

## Chapter I

### Kami

Katia Chirkova  
CRLAO, CNRS

#### 1. Introduction

Kami Tibetan (hereafter Kami) is a variety of Tibetan spoken in Mùlǐ Tibetan Autonomous County 木里藏族自治县, or <mu li rang skyong rdzong> in Written Tibetan (hereafter WT). This county is part of Liángshān Yí Autonomous Prefecture 凉山彝族自治州 in Sichuān Province of the People's Republic of China (PRC).

Established in 1953, Mùlǐ Tibetan Autonomous County is a successor to the semi-independent theocratic kingdom of Mùlǐ (variously, <rmǐ li> or <rmu le>), ruled by hereditary lama kings of the Tibetan-Buddhist *Dge lugs pa* tradition.<sup>1</sup>

Mùlǐ is one of the religious, cultural, and geopolitical border areas of the Tibetan realm. It is culturally Tibetan, but ethnically and linguistically much less so. Notable ethnic groups residing in Mùlǐ include (linguistic affiliation of the languages they speak is mentioned in brackets):

- Pǔmǐ 普米 (Qiangic), the ethnic majority and, historically, the ruling elite
- Gāmǐ 嘎米 or Kami Tibetans (Tibetan)
- Xùmǐ 旭米, or Sùmǔ 粟母, /ʂu<sup>55</sup>-hǐ<sup>55</sup>/, a.k.a. Shǐxīng 史興 (Qiangic)
- Lǐrú 里汝 or Lizu /li<sup>55</sup>-zu<sup>55</sup>/, a.k.a. Ěrsū 爾蘇 (Qiangic)
- Nàmùzī 納木茲 /næ<sup>55</sup>-mu<sup>33</sup>-zǐ<sup>31</sup>/ (Qiangic)
- Nuòsū 諾蘇 or Nosu (Northern Yí or Ngwi, Ngwi-Burmese)
- Móxiē 麼些 or Moso (unclassified, but held close to Ngwi-Burmese)
- South-West Mandarin (Sinitic), presently the lingua franca

The county is historically multilingual. Its languages have been in close contact with each other for a long time in a situation of equilibrium. Until recently, no single language enjoyed special prestige or dominated over other languages. Consequently, language contact is likely to have played an important role in the development of local linguistic varieties.

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<sup>1</sup> On the history of Mùlǐ, see Kessler (1986), Mùlǐ Gazetteers (1995), van Spengen (2002), and Wellens (2006).

The Kami people are among the oldest inhabitants of the area. It is estimated that they arrived around 680 AD (Kessler 1986:20, 46). The self-designation of the group is /<sup>L</sup>pe/ <bod>.<sup>2</sup> ‘Kami’ is a common appellation of the dialect in Mùlǐ. This name stems from the Pǔmǐ speakers who call the Kami /ka<sup>55</sup>-mə<sup>55</sup>/.<sup>3</sup> The latter term is reportedly an abbreviation of a longer expression for ‘helpers’, consisting of the verb /ka<sup>55</sup>ku<sup>35</sup>/ ‘help’ and the noun /mə<sup>53</sup>/ ‘person’. Fearless skillful warriors, the Kami formerly served the ruling Pǔmǐ elite of Mùlǐ.

Kami is spoken by approximately 20,000 people who reside in six townships in the northern part of Mùlǐ. From West to East, these townships are: (1) Shuǐluò 水洛 /<sup>L</sup>co-<sup>H</sup>lo/, (2) Màiri 麥日, (3) Dōnglǎng 東朗, (4) Tángyāng 唐央, (5) Bówō 博窩 /<sup>L</sup>ba-<sup>H</sup>wu/, (6) Màidilóng 麥地龍.<sup>4</sup>

<sup>2</sup> I gratefully acknowledge the financial support of the Royal Netherlands Academy of Sciences and the Chinese Academy of Social Sciences as part of the project ‘Trans-Himalayan database development: China and the Subcontinent’ and of the Agence Nationale de la Recherche (France) as part of the research project ‘What defines Qiang-ness? Towards a phylogenetic assessment of the Southern Qiangic languages of Muli’ (ANR-07-JCJC-0063). I owe a debt of gratitude to my Kami language consultants: Mr. Yáng Lǚróng 楊魯絨圖丁 /<sup>L</sup>te<sup>h</sup>-<sup>H</sup>ra <sup>H</sup>ja-<sup>L</sup>l̥ <sup>H</sup>lu-<sup>H</sup>z̥ /<sup>L</sup>tu-<sup>H</sup>d̥i/ <blo bzang stobs ldan>, Mr. Āgāo Lǚróng 阿高魯絨 /<sup>L</sup>a-<sup>H</sup>ŋɔ <sup>H</sup>lu-<sup>H</sup>z̥ / <blo bzang>, Mr. Lǚróng Cì’er 魯絨次爾 /<sup>H</sup>lu-<sup>H</sup>z̥ <sup>H</sup>ts<sup>h</sup>-<sup>H</sup>r̥e/ <blo bzang tshe ring>, and Mrs. Qǐ Zhēn 啓珍 /<sup>L</sup>a-<sup>H</sup>lu <sup>H</sup>te<sup>h</sup>-<sup>H</sup>t̥ʂe/ <chos sgron>. I am also indebted to Mr. Lǚróng Duōdīng 魯絨多丁 /<sup>L</sup>dzi-<sup>H</sup>ʂ̥ <sup>H</sup>lu-<sup>H</sup>z̥ <sup>H</sup>to-<sup>H</sup>d̥e/ <blo bzang stob ldan> for his efficient and enthusiastic help in facilitating and assisting this study, and for providing background information on Kami. I am also grateful to Guillaume Jacques, Alexis Michaud, Paul van Els, Jackson T.-S. Sun, and the anonymous reviewers of *Language and Linguistics* for useful comments on earlier versions of the paper, to Franz Huber for creating the map, and to Hilary Chappell for help with the word list. I present Kami data in broad phonetic transcription that includes some common allophones, which result from irregular phonological processes, as well as uvular allophones of velar phonemes. Square brackets are used for narrow phonetic transcriptions (surface phonological representations) and slashes for broad phonetic transcriptions (the product of my analysis). Kami register tones are here marked by superscript letters (L for ‘low’ and H for ‘high’) (see §2.4 for discussion). WT forms (in Wylie’s 1959 standard transcription) are provided in angle brackets alongside the corresponding spoken forms. The following conventions are used: > = changes into; < = develops from; - = syllable boundary within a lexical word; = = clitic boundary; ~ = variation between two forms; ? = a morpheme whose meaning is unclear or, if attached to a word, signals that the meaning or the etymon that this word represents is tentative; \* = unattested form which has been historically reconstructed or, in the word list, a combination of two etymons that is not attested in WT (as based on the Rangjung Yeshe Tibetan-English dictionary, [www.nitartha.org/dictionary.html](http://www.nitartha.org/dictionary.html)). The Middle Chinese forms follow Baxter (1992); the Southwestern Mandarin forms represented the dialect of Mùlǐ recorded by Lǐ Lán 李藍 (p.c.).

<sup>3</sup> The Pǔmǐ data are from Lù (2001), Guillaume Jacques (p.c.), and personal research. Shǐxīng, Lizu and Nàmùzī data throughout the text are from my personal research (see also Chirkova & Chen 2013a; Chirkova et al. 2013b).

<sup>4</sup> The division into townships dates from 1953. My consultants, all from Shuǐluò, customarily refer to these townships by their Chinese names. Only two non-Chinese names could be elicited. Here are some explanations for the names of the townships, as gathered from my language consultants, from

In Shuǐluò, the Kami reside in the north of the township, with the Xùmǐ and Pǔmǐ people as their neighbors. The townships of Màirì and Dōnglǎng are Kami monoethnic. The township of Mǎidilóng is Kami and Chinese mixed. The townships of Tángyāng and Bówō are mixed Kami, Nosu, and Chinese. To their north, the Kami border on the Tibetan-speaking counties of the Gānzī 甘孜 <dkar mdzes> Tibetan Autonomous Prefecture, see the maps below.

Kami speakers are by and large trilingual in Kami, Pǔmǐ, and Southwestern Mandarin. Pǔmǐ used to be the lingua franca of the area, a role that is taken over by Mandarin. In my observation, older people use Pǔmǐ to speak with others whose mother tongue is different, whereas younger speakers use Mandarin for this purpose. In addition, many Kami also speak the languages of the ethnic groups with whom they share a border, i.e. the Shíxīng language in Shuǐluò, and the Nosu language in Tángyāng and Bówō.

Based on mutual intelligibility, speakers of Kami recognize two sub-dialects of their language: that of Shuǐluò, Màirì, and Dōnglǎng, on the one hand, and that of Tángyāng, Bówō, and Mǎidilóng, on the other hand. While the precise nature of differences between the two sub-dialects remains to be investigated, it is conceivable that these differences are mainly due to the influence of the languages of the respective ethnic groups, that is, Shíxīng and Nosu, with which the Kami share a border.

The present work is limited to the sub-dialect of Shuǐluò, Màirì, and Dōnglǎng, as represented by the speech of Shuǐluò. Overall, Kami is inhomogeneous. This is to say that every single Kami-speaking village has its own variety with distinctive phonological, morphological, and lexical features. My work with four language consultants, all from different villages, reveals a wide array of inter-village variation, ranging from different segmental inventories, different tonal patterns in polysyllabic words, to words traceable to different WT etymons (see §2.2 and further).<sup>5</sup>

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Kessler (1986), and from Mùlǐ Gazetteers (1995). The name for Shuǐluò, /<sup>l</sup>ɕo-<sup>H</sup>lo/ <sho log>, is a Tibetan rendering of the original Xùmǐ toponym, the Xùmǐ people being the ethnic majority in this township. The first syllable stems from the autonym of the group /<sup>H</sup>ʂu-<sup>H</sup>hĩ/, literally ‘the Shu people’, whereas the second syllable means ‘valley’, i.e. ‘valleys of the Shu people’ (Mùlǐ Gazetteers 1995: 133). The name for Màirì derives from the Tibetan word for ‘sulfer’, <mu zi>, which used to be produced in the area (Mùlǐ Gazetteers 1995:154). According to Mùlǐ Gazetteers (1995:153), ‘Dōnglǎng’ stands for ‘spirit of the tiger’. However, given the Chinese transliteration of the name, it appears to rather derive from <dom bla ma?> ‘spirit of the bear’. ‘Tángyāng’ comes from an earlier ‘同窩’ *tóngwō*, meaning ‘plain, flatlands’, WT <thang pa> (Mùlǐ Gazetteers 1995:155). ‘Bówō’ allegedly comes from the word for ‘wine jug’, given the elongated shape of this township (Mùlǐ Gazetteers 1995:156). The Tibetan etymology of this word is unclear to me. Finally, ‘Mǎidilóng’ means ‘valley of Muti Konka’, <mu ti(g) rong> (Mùlǐ Gazetteers 1995:157). Muti Konka (麥地貢嘎, <mu ti(g) gangs dkar>) is a mountain at the border of Mùlǐ and Jiùlóng counties.

<sup>5</sup> An example of a word that is traceable to different WT etymons in different villages is ‘rust’: /<sup>H</sup>tsɔ/ <gtsaʰ> for my main consultant vs. /<sup>H</sup>zɔ/ <g.ya> for my other consultants.



• 喬瓦鎮 Qiáowǎ zhèn, the administrative seat of Muli Tibetan Autonomous County  
**Map:** Location of Kami townships in Muli

### 1.1 Kami: previous studies, linguistic position

Kami was included in the major linguistic survey of China in the 1950s, and it is listed in comprehensive classifications of the Tibetan dialects of the PRC.<sup>6</sup> However, to my knowledge, no linguistic data or analysis of Kami have ever been released.

In Gésāng (1964), Kami belongs to the southern cluster of Kham dialects. Besides Kami, this cluster comprises a large number of dialects, including the dialects of Gānzī Prefecture, the dialects of Dìqìng 迪慶 <bde chen> Tibetan Autonomous Prefecture in Yúnnán Province, and some dialects of Chāngdū 昌都 <chab mdo> Prefecture in Tibet. Bātáng 巴塘 Tibetan <'ba' thang> is held to be representative of this cluster. Hence, references to this dialect, both in terms of data and analysis thereof (Gésāng 1989; Dài & Huáng 1992) will be made throughout the present article.

<sup>6</sup> These comprehensive classifications include Gésāng (1964), and Qú & Jīn (1981). Curiously, Kami is no longer included in the later revised edition of Gésāng (1964), e.g. Gésāng & Gésāng (2002). Neither is it incorporated in the detailed classification in Zhāng (1993).

The southern Kham cluster in Gésāng (1964) corresponds to two distinct clusters in the classification of Qú & Jīn (1981). These clusters are (1) Eastern (including the dialects of Gānzī Prefecture and those of Chāngdū Prefecture), and (2) Southern (including Kami and the dialects of Dìqīng Prefecture). The criteria underlying this classification are supposedly more fine-grained than those in Gésāng (1964), hence yielding a more detailed classification scheme. Unfortunately, as far as I am aware, the precise combination of features underlying either of these two clusters has never been made explicit.

Overall, Kami fits well into the ‘Kham-profile’ in that it combines a number of features that are held to be distinctive of this group, as outlined in Hú (1991:191-198), Zhāng (1993), and Gésāng & Gésāng (2002:72-91).<sup>7</sup> The ensuing description and discussion are built against the background of the best-recorded Kham dialects Bātáng and Dégé 德格 <sde dge>, and the documented dialects of Dìqīng Prefecture: Zhōngdiàn 中甸 <rgyal thang> (Lù 1990; Wang 1996; Hongladarom 1996) and Dōngwàng 東旺 <gtor ba rong> or <rter ma rung> (Bartee, this volume). This procedure, I argue, enables us to (1) situate Kami in a broader regional context, (2) test the assumption that Kami forms one cluster with dialects of Dìqīng Prefecture, and finally, (3) detect possible non-Tibetan, idiosyncronic features of Kami to be potentially interpreted as indicative of contact-induced areal phenomena.

## 1.2 Data sources and structure of the chapter

The phonological and lexical study of Kami is based on materials I collected during several field trips. I started working on Kami in 2006, in connection with my ongoing work on the Shīxīng language, with which Kami is in close contact. As my original motivation was essentially to gather supporting data for my study of Shīxīng, I limited myself to the Kami variety of Shuǐluò. I continued working on Kami in 2008 and 2009 and have so far worked with four speakers: three male, all in their 50s, and one female, in her 40s. The present study is largely based on fieldwork conducted in 2009. The consultant I had the privilege of working with is the one with whom I have worked the longest, and whose speech, accidentally, maintains more segmental phonemic distinctions than any of the three other consultants: Mr. Yáng Lǔróng Túdīng 楊魯絨圖丁 from the Qilā village (hereafter, the main consultant). His full name is /<sup>L</sup>tɛ<sup>h</sup>i-<sup>H</sup>ra <sup>H</sup>ja-<sup>L</sup>l̥ɿ̃ <sup>H</sup>lu-<sup>H</sup>zũ <sup>L</sup>tu-<sup>H</sup>đi/ <blo bzang stobs ldan>. Essential phonological differences between consultants are commented upon throughout the text.

<sup>7</sup> That said, however, I keep in mind that many a characteristic Kham feature is too general and non-committal to make Kham (which is a rather heterogeneous collection of dialects) a coherent group, see Denwood (1999:31-32) and Sun (2003:794-796) for discussion. Nonetheless, in the absence of a more rigorous classification, I will use the proposed characteristic features as indications of most salient regional tendencies, whether retentions (e.g. simplified consonant clusters, voiced obstruent initials) or convergent developments (e.g. syllable canon reduction and tones).

The chapter is organized as follows. Section 1 is this introduction. Section 2 outlines synchronic Kami phonology. Section 3 traces the origins and developments of this phonological system from Old Tibetan (hereafter OT). The sound system of OT essentially refers to the phonological system underlying traditional Tibetan orthography, which for the most part can be recovered through a comparison of the modern dialectal reflexes of the orthographic forms. Section 4 provides a summary discussion. I conclude this chapter with Appendix I, a table summarizing Kami initials and their OT origins, and Appendix II, an English-Kami word list of approximately 1,500 common words.

## 2. Synchronic phonology

### 2.1 Syllable structure and word structure

The canonical Kami syllable minimally consists of an obligatory vowel and a tone. It may also contain up to three optional elements, in the following linear structure: (C)(C)V(V), where C stands for consonant, V stands for vowel, the two vowel-symbol-notation stands for diphthong, and parantheses indicate optional constituents. The only possible initial consonant clusters are homorganic nasal-stop and nasal-affricate clusters as well as the cluster /hʃ/. Vowel-initial words are usually preceded by a non-phonemic glottal stop.

**Table 1:** Kami syllable structure

V	/ <sup>L</sup> ʒ̃/ ‘come’
VV	/ <sup>L</sup> ue/ ‘light, rays’
CV	/ <sup>L</sup> du/ ‘stone’
CVV	/ <sup>H</sup> p <sup>h</sup> ɔ- <sup>H</sup> dui/ ‘blister’
CCV	/ <sup>L</sup> Ndə/ ‘exist; reside; sit’, / <sup>H</sup> hʃɔ/ ‘god, Buddha’
CCVV	/ <sup>H</sup> Nduẽ/ ‘recite, chant’

Similar to its linguistic neighbors, Kami is phonologically monosyllabic with a strong tendency towards disyllabicity in its lexicon. In the surveyed sample of approximately 2,000 lexical items, 27 percent of words are monosyllabic, over 65 percent are disyllabic, and the remainder are trisyllabic and quadrisyllabic. Trisyllabic and quadrisyllabic words tend to be made up of compounds, e.g. /<sup>L</sup>n̄<sup>L</sup>go-<sup>H</sup>wā/ ‘roe of fish’ (< /<sup>L</sup>n̄/ ‘fish’, /<sup>L</sup>go-<sup>H</sup>wā/ ‘egg’), /<sup>L</sup>dʒa-<sup>H</sup>ʕe<sup>L</sup>xu-<sup>L</sup>wɔ/ ‘traditional Tibetan hat’ (> /<sup>L</sup>dʒa-<sup>H</sup>ʕe/ ‘India’, /<sup>L</sup>xu-<sup>H</sup>wɔ/ ‘hat’). A handful of trisyllabic words are also monomorphemic, e.g. /<sup>H</sup>l̄<sup>H</sup>Nbu-<sup>H</sup>te<sup>h</sup>i/ ‘elephant’, /<sup>H</sup>ʃa-<sup>H</sup>bu-<sup>H</sup>lo/ ‘beige, light blue-grey’.

The disyllabic word is the domain of a number of irregular phonological processes, including lenition, intervocalic voicing (which is at times accompanied by lenition), and resyllabification (see §3.4 for discussion and exemplification). These processes target the initial of a second syllable, resulting in slightly different segmental inventories in the first and the second syllable of the word.

## 2.2 Initials

Kami Tibetan has an elaborate onset system, which comprises forty-seven simple initial consonants and eight complex initials.

### 2.2.1 Simple initials

Consonant phonemes in Kami represent seven distinct places of articulation and six distinctive manners of articulation. The consonant phonemes are listed in Table 2 according to place and manner of articulation (/r/ is phonetically [ɾ] or [ʐ], in free variation).

**Table 2:** Kami consonant phonemes (main consultant)

Bilabial	Dental	Retroflex	Post-alveolar	Alveolo-palatal	Velar	Glottal
p, p <sup>h</sup> , b	t, t <sup>h</sup> , d				k, k <sup>h</sup> , g	
	ts, ts <sup>h</sup> , dz	tʂ, tʂ <sup>h</sup> , dzʂ	tʃ, tʃ <sup>h</sup> , dʒ	tɕ, tɕ <sup>h</sup> , dzɕ		
	s, s <sup>h</sup> , z		ʃ, ʃ <sup>h</sup> , ʒ	ɕ, ɕ <sup>h</sup> , zɕ	x~χ, ɣ~ʁ	h
m, m̥	n, n̥			ɲ, ɲ̥	ŋ, ŋ̥	
	l, l̥					
w	ɾ, ʐ			j		

All phonemes may appear both in the word-initial and in the second-syllable-initial position, with the exception of /r/, which is restricted to the second-syllable-initial position. This phoneme tentatively results from word-internal mutation, involving rhotacism (see §3.4). The remainder of this section discusses Kami consonant phonemes by place of articulation.

#### 2.2.1.1 Stops

Kami stops are pronounced at three different places of articulation: bilabial, dental, and velar. Kami stops contrast in voicing; voiceless stops are further distinguished by aspiration, e.g.:

- /p/: /<sup>L</sup>pɔ/ ‘cow’, /<sup>H</sup>pə/ ‘(animal) hair, fur; son’, /<sup>H</sup>pu/ ‘move’  
 /ph/: /<sup>H</sup>p<sup>h</sup>ɔ/ ‘father’, /<sup>H</sup>p<sup>h</sup>ə/ ‘malt dregs after brewing beer’, /<sup>H</sup>p<sup>h</sup>u/ ‘punch’  
 /b/: /<sup>H</sup>bɔ/ ‘bury’, /<sup>L</sup>tʂi-<sup>H</sup>bə/ ‘bell’, /<sup>L</sup>bu/ ‘breath’  
 /t/: /<sup>H</sup>ta/ ‘tiger’, /<sup>H</sup>tɕ/ ‘scatter, cast’, /<sup>H</sup>tu/ ‘pluck, pick (flowers)’  
 /t<sup>h</sup>/: /<sup>H</sup>t<sup>h</sup>a/ ‘texture, web’, /<sup>H</sup>t<sup>h</sup>ɕ/ ‘fireplace, stove, hearth’, /<sup>H</sup>t<sup>h</sup>u/ ‘grain, crops’  
 /d/: /<sup>L</sup>da/ ‘lick’, /<sup>L</sup>du/ ‘poke, stab’, /<sup>L</sup>du/ ‘stone’  
 /k/: /<sup>H</sup>kɔ/ ‘gutter; pillar’, /<sup>H</sup>kɕ/ ‘cover’, /<sup>H</sup>ku/ ‘carve, engrave’  
 /k<sup>h</sup>/: /<sup>H</sup>k<sup>h</sup>ɔ/ ‘mouth’, /<sup>H</sup>k<sup>h</sup>ɕ/ ‘needle’, /<sup>H</sup>k<sup>h</sup>u-<sup>H</sup>nbɔ/ ‘house’  
 /g/: /<sup>H</sup>gɔ/ ‘saddle’, /<sup>L</sup>gu/ ‘wait’, /<sup>H</sup>gu/ ‘door; divide, share’

### 2.2.1.2 Affricates

Kami affricates include more contrasts of place of articulation than stops, namely four: dental, retroflex, postalveolar, alveolopalatal. Words with postalveolar affricates are infrequent in the surveyed sample. Similar to stops, Kami affricates contrast in voicing; voiceless unaspirated affricates further contrast with their voiceless aspirated counterparts:

/ts/:	/ <sup>H</sup> tʂa/ ‘sieve, sift’, / <sup>H</sup> tʂɔ/ ‘root’, / <sup>H</sup> tʂu- <sup>H</sup> wɔ/ ‘grass’
/tʂ <sup>h</sup> /:	/ <sup>H</sup> tʂ <sup>h</sup> a/ ‘marry a woman’, / <sup>H</sup> tʂ <sup>h</sup> ɔ/ ‘salt’, / <sup>H</sup> tʂ <sup>h</sup> u/ ‘lake; be busy’
/dz/:	/ <sup>H</sup> ti- <sup>H</sup> dza/ ‘saber, small sword’, / <sup>H</sup> dzɔ̃/ ‘county’, / <sup>L</sup> dzui/ ‘pasture, herd’
/tʂ/:	/ <sup>H</sup> tʂa/ ‘fear, be afraid of’, / <sup>H</sup> tʂɔ/ ‘(human) hair’, / <sup>H</sup> tʂɔ̃/ ‘swell’
/tʂ <sup>h</sup> /:	/ <sup>H</sup> tʂ <sup>h</sup> a/ ‘blood’, / <sup>H</sup> tʂ <sup>h</sup> ɔ/ ‘thin’, / <sup>H</sup> tʂ <sup>h</sup> ɔ̃/ ‘beads, rosary’
/dz/:	/ <sup>H</sup> dzɔ/ ‘enemy’, / <sup>H</sup> dzɔ̃/ ‘honey; sugar’
/tʃ/:	/ <sup>H</sup> tʃa/ ‘weigh’, / <sup>L</sup> tʃɔ̃/ ‘wall’, / <sup>L</sup> tʃuẽ/ ‘put on, wear’
/tʃ <sup>h</sup> /:	/ <sup>H</sup> tʃ <sup>h</sup> ɔ/ ‘dog’, / <sup>H</sup> tʃ <sup>h</sup> ue/ ‘thou, second person singular pronoun’
/dʒ/:	/ <sup>H</sup> dʒɔ/ ‘Chinese; hundred’, / <sup>L</sup> dʒɔ̃/ ‘intestines, bowels’
/tɕ/:	/ <sup>H</sup> tɕa/ ‘iron’, / <sup>L</sup> tɕɔ/ ‘tea’, / <sup>L</sup> s <sup>h</sup> u- <sup>H</sup> tɕo/ ‘hoof, clout’
/tɕ <sup>h</sup> /:	/ <sup>H</sup> tɕ <sup>h</sup> a <sup>L</sup> tei/ ‘one pair’, / <sup>H</sup> tɕ <sup>h</sup> ɔ/ ‘water’, / <sup>H</sup> tɕ <sup>h</sup> o/ ‘be enough’
/dz/:	/ <sup>H</sup> dzi/ ‘heavy’, / <sup>L</sup> dza- <sup>H</sup> mu/ ‘heavy’

Kami exhibits a typologically unusual opposition between the postalveolar and the alveolopalatal places of articulation for affricates and fricatives. This opposition has been argued to be not optimal in terms of maintaining sufficient perceptual contrast and therefore, if not altogether impossible, then in the least, highly marked (Hall 1997:66-70).<sup>8</sup>

This opposition in Kami is mostly constrained to the environment before non-high non-front vowels, whereas the two series are not distinguished before front vowels. In addition, before the schwa, the contrast between the two series may variously be present (for the initials /tʃ<sup>h</sup>/ and /tɕ<sup>h</sup>/) or neutralized (for the initials /tʃ/ and /tɕ/). Consider some examples (also contrasted with retroflex affricates):

<sup>8</sup> Among Tibetan dialects, the same opposition is also attested in Báimǎ (Zhāng 1994a, 1994b; Zhang 1997; Huáng & Zhāng 1995). The respective OT origins of postalveolar and alveolopalatal phonemes in Kami and Báimǎ are, however, distinct. The OT origins of these phonemes in Kami are discussed in §3. Báimǎ postalveolar affricates mostly develop from the original OT postalveolar affricates, whereas Báimǎ alveolopalatal affricates mostly develop from OT *Ky*- and *Kr*- clusters. (Capital *K*- and *P*- stand for velar and labial stop consonants, respectively.) The same distinction is also attested in a number of Qiangic languages, such as Qiang (Sun & Evans, forthcoming) and Ersu (Chirkova et al., forthcoming). Sun & Evans (forthcoming) analyze Qiang alveolopalatals as postalveolars with a palatal medial *-j* (e.g. /dʒa/ ‘common silverweed’ vs. /dʒja-su<sup>ʷ</sup>/ ‘finger’). This analysis is motivated by the phonological alternation pattern /i/ ~/ja/ (e.g. /pi/ ‘pig’ vs. /pja-ɣu/ ‘wild pig’; /dʒi-/ ‘arm/hand/leg’ vs. /dʒja-su<sup>ʷ</sup>/ ‘finger’).

/ <sup>H</sup> tʃa/ ‘weigh’	/ <sup>H</sup> tʃa/ ‘iron’	/ <sup>H</sup> tʃa/ ‘fear, be afraid of’
/ <sup>H</sup> tʃ <sup>h</sup> ə/ ‘dog’	/ <sup>H</sup> tʃ <sup>h</sup> ə/ ‘water’	/ <sup>H</sup> tʃ <sup>h</sup> ə/ ‘bed’
/ <sup>H</sup> tʃ <sup>h</sup> ue/ ‘thou’	/ <sup>H</sup> tʃ <sup>h</sup> ue <sup>L</sup> tʃa/ ‘be tired’	/ <sup>H</sup> tʃ <sup>h</sup> ue/ ‘meet, come across’
/ <sup>L</sup> Ndʒu/ ‘quick’	/ <sup>L</sup> Ndʒu- <sup>H</sup> wā/ ‘tail’	/ <sup>L</sup> Ndʒu/ ‘walk’
/ <sup>H</sup> tei/ ‘one’ (no contrast with / <sup>H</sup> tʃi/)		/ <sup>H</sup> tʃi/ ‘monkey; ask; wrap’
/ <sup>H</sup> teə/ ‘ten; scoop’ (no contrast with / <sup>H</sup> tʃə/)		/ <sup>H</sup> tʃə/ ‘knife; wash; write’
/ <sup>L</sup> tʃɔ̃/ ‘wall’ (no contrast with / <sup>L</sup> teɔ̃/)		/ <sup>L</sup> tʃɔ̃/ ‘cold’
/ <sup>L</sup> dʒɔ̃/ (no contrast with / <sup>L</sup> dʒɔ̃/) <sup>9</sup> ‘bowels’		/ <sup>L</sup> dʒɔ̃/ ‘village’

### 2.2.1.3 Fricatives

Kami fricatives are pronounced at five different places of articulation: dental, postalveolar, alveopalatal, velar(-uvular), glottal. Dental, postalveolar, alveopalatal, and velar fricatives contrast in voicing (viz. /s/ vs. /z/, /ʃ/ vs. /ʒ/, /ç/ vs. /ʒ/, /x/ vs. /ɣ/). The voiceless glottal fricative /h/ does not have a voiced counterpart. Consider some examples of the former three voiceless-voiced pairs:

/ <sup>L</sup> sa- <sup>H</sup> mɔ̃/ ‘edibles, food’	/ <sup>L</sup> za- <sup>H</sup> bɔ̃/ ‘deaf’ <sup>10</sup>
/ <sup>L</sup> ʃɔ̃/ ‘bird; chicken’	/ <sup>L</sup> ʒɔ̃/ ‘spouse’
/ <sup>H</sup> ɛĩ/ ‘wood’	/ <sup>H</sup> zĩ/ ‘later, hereafter’

I analyze the velar fricatives as having two allophonic realizations, viz. [x] and [χ], and [ɣ] and [ʁ]. The uvular pronunciation is common in the word-initial position before back vowels, whereas the velar pronunciation is common in the word-initial position with the front vowel /ɛ/, and in the second-syllable-initial position with all vowels.<sup>11</sup> In the word-initial position, my main consultant accepts [x] and [χ] to be exchanged without a change or loss of meaning, e.g. [ʰxu]~[ʰχu] ‘food, cooked rice’. He also accepts [ɣ] and [ʁ] to be interchanged before /ɛ/ without a change or loss of meaning, e.g. [ʰɣɛ]~[ʰʁɛ] ‘shave’. In other instances (when followed by non-high non-front vowels), the word-initial voiced fricative is distinctly uvular, [ʁ], e.g. [ʰʁɔ̃] ‘rainbow’. In the absence of minimal pairs in my corpus, velar and uvular fricatives can in principle be treated as allophonic variants. Nonetheless, I argue that uvular allophones deserve a special note, given that (1) uvular phonemes are infrequent in Tibetan dialects, and (2) in Kami,

<sup>9</sup> There is, however, a nasal-affricate cluster with this phoneme, i.e. /<sup>H</sup>Ndʒɔ̃/ ‘Moso, Na people’.

<sup>10</sup> Some words with the initial /z/ in the speech of my main consultant are pronounced with the initial /dz/ by my other consultants. For example: main consultant /<sup>L</sup>za-<sup>H</sup>ku/, other consultants /<sup>L</sup>dza-<sup>H</sup>ku/ for ‘shoes, boots’.

<sup>11</sup> In fact, in the latter position, velar fricatives are the lenited allophones of the velar stops, e.g. /<sup>H</sup>s<sup>h</sup>o-<sup>H</sup>χɔ̃/ ‘thatched house’ (< /<sup>H</sup>s<sup>h</sup>o/ ‘straw’, /<sup>H</sup>k<sup>h</sup>ɔ̃/ ‘house’), /<sup>L</sup>du-<sup>H</sup>ɣɛ/ ‘white stone’ (< /<sup>L</sup>du/ ‘stone’, /<sup>L</sup>ka-<sup>H</sup>kɛ/ ‘white’), see §§3.4.1-2 for discussion.

the OT origins of uvular phonemes are distinct from those of velar phonemes. For this reason, I keep velar and uvular allophones distinct in transcriptions, transcribing them as perceived. For example:

$/^L a-^H x\partial/$ ‘uncle’	$/^L r a-^H \gamma\partial/$ ‘sheepfold, pen; downstairs’
$/^H x\partial/$ [ $^H \chi\partial$ ] ‘slaughter’	$/^H \gamma\partial/$ [ $^H k\partial$ ] ‘rainbow’

The glottal voiceless fricative is infrequent and occurs for the most part in the second-syllable-initial position, where, in some instances, it appears to derive from the lenition of  $/p^h/$  (see §3.4.1 for further discussion). For example:

$/^H h\partial-^L k u/$ ‘understand’
$/^H h u-^H t^h a/$ ‘diligent, conscientious’
$/^L p^h u-^H h a/$ ‘boar, male pig’ (< $/p^h u-$ (bound root) ‘male’, $/^H p^h a/$ ‘pig’)

The dental, the postalveolar and the alveopalatal voiceless fricatives are further distinguished by aspiration, viz.  $/s/$  vs.  $/s^h/$ ,  $/f/$  vs.  $/f^h/$  and  $/\epsilon/$  vs.  $/\epsilon^h/$ . For example:

$/^L s a-^H m\delta/$ ‘edibles’	$/^L s^h a-^H m\delta/$ ‘nail, fingernail’
$/^L f a-^H m\delta/$ ‘hen’	$/^L f^h a-^H m\delta/$ ‘broom’
$/^H \epsilon i/$ ‘louse’	$/^H \epsilon^h i/$ ‘know (how to do something), be able’

Similar to affricates, Kami fricatives exhibit a typologically unusual contrast between the postalveolar and the alveopalatal places of articulation. Also similar to affricates, this contrast is essentially maintained before non-high non-front vowels (and also before the schwa in the case of  $/z/$  and  $/z/$ ), whereas it is neutralized before the high front vowel  $/i/$ . For example:

$/^L \epsilon a-^H p\partial/$ ‘thing, goods’	$/^L f a-^H p\partial/$ ‘feather, plumage’
$/^L z a-^H n b\partial/$ ‘raw’	$/^L z a-^H w\partial/$ ‘poplar’
$/^H z\partial/$ ‘four’	$/^H z\partial/$ ‘turquoise’

$/^L \epsilon i/$  ‘little bird; sparrow’,  $/^H k\delta-^H z i/$  ‘footprint’

The typologically infrequent opposition between postalveolar and alveopalatal affricates and fricatives has been attested only in the speech of my main consultant. In the speech of the remaining three consultants, words with postalveolar affricates in the speech of my main consultant are pronounced with alveopalatal affricates; whereas words with postalveolar fricatives in the speech of my main consultant are rendered as dental fricatives in the speech of my other consultants. For example:

‘dog’: main consultant: /<sup>H</sup>tʰə/ , other consultants: /<sup>H</sup>tɛ<sup>h</sup>ə/

‘bird, chicken’: main consultant: /<sup>L</sup>ʃə/ , other consultants: /<sup>L</sup>sə/

Two exceptions to this generalization can be noted: ‘sour’ and ‘wolf’. In the speech of my main consultant, these words are pronounced with a voiceless postalveolar fricative initial: /<sup>H</sup>ʃu-<sup>H</sup>kua/ and /<sup>H</sup>ʃə/, respectively. Instead of having an otherwise regular correspondence with the voiceless dental fricative, these words in the speech of my other consultants feature a distinct initial phoneme, /ɣ/, i.e. /<sup>H</sup>ʃu-<sup>H</sup>kua/ ‘sour’ and /<sup>H</sup>ʃə/ ‘wolf’. The elimination of the postalveolar series in the speech of other consultants and the inclusion of a new retroflex phoneme brings the inventory of consonantal phonemes in their speech to a total of 42, as summarized in Table 3:

**Table 3:** Kami consonant phonemes (other consultants)

Bilabial	Dental	Retroflex	Alvelo-palatal	Velar	Glottal
p, p <sup>h</sup> , b	t, t <sup>h</sup> , d			k, k <sup>h</sup> , g	
	ts, ts <sup>h</sup> , dz	tʂ, tʂ <sup>h</sup> , dz <sub>ɿ</sub>	tɕ, tɕ <sup>h</sup> , dz		
	s, s <sup>h</sup> , z	ʂ	ɕ, ɕ <sup>h</sup> , ʒ	x~χ, ʏ~ʝ	h
m, m̥	n, n̥		ɲ, ɲ̥	ŋ, ŋ̥	
	l, l̥				
w	r, r̥		j		

### 2.2.1.4 Nasals

Kami nasals are pronounced at the bilabial, dental, alveolopalatal, and velar places of articulations.

All Kami nasals show the contrast voiced-voiceless, as the (near) minimal pairs below show. The voiceless nasals, /m̥, n̥, ɲ̥, ŋ̥/ normally have homorganic voiced nasal onsets but voiceless, slightly aspirated release, i.e. respectively, [m̥m̥<sup>h</sup>], [n̥n̥<sup>h</sup>], [ɲ̥ɲ̥<sup>h</sup>], [ŋ̥ŋ̥<sup>h</sup>].<sup>12</sup>

/<sup>H</sup>mã-<sup>H</sup>ŋgi/ ‘chin, jaw’

/<sup>L</sup>m̥ã-<sup>H</sup>χu/ ‘dinner’

/<sup>H</sup>nã/ ‘sky, heaven’

/<sup>H</sup>n̥ã/ ‘snivel, snot’

/<sup>H</sup>ɲi/ ‘eye’

/<sup>H</sup>ɲi/ ‘ripen’

/<sup>H</sup>ŋuẽ/ ‘hunt’

/<sup>H</sup>ŋ̥uẽ/ ‘front’

### 2.2.1.5 Liquids and approximants

There are four central approximants and two lateral approximants in Kami: /w/, /j/, /r/, /ɾ/,

<sup>12</sup> Voiceless nasals in Dōngwàng (Bartee, this volume) appear to have similar phonetic values.

/l/, /l̥/. The approximants /l/ and /r/ demonstrate a two-way contrast in voicing. /r̥/ is restricted to the second-syllable-initial position. Consider these examples:

- /w/: /<sup>L</sup>wɔ/ ‘fox’, /<sup>H</sup>wu-<sup>H</sup>li/ ‘cat’
- /j/: /<sup>L</sup>jɔ/ ‘hand’, /<sup>L</sup>ju/ ‘year’
- /l/: /<sup>H</sup>lɔ/ ‘moon; musk deer’, /<sup>H</sup>lu/ ‘bellyband, saddle girth’
- /l̥/: /<sup>H</sup>l̥ɔ/ ‘water or mountain spirit’, /<sup>H</sup>l̥u/ ‘deceive, cheat’
- /r/: /<sup>L</sup>a-<sup>H</sup>ra/ ‘arak, strong liquor, alcoholic drink’, /<sup>L</sup>gu-<sup>H</sup>re/ ‘old’
- /r̥/: /<sup>L</sup>pe-<sup>H</sup>ra/ ‘Tibetan liquor’, /<sup>L</sup>gu-<sup>H</sup>r̥ɛ/ ‘doorsill, threshold’

### 2.2.2 Complex initials

Kami complex initials are nasal-stop and nasal-affricate clusters and the cluster /h̥j/.<sup>13</sup> The former include seven voiced compound initials beginning with a homorganic nasal (here notated as ‘N’):

Nb    Nd    Ndz    Ndʒ    Ndʒ    Ndʒ    Ng

Examples include:

- |  |   |
|--|---|
| / <sup>H</sup> bõ/ ‘thick, rough, coarse’    | / <sup>H</sup> Nbõ/ ‘large bamboo basket’ |
| / <sup>H</sup> dɛ/ ‘brush; whet (a knife)’   | / <sup>H</sup> Ndɛ/ ‘shiver, tremble’     |
| / <sup>L</sup> dzui/ ‘herd, drive (animals)’ | / <sup>L</sup> Ndzui/ ‘finger’            |
| / <sup>L</sup> dzõ/ ‘village’                | / <sup>L</sup> Ndzõ/ ‘have one’s fill’    |
| / <sup>L</sup> dʒõ/ ‘intestines, bowels’     | / <sup>L</sup> Ndʒu/ ‘quick’              |
| / <sup>H</sup> dzi/ ‘heavy’                  | / <sup>L</sup> Ndzi/ ‘penis’              |
| / <sup>H</sup> gu/ ‘door’                    | / <sup>H</sup> Ngu/ ‘head’                |

The cluster /h̥j/ occurs infrequently, e.g. /<sup>H</sup>h̥jɔ/ ‘god, Buddha’, /<sup>H</sup>h̥jã/ ‘shoe’, /<sup>L</sup>ja-<sup>H</sup>h̥jɔ/ ‘tool, instrument’, /<sup>H</sup>ma-<sup>L</sup>h̥jũ/ ‘drop, fall’.

Seen in the context of Kham dialects (Zhāng 1993; Hú 1991:191-198; Gésāng & Gésāng 2002:73-82), Kami consonant phonemes for the most part conform to the characteristic tendencies displayed by the group, namely: (1) stops, affricates, fricatives, and nasals all contrast in voicing; (2) voiceless stops, affricates and fricatives also contrast in aspiration (with the exception of /x~χ/); (3) consonant clusters are by and large restricted to nasal-stop and nasal-affricate clusters (in Kami, with an additional cluster /h̥j/).

On a more erratic side, Kami (1) has a large number of consonantal phonemes, (2) exhibits the typologically unusual opposition between the postalveolar and the alveopalatal

<sup>13</sup> I note, however, one exception with a nasal-voiceless aspirated stop cluster: /<sup>H</sup>ta-<sup>H</sup>Nt<sup>h</sup>ui/ [t<sup>h</sup>ta-<sup>H</sup>ŋt<sup>h</sup>ui] ‘reins’.

places of articulation, and (3) has rather unusual uvular allophones of velar fricatives.

## 2.3 Rhymes

Kami has ten oral vowel phonemes, six nasal vowel phonemes, and five diphthongs (including one nasal diphthong, viz. /uẽ/), in all 21 finals. The vowel phonemes are charted in Table 4.

**Table 4:** Kami rhymes (main consultant)

<b>Oral</b>	i	e	ɛ	a	ə	u	u	ɣ	o	ɔ
<b>Nasal</b>	ĩ	ẽ		ã		ũ	ũ			õ
<b>Diphthong</b>	ei, ui	ue		ua						
<b>Nasal diphthong</b>		uẽ								

After palatal initials, phonemes /u/, /ũ/, /ui/, /ue/, and /uẽ/ are phonetically [y], [ỹ], [yi], [ye], and [yẽ], respectively. For example, /<sup>L</sup>ju/ [L̥jy] ‘year’, /<sup>L</sup>ṽũ-<sup>H</sup>wã/ [L̥ṽỹ-<sup>H</sup>wã] ‘bamboo’, /<sup>L</sup>ṽue-<sup>H</sup>ṽue/ [L̥ṽye-<sup>H</sup>ṽye] ‘two’.

Of the above phonemes, /a/, /i/, /u/, /õ/ and /ue/ have been attested in the word-initial position. Oral, nasal and diphthong phonemes in Kami are discussed presently.

### 2.3.1 Oral vowels

The phoneme /ɔ/ has two allophonic realizations in free variation /ɔ/ and /ɑɔ/, respectively. /o/ is phonetically [ou], /u/ is phonetically [uʷ], and /ɣ/ is phonetically [ɣʷ].

Close and close-mid back vowels contrast in rounding, i.e. /u/ vs. /uʷ/, and /o/ vs. /ɣ/. For example:

- /u/: /<sup>H</sup>tu/ ‘cut off’, /<sup>L</sup>du/ ‘stone’, /<sup>H</sup>ku/ ‘carve, engrave’, /<sup>H</sup>su/ ‘tooth’  
 /uʷ/: /<sup>L</sup>tuʷ/ ‘poison’, /<sup>L</sup>duʷ/ ‘poke, stab’, /<sup>L</sup>ŋgu<sup>H</sup>kuʷ/ ‘nod’, /<sup>L</sup>suʷ/ ‘bark’  
 /o/: /<sup>H</sup>to/ ‘be hungry’, /<sup>L</sup>t<sup>h</sup>a-<sup>H</sup>ko/ ‘vertical’, /<sup>H</sup>so/ ‘fate’  
 /ɣ/: /<sup>H</sup>t<sup>h</sup>ɣ/ ‘fireplace, stove, hearth’, /<sup>H</sup>kɣ/ ‘cover’, /<sup>H</sup>sɣ/ ‘shallow’

The mid vowels contrast two degrees of vowel height: /e/ vs. /ɛ/ and /o/ vs. /ɔ/, as in the following examples:

- /e/: /<sup>L</sup>te/ ‘drive away, chase’, /<sup>H</sup>de/ ‘plate’, /<sup>H</sup>ke/ ‘voice’, /<sup>H</sup>se/ ‘kill’  
 /ɛ/: /<sup>L</sup>tɛ/ ‘flag; win’, /<sup>H</sup>dɛ/ ‘rub, smear’, /<sup>H</sup>kɛ/ ‘fat (meat)’, /<sup>H</sup>sɛ-<sup>H</sup>wɔ/ ‘new’  
 /o/: /<sup>H</sup>to/ ‘be hungry’, /<sup>L</sup>t<sup>h</sup>a-<sup>H</sup>ko/ ‘vertical’, /<sup>H</sup>so/ ‘fate’  
 /ɔ/: /<sup>H</sup>tɔ/ ‘horse’, /<sup>L</sup>Ndɔ/ ‘arrow’, /<sup>H</sup>kɔ/ ‘gutter; pillar’, /<sup>L</sup>ʒu-<sup>H</sup>sɔ/ ‘widow’

Here are examples of the remaining oral vowel phonemes:

/i/: /<sup>L</sup>teɪ/ ‘steelyard’, /<sup>H</sup>di/ ‘cooking pot’, /<sup>H</sup>ki/ ‘thread’, /<sup>H</sup>si/ ‘bright’  
 /ə/: /<sup>L</sup>pə-<sup>H</sup>tə/ ‘calf’, /<sup>L</sup>Ndə/ ‘be; sit; dwell’, /<sup>L</sup>ɛi-<sup>L</sup>kə-<sup>H</sup>rə/ ‘fine’, /<sup>L</sup>sə-<sup>H</sup>pə/ ‘belly’  
 /a/: /<sup>H</sup>ta/ ‘tiger; mark’, /<sup>L</sup>da/ ‘lick’, /<sup>H</sup>ka ( <sup>H</sup>teɪ )/ ‘(one) cent’, /<sup>H</sup>sa/ ‘burn; hot’

### 2.3.2 Nasal vowels

The phoneme /ũ/ is infrequent. /ã/ is phonetically [ã̃]. Consider the following examples of nasal vowels:

/ĩ/: /<sup>H</sup>ĩ/ ‘above’, /<sup>H</sup>dĩ/ ‘fly’, /<sup>H</sup>ɛĩ/ ‘wood’  
 /ẽ/: /<sup>H</sup>tẽ/ ‘cover, quilt’, /<sup>H</sup>dẽ/ ‘seven’, /<sup>H</sup>kẽ/ ‘chase after’, /<sup>H</sup>sẽ/ ‘breast-feed’  
 /ã/: /<sup>L</sup>tã/ ‘tense’, /<sup>H</sup>dã/ ‘tie up, bind up’, /<sup>L</sup>jei-<sup>H</sup>kã/ ‘difficult, hard’, /<sup>H</sup>sã/ ‘otter’  
 /ũ/: /<sup>H</sup>t<sup>h</sup>ũ/ ‘drink’, /<sup>L</sup>dũ/ ‘hit’, /<sup>H</sup>kũ/ ‘hide something’, /<sup>L</sup>a-<sup>H</sup>sũ/ ‘aunt’  
 /ũ/: /<sup>H</sup>dũ/ ‘weed, grass’, /<sup>H</sup>sũ/ ‘three’  
 /õ/: /<sup>L</sup>tõ/ ‘bear’, /<sup>H</sup>dõ/ ‘face’, /<sup>H</sup>kõ/ ‘foot’, /<sup>H</sup>sõ/ ‘hemp’

### 2.3.3 Diphthongs

In terms of relative sonority of the two sounds involved, Kami diphthongs distinguish between (1) two falling (or descending) diphthongs, namely /ei/ ([ej]), and /ui/ ([uj]), and (2) three rising (or ascending) diphthongs, namely /ue/ ([we]), /uẽ/ ([wẽ]), /ua/ ([wa]).

The diphthong /ua/ co-occurs only with velar stops, e.g. /<sup>L</sup>gua-<sup>H</sup>ʃu/ ‘yak’, /<sup>L</sup>k<sup>h</sup>ua-<sup>H</sup>la/ ‘(wooden) basin’, the suffix /kua/ in some adjectives, e.g. /<sup>L</sup>sa-<sup>H</sup>kua/ ‘hard’. There is also a marginal diphthong /ie/ attested in a handful of words, e.g. /<sup>H</sup>kie/ ‘ladder’, /<sup>L</sup>p<sup>h</sup>ie/ ‘back, behind, outside’.

Examples of the other diphthongs are:

/ei/: /<sup>L</sup>teɪ/ ‘that, there’, /<sup>L</sup>keɪ/ ‘clothes’, /<sup>H</sup>ɛeɪ/ ‘plow’  
 /ui/: /<sup>L</sup>mo-<sup>H</sup>t<sup>h</sup>ui/ ‘matches’, /<sup>H</sup>p<sup>h</sup>ɔ-<sup>H</sup>dui/ ‘blister’, /<sup>L</sup>sui/ ‘side’  
 /ue/: /<sup>H</sup>p<sup>h</sup>a-<sup>H</sup>tue/ ‘disappear’, /<sup>L</sup>ja-<sup>H</sup>kue/ ‘bracelet’, /<sup>H</sup>ʃue/ ‘use’  
 /uẽ/: /<sup>H</sup>Nduẽ/ ‘read out loud’, /<sup>H</sup>kuẽ/ ‘wear’, /<sup>H</sup>suẽ-<sup>H</sup>lu/ ‘pea’

The inventory of vowel phonemes in the speech of my main consultant is again the most elaborated among all the surveyed consultants. In the speech of my other consultants, /ei/ merges with /e/, and /ũ/ merges with /õ/. This yields the inventory of 19 phonemes, as charted in Table 5.

**Table 5:** Kami rhymes (other consultants)

<b>Oral</b>	i	e	ɛ	a	ə	u	u	ɣ	o	ɔ
<b>Nasal</b>	ĩ	ẽ		ã		ũ				õ
<b>Diphthong</b>	ui	ue		ua						
<b>Nasal diphthong</b>		uẽ								

One final point concerning vowel phonemes is that in the majority of cases, vowel phonemes of a root remain unchanged whether in monosyllabic words or, in the same root, in the first syllable of a disyllabic word. One notable exception is /ɔ/, which, in the latter position, frequently changes to /a/. For example, /<sup>L</sup>ʃɔ/ ‘bird’ vs. /<sup>L</sup>ʃa-<sup>H</sup>pə/ ‘feather, plumage’. This phenomenon, which is fairly regular in Kami, is an example of ‘position-induced rhyme alternations’, as attested in Sè’ěrbà 色爾壩 <gser pa> and Yùshù 玉樹 <yul shul> dialects of Tibetan, as well as, to a lesser extent, among Rgyalrongic languages (Jackson Sun, p.c.).

Seen against the background of the best-documented Kham dialects (Gésāng 1989; Hú 1991:192; Qú 1991:7, 16, 88-89; Zhāng 1993:303-304; Gésāng & Gésāng 2002:76-79), Kami vowel inventory again confirms most features that are held as characteristic of the Kham group. In its more extended system (that of my main consultant), Kami has many innovative vowels (e.g. /ɛ/ and /ə/) and many diphthongs in addition to the five Old Tibetan vowels (/a, i, u, e, o/). Vowel length is not contrastive in this dialect.

On a more erratic side, unlike many Kham dialects (e.g. Gésāng & Gésāng 2002:77), Kami does not distinguish between the front and back low unrounded vowels /a/ vs. /ɑ/. Furthermore, Kami has an unusually large inventory of vowel phonemes. In addition, a striking feature of this dialect is that it does not have the phonemic glottal stop in the coda position.

## 2.4 Tone and prosodic organization

Kami has a simple tonal system, contrasting two tones in monosyllabic words: High vs. Low.<sup>14</sup> This robust opposition is confirmed in the speech of all language consultants. The precise phonetic values of the tones, on the other hand, vary among the consultants. The opposition is (i) between a low rising (13) and a high level tone (55) in the speech of my main consultant, (ii) between a low rising (13) and a high falling tone (53) in the speech of two other consultants, and (iii) between a mid-level (33) and a high falling tone (53) in the speech of the remaining consultant. The binary contrast is here treated as the register opposition, notationally /L/ vs. /H/.<sup>15</sup> Consider these examples:

<sup>14</sup> In addition, a small number of monosyllabic roots with voiced initials have unstable tones, e.g. /<sup>L</sup>ɲue~<sup>H</sup>ɲue/ ‘two’, /<sup>L</sup>dẽ~<sup>H</sup>dẽ/ ‘seven’ (to be further discussed in §3.3).

<sup>15</sup> In many Tibetan dialects, when uttered in isolation, low-register syllables are characterized by a rise in pitch, whereas high-register syllables are characterized by a fall in pitch (Sun 1997:491, 499). Low register roots and words in Kami are here analyzed as combining a lexical low tone and a

<sup>L</sup> gu/ ‘kneel’	<sup>H</sup> gu/ ‘divide, split’
<sup>L</sup> tuw/ ‘poison’	<sup>H</sup> tuw/ ‘spurt, spray’
<sup>L</sup> tʂa/ ‘precipice, cliff’	<sup>H</sup> tʂa/ ‘fear, be afraid of’
<sup>L</sup> ɕi/ ‘field, land’	<sup>H</sup> ɕi/ ‘wood, tree’
<sup>L</sup> ni/ ‘fire’	<sup>H</sup> ni/ ‘eye’

In lexical words of over one syllable, three tonal patterns are attested. The same three-way distinction in tone patterns is also attested in noun-noun, noun-adjective, and verb-object compounds. The tonal contrasts can be any of the three possibilities:<sup>16</sup>

(1) H tone on all syllables (/H-...-H/), e.g. <sup>H</sup>p<sup>h</sup>a <sup>H</sup>χɔ/ ‘slaughter a pig’, <sup>H</sup>ti-<sup>H</sup>dzi/ ‘wine pot’, <sup>H</sup>ʃa-<sup>H</sup>bu-<sup>H</sup>lo/ ‘beige, light blue-grey’

(2) a sequence of L tones on all syllables up to the penultimate and H on the last syllable (/L-...-H/), e.g. <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>χɔ/ ‘pork’, <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>gue/ ‘wild pig’, <sup>L</sup>ti-<sup>H</sup>dzi/ ‘cigarette’, <sup>L</sup>tɛ-<sup>L</sup>se-<sup>H</sup>ɕi/ ‘mulberry tree’

(3) a sequence of H tone on the first syllable and L on all following syllables (/H-...-L/), e.g. <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>χɔ/ ‘slaughter’, <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>gue/ ‘turn one’s head, turn round’, <sup>H</sup>pi-<sup>L</sup>tɔ-<sup>L</sup>so/ ‘log raft’

Overall in Tibetan, as argued by Sun (1997:489), the primary register contrast is borne by the word-initial syllable, whereas tone is neutralized on all remaining syllables. Kami appears to partially conform to this generalization. The tonal pattern of at least some polysyllabic words can be analyzed as conditioned by the lexical tone of the first syllable. If the tone of the first syllable is /H/, the tone of all following syllables will also be H. If the tone of the first syllable is /L/, the tone of all following syllables will also be L. In addition, in the latter case, the final syllable of the polysyllabic domain will carry the post-lexical H tone.<sup>17</sup> Here are some examples:

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boundary H tone, added post-lexically. The addition of post-lexical H tone stems from the prohibition of all L-words in this language. On monosyllabic words with /L/ tone, both the lexical L tone and the boundary H tone crowd on the only syllable there is, e.g. <sup>L</sup>ni/ [ni<sup>13</sup>] ‘fire’. On words and compounds of two syllables or more, the boundary tone is assigned to the final syllable of the word, e.g. <sup>L</sup>ni <sup>H</sup>Nbe/ [ni<sup>33</sup> Nbe<sup>55</sup>] ‘catch fire, be on fire’ (< <sup>L</sup>ni/ [ni<sup>13</sup>] ‘fire’, <sup>L</sup>Nbe/ [Nbe<sup>13</sup>] ‘catch’).

<sup>16</sup> An additional observation is that compounds of over two syllables often have one of the three tonal patterns on the leftmost two syllables. The remaining syllables lose their tones and are treated here as extrametrical syllables. Phonetically, these syllables are realized on a low pitch. For example, <sup>L</sup>Nbu-<sup>H</sup>ru <sup>L</sup>teɔ/ ‘scented tea’ (< <sup>L</sup>Nbu-<sup>H</sup>ru/ ‘flower’, <sup>L</sup>teɔ/ ‘tea’); <sup>L</sup>dʒa-<sup>H</sup>ye <sup>L</sup>xu-<sup>L</sup>wɔ/ ‘traditional Tibetan hat’ (> <sup>L</sup>dʒa-<sup>H</sup>ye/ ‘India’, <sup>L</sup>xu-<sup>H</sup>wɔ/ ‘hat’).

<sup>17</sup> Formally, this process (also shared with the neighboring Shīxīng language, Chirkova & Michaud 2009) can be accounted for as left-to-right tone spreading. In this analysis, tonal patterns in polysyllabic domains are phonetic implementation of the lexical H and L tones on monosyllables. In other words,

$/^Hk\delta/$  ‘foot’ +  $/^Hzi/$  ‘trace’ >  $/^Hk\delta-^Hzi/$  ‘footprint’  
 $/^Hk\delta/$  ‘foot’ +  $/^LNdzui/$  ‘finger’ >  $/^Hk\delta-^HNdzui/$  ‘toe’  
 $/^Lj\omega/$  ‘hand’ +  $/^Hzi/$  ‘trace’ >  $/^Lja-^Hzi/$  ‘hand print, finger print’  
 $/^Lza/$  ‘yak’ +  $/^H\chi\omega/$  ‘meat’ >  $/^Lza-^H\chi\omega/$  ‘yak meat’

Notably, this analysis has many counterexamples, chiefly resulting from a clear preference of my main consultant for the /L-H/ tonal pattern on disyllabic nouns, regardless of the tone of the word-initial syllable. For example:

$/^Hp^ha/$  ‘pig’ +  $/^H\chi\omega/$  ‘meat’ >  $/^Lp^ha-^H\chi\omega/$  ‘pork’ (expected:  $/^Hp^ha-^H\chi\omega/$ )  
 $/^Ht\omega/$  ‘horse’ +  $/^Lr\omega/$  ‘pen, ring’ >  $/^Lt\omega-^Hr\omega/$  ‘horse corral, stable’ (expected,  $/^Ht\omega-^Hr\omega/$ )

Furthermore, the analysis of the tonal pattern in polysyllabic domains as conditioned by the tone of the word-initial syllable falls short of explaining the origin of the third tonal pattern, viz. /H-L/. This tonal pattern by and large occurs on disyllabic verbs (formed with a directional prefix) and verb-object compounds. If the contrastive tonal patterns on polysyllabic domains were directly related to the two lexical tones, disyllabic verbs formed with directional prefixes should exhibit two distinct tonal patterns, correlated with the two contrastive lexical tones of the verb roots, with the surface tones of toneless verbal prefixes conditioned by the lexical tone of the verb root.<sup>18</sup> This is, however, not the case, as the tonal pattern of disyllabic verbs in the speech of my main consultant is in most instances /H-L/, irrespective of the lexical tone of the root.<sup>19</sup> For example:

$/^Ht^h\tilde{e}/$ ‘pull’	$[^Lka]$ ‘put, place’
$/^Hja-^Lt^h\tilde{e}/$ ‘pull up’	$[^Hja-^Lka]$ ‘put upward’
$/^Hma-^Lt^h\tilde{e}/$ ‘pull down’	$[^Hma-^Lka]$ ‘put down’
$/^Hts^ha-^Lt^h\tilde{e}/$ ‘pull towards oneself’	$[^Hts^ha-^Lka]$ ‘put near oneself’
$/^Hp^ha-^Lt^h\tilde{e}/$ ‘pull away from oneself’	$[^Hp^ha-^Lka]$ ‘put away from oneself’

Altogether, I note that in verbs formed through prefixation, the syllables carrying /L/ tone differ from those carrying /H/ tone in prominence (duration and intensity) in that the syllable carrying /H/ tone is longer and louder than the syllable with /L/ tone in the same word. The distinction in prominence is here taken as indication of the stressed status of the syllable carrying the H tone and the unstressed status of the toneless prefixes carrying the phonological L tone.

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the /H-H/ and the /L-H/ tonal patterns are the extension of the lexical tones /H/ and /L/, respectively. The mode of association of tones to syllables as one-to-one mapping of tones to available syllables, followed by the spreading of the last tone and the addition of a post-lexical boundary H tone.

<sup>18</sup> Kami verbal prefixes are here analyzed as lexically unspecified for tone, as elsewhere in Tibetan.

<sup>19</sup> In careful speech, the verb root may be pronounced with the etymological tone on the verbal root and the high tone on the prefix, e.g.  $[p^ha^{55}-t^h\tilde{e}^{55}]$ ,  $/^Hp^ha-^Ht^h\tilde{e}/$ , ‘pull up’,  $[p^ha^{55}-ka^{13}]$ ,  $/^Hp^ha-^Lka/$ , ‘put down’.

To account for these observations, I propose to analyse the prosodic organization of Kami as combining (1) a word-tone system, whereby the primary register contrast is conditioned by the tone of the word-initial syllable, as widespread in Tibetan dialects, with (2) a system of stress accent, iambic, or right-prominent on nominal constructions, and trochaic, or left prominent on verbal constructions, with some instances of lexically marked stress placement.<sup>20</sup>

Seen in an areal context, the prosodic system of Kami is similar to those of neighboring Qiangic languages, all of which, to a different extent, combine a tone system with a stress system. The prosodic system of Kami is particularly close to that of its immediate geographic neighbor Shǐxīng (Chirkova & Michaud 2009). The important dissimilarity between the two languages is the location of stress, which is domain-initial in Shǐxīng and variable in Kami, depending on the syntactic organization of the expression.

Seen against the background of Kham dialects, Kami has a rather impoverished tonal system. For example, Bātáng has been described as having four tones on monosyllables, namely (i) high even (high long, 55), (ii) high falling (high short, 53), (iii) low rising (low long, 13), (iv) low rising-falling (low short, 23), and (v) an additional light tone (11) on extrametrical syllables (Gésāng 1989:350-351).<sup>21</sup>

A similar tonal system with four contrastive tones on monosyllables, contrasting two level and two contour tones, has also been proposed by Gésāng & Gésāng (2002:107-110) for Dégé. However, Häsler (1999:29) reports that in her acoustic study of the tones in the Dégé dialect, she was unable to identify contour differences between the four tones as suggested in the Chinese literature. She furthermore suggests that the distinctive features of the prosodic organization of Dégé are rather syllable length and two register tones, High and Low. The same analysis in terms of syllable length and register distinction is also likely to be applicable to the prosodic organization of Bātáng. In this context, the two conspicuous features of the prosodic organization of Kami are (1) the absence of contrastive length, and (2) the presence of a stress-based system.

### 3. Phonological history

This section presents a phonological history of Kami recovered through a comparison with the phonological structure of OT.

Similar to other Kham dialects, the extremely complicated syllable structure of OT, viz. (b)(Cp)C(M)V(C)(s/d), is depleted in Kami to evolve into a simpler syllable structure of the (C)(C)V(V) type.<sup>22</sup> The major developments include gradual disappearance of both prefixal

<sup>20</sup> A system of stress accent has been described for some Amdo dialects, and Zhongu, Sun (2003:778).

<sup>21</sup> For example: /ka<sup>55</sup>/ <ka ba> ‘pillar’, /ka<sup>53</sup>/ <bkag> ‘hinder’, /ka<sup>13</sup>/ <gar> ‘where’, <gag> /ka<sup>23</sup>/ ‘obstruct, hinder’ (Gésāng 1989:350-352, 354-356).

<sup>22</sup> Within the OT syllable canon (b)(Cp)C(M)V(C)(s/d), I distinguish between the following phonological slots: Cp: prefixal consonants, *g-*, *d-*, *b-*, *r-*, *l-*, *s-*, *n-* (WT *a-chung*), of which *r-*, *l-* and *s-* can further

consonants and consonantal codas (conceivably, through the processes of weakening and assimilation, that are likely to have proceeded through the consecutive stages of devoicing, lenition, loss of obstruency, and attrition). The elision of prefixal consonants led to the development of high tone, whereas the disappearance of consonantal codas led to the development of innovative vowels and diphthongs.

One inevitable consequence of the drastic simplification of the OT syllable canon is extensive homophony in Kami monosyllabic words. For example, the words /<sup>H</sup>tsu/ and /<sup>H</sup>tʃi/ have three distinct meanings each: /<sup>H</sup>tsu/ (1) ‘top of the head’ <gtsug>; (2) ‘stick, set a plant in the ground; stab’ <btsugs>; (3) ‘squat’ <tsog?>; /<sup>H</sup>tʃi/ (1) ‘monkey’ <spre’u>, (2) ‘ask’ <’dri>, (3) ‘wrap around’ <dkri>.

### 3.1 History of Kami onsets

The main developments of Kami onsets are conditioned by the presence or absence of OT prefixes. Unprefixed voiceless stops and affricates remain unchanged and high-toned, whereas unprefixed voiceless fricatives become high-toned and aspirated. Unprefixed voiced obstruents become devoiced and low-toned.

The major trend for root initials with oral prefixal consonants (*g-*, *d-*, *b-*, *r-*, *l-*, *s-*) is their disappearance irrespective of their voicing, or voicing of the root initial. In addition, the dental spirant prefix *s-* conditions the development of voiceless nasal initials. Before being elided, the prefixes acted as a buffer against devoicing of the following root initials, yielding modern voiced obstruents and sonorants. Nasal prefixal consonants (*m-* and *n-*), on the other hand, mostly give rise to modern nasal-stop and nasal-affricate clusters. Altogether, these are common Kham developments, e.g. Hú (1991:191-198), Zhāng (1993), and Gésāng & Gésāng (2002:72-91). A summary table of Kami initial consonants and their OT origins is provided in Appendix 1.

#### 3.1.1 OT simple initials

OT obstruents include bilabial, dental, velar, and glottal stops, dental and postalveolar affricates, and dental, postalveolar, and glottal fricatives.

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be combined with the pre-prefixal consonant *b-*; C: root initial, which can be filled by any WT consonant; M: medials *-w-*, *-y-* and *-r-*; V: nucleus vowel, which may be filled by any WT vowel; C: consonantal codas, *-b*, *-d*, *-g*, *-m*, *-n*, *-ŋ*, *-r*, *-l*, *-s*, of which grave consonants may further combine with *-s*, and coronal consonants may further combine with *-d*. Overall, the development of OT consonantal clusters in the prefixal position (i.e. *bCp-*) and in the coda position (i.e. *-Cs/d*) in Kami is that of a simple consonantal prefix and a simple consonantal coda, respectively. For example, <brgya> ‘hundred’ /<sup>H</sup>dʒɔ/ vs. <rgya> /<sup>H</sup>dʒɔ/; <bzang> /<sup>H</sup>zɔ̃/ ‘good’ vs. <zangs> /<sup>H</sup>sɔ̃/ ‘copper’. For this reason, OT consonantal clusters in the prefixal position and in the coda position need not concern us.

OT syllables with a glottal stop onset (corresponding to syllables with the *a-chung* and *a-chen* as their base in WT, e.g. Beyer 1992:57, fn.3) are realized as vowel-initial syllables in Kami, preceded by a non-phonemic glottal stop, unmarked in the transcriptions. For example:

<a ma> /<sup>H</sup>a-<sup>H</sup>mǝ/ ‘mother’  
 <o ma> /<sup>L</sup>u-<sup>H</sup>ǝ/ ‘milk’

### 3.1.1.1 Stops and affricates

The place of articulation of OT stops and affricates remains unchanged in Kami. Consider the following examples:

<pi wang> /<sup>H</sup>pi-<sup>H</sup>wǝ/ ‘guitar, lute, violin’  
 <spu> /<sup>H</sup>pǝ/ ‘(animal) hair, fur’  
 <phag> /<sup>H</sup>p<sup>h</sup>a/ ‘pig’  
 <ba> /<sup>L</sup>pǝ/ ‘cow’

<rta> /<sup>H</sup>tǝ/ ‘horse’  
 <stag> /<sup>H</sup>tǝ/ ‘tiger’  
 <thab> /<sup>H</sup>t<sup>h</sup>ǝ/ ‘fireplace, stove, hearth’  
 <dar> /<sup>L</sup>tǝ/ ‘flag’  
 <rdo> /<sup>L</sup>du/ ‘stone’

<ka> ‘pillar’, <rka> ‘gully, gutter’, both /<sup>H</sup>kǝ/  
 <kha> /<sup>H</sup>k<sup>h</sup>ǝ/ ‘mouth’  
 <ga> /<sup>L</sup>ka-<sup>L</sup>kǝ/ ‘where’  
 <sga> /<sup>H</sup>gǝ/ ‘saddle’

<rtsa> /<sup>H</sup>tsǝ/ ‘root’  
 <tshang> /<sup>H</sup>ts<sup>h</sup>ǝ/ ‘household, family; nest’  
 <rdzong> /<sup>H</sup>dzǝ/ ‘county’

In addition, the OT initial *dz-* at times develops into /z/ in Kami, e.g. <rdza ma> /<sup>L</sup>za-<sup>H</sup>ǝ/ ‘clay baking pot’, <rdzi ma> /<sup>L</sup>zǝ-<sup>H</sup>ǝ/ ‘eyebrow; eyelash’.

<bcu> /<sup>H</sup>teǝ/ ‘scoop up, ladle out’  
 <lcags> /<sup>H</sup>teǝ/ ‘iron’  
 <cha> /<sup>H</sup>te<sup>h</sup>ǝ/ ‘pair’  
 <ja> /<sup>L</sup>teǝ/ ‘tea’  
 <ljid> /<sup>H</sup>dzi/ ‘heavy’

### 3.1.1.2 Fricatives

The OT unprefixated voiceless dental fricative becomes aspirated in Kami, whereas its voiced counterpart, *z-*, becomes devoiced. Prefixated dental fricatives preserve the original quality of the root initial (in terms of voicing and aspiration) and become high-toned. Consider some relevant Kami examples:

<sa> /<sup>H</sup>sʰɔ/ ‘earth, land’  
 <bsad> /<sup>H</sup>se/ ‘kill’  
 <zag> /<sup>L</sup>sa/ ‘shed (tears)’  
 <bzi> /<sup>L</sup>zə/ ‘be drunk’

Some exceptions to this altogether pervasive change include <so> /<sup>H</sup>su/ ‘tooth’ and <so ma> /<sup>H</sup>sɿ/ ‘hemp’.

The development of OT postalveolar fricatives is extremely variegated among Tibetan dialects, with at least two distinct paths of development (in all cases, prefixed OT fricatives preserve the original voicing and aspiration quality of the initial):

(1) velar fricatives, as in Dégé (Häsler 1999:33, 38) and Bātáng (Gésāng 1989:339)

(2) retroflex fricatives, as in dialects of Dìqìng Prefecture, represented here by Zhōngdiàn (Lù 1990; Wang 1996; Hongladarom 1996), Dōngwàng (Bartee, this volume) as well as in Zhuóní (卓尼 <co ne>, Qú 1962), Dōngyì 東義 (a variety of Tibetan spoken at Dàochéng 稻城 <dab pa> county in Gānzī Prefecture, see Sun 2003:782)

In both cases, the development may be complicated by the process of palatalization of the initial before the original OT high front vowels *or* before modern front vowels. This process may be phonologically conditioned, as is the case in some Dégé dialects that have fronted and palatalized allophone phonemes before high vowels, and velarized allophone phonemes before back vowels (Häsler 1999:15-16; Gésāng & Gésāng 2002:97). Alternatively, such a split may be phonemicized, as in Zhongu Tibetan 熱務溝 <zho ngu> (Sun 2003:782). In this dialect, OT postalveolar spirants turn into retroflexes in most phonological environments, except before modern front vowels, where they remain postalveolar.

The developments of OT postalveolar fricatives in Kami are characterized by a similar phonemic split, which turns the original OT postalveolar fricatives into alveolopalatal fricatives before the original OT high front vowels and into uvular fricatives elsewhere. Notably, in the latter environment, viz. before non-high non-front vowels, Kami reflexes of OT voiceless aspirated postalveolar fricatives are identical to those of OT voiceless plain postalveolar fricatives. In addition, the ongoing process of palatalization before modern front vowels continues to transform some words with uvular initials into those with alveolopalatal or velar

initials. For example: <bshad> /<sup>H</sup>ɕe/ ‘speak’, <shad> /<sup>H</sup>ɕe/ ‘comb’, <bzhar> /<sup>L</sup>ʎe/, [L<sup>L</sup>ʎe]~[L<sup>L</sup>ɕe] ‘shave’.<sup>23</sup> For example:

<zhim> /<sup>L</sup>ɕẽ/ ‘tasty, delicious’

<bzhi> /<sup>H</sup>zə/ ‘four’

<shi> /<sup>H</sup>ɕ<sup>h</sup>ə/ ‘die’<sup>24</sup>

<zho> /<sup>L</sup>xu/ ([L<sup>L</sup>xu]~[L<sup>L</sup>ɕu]) ‘yoghurt’

<gzhu> /<sup>H</sup>ʎə/, [L<sup>L</sup>ɕə] ‘bow (weapon)’

<sha> /<sup>H</sup>xɔ/, ([L<sup>L</sup>ɕɔ]) ‘meat’

<bsha> /<sup>H</sup>xɔ/ ([L<sup>L</sup>ɕɔ]) ‘slaughter’

Retroflex reflexes of OT postalveolar fricatives in the dialects of Dìqìng Prefecture suggest that there was some rhotic quality present in the original OT sound.<sup>25</sup> A Qiangic neighbour of Kami, Lizu, evidences a parallel development, whereby uvular phonemes in the Mùlǐ dialect of Lizu correspond to retroflex phonemes in another dialect of this language (spoken in the county of Gānlùò) (Chirkova 2008). A similar (conceivably, areal) motivation underlying the development of uvular rather than retroflex reflexes in Kami and Lizu may be called for.

Uvulars have been attested in many peripheral Kham dialects spoken in the multi-lingual historical border areas between Tibet and China that are currently known as the ‘ethnic corridor’ of Sìchuān and Yúnnán provinces.<sup>26</sup> Consequently, as argued by Jackson Sun (2003:782), it remains a possibility that some instances of these uvulars represent retention of ancient consonantal contrasts which predate standard Written Tibetan. In his discussion of Zhongu uvular phonemes, Sun (2003:782-783) proposes three test words that often contain uvular onsets in the Tibetan dialects that have phonemic uvulars, namely: ‘snow’, ‘bitter’, and ‘understand’. Notably, the three words do not have uvular reflexes in Kami, viz. /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>wɔ/ ‘snow’, /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tu/ ‘bitter’, and /<sup>H</sup>hɔ-<sup>L</sup>ku/ ‘understand’. Neither do the same test words have uvular reflexes in the Qiangic languages of Mùlǐ: Shíxīng, Pǔmǐ, Lizu, and Nàmùzī, with the only exception of ‘bitter’, Shíxīng /<sup>HL</sup>q<sup>h</sup>ɔ-sɔ̃/, Nàmùzī /luo<sup>31</sup>-q<sup>h</sup>a<sup>31</sup>/ (with the directional prefix /luo-/). At the same time, what appears to be a common areal feature underlying the velar-uvular distinction in Kami

<sup>23</sup> An alternative development, suggested by an anonymous reviewer, would be for the postalveolar fricatives to become velar and uvular fricatives. These are to be later palatalized to alveopalatals before the original OT *-i* (which first becomes Kami /i/ and later /ə/) and OT *ad* (which becomes Kami /e/). This further implies that the palatalization occurred before the change of OT *-i* to Kami /ə/.

<sup>24</sup> Some exceptions include <shig> /<sup>H</sup>ei/ ‘louse’, <shing> /<sup>H</sup>ẽi/ ‘wood’, <phyi> /<sup>H</sup>ʎə/ ‘be late’, in that these words lack aspiration.

<sup>25</sup> For instance, these developments of OT postalveolar fricatives in Kami may tentatively be taken as evidence of the postinitial *-r-* occurring after postalveolar fricatives in Proto-Tibetan (Beyer 1992: 86).

<sup>26</sup> For example, Yǎjiāng 雅江 <nyag chu kha>, Acuo (2008); Shíbàzi 石壩子 <kun sngon> (Sōngpān 松潘), Huá & Gǎzāngtā (1997); Zhongu (Sōngpān), Sun (2003:782-783).

and in the Qiangic languages of Müli is a pronounced tendency to uvularize velars before low vowels, possibly in connection with some rhotic quality of the original rhyme, cf. Pǔmǐ (Lù 2001:43-44), Ersu (Sūn 1982:243). This feature may have been phonemicized in some varieties, giving rise to a full-fledged uvular series, e.g. Shǐxīng (Huáng & Rénzēng 1991).

Finally, OT glottal fricative (WT *h-*) remains unchanged in Kami. For example:

<ha ko> /<sup>H</sup>hɔ-<sup>L</sup>ku/ ‘understand’  
 <hur thag> /<sup>H</sup>hu-<sup>L</sup>tʰa/ ‘diligent, conscientious’  
 <ham> /<sup>H</sup>p<sup>h</sup>a-<sup>H</sup>hã/ ‘become meldewed’ (with the directional prefix /p<sup>h</sup>a-/ ‘outward’)

### 3.1.2 OT sonorants

OT sonorants include four nasals (*m, n, ɲ, and ŋ*), two liquids (*r, l*), and two glides (*w, j*).

#### 3.1.2.1 OT nasals

OT simplex nasals are generally kept as such in Kami, unless preceded by the prefixed *s-*, which changes them into voiceless nasals. This appears to be a common development in Kham dialects, all of which have symmetrical pairs of voiced and voiceless nasals at four places of articulation (e.g. Bātáng, Gésāng 1989:339; Dégé, Häsler 1999:44; Dōngwàng, Barte, this volume). This feature is therefore promoted to one of the characteristic traits of the entire group (e.g. Gésāng & Gésāng 2002:74). For example:

<ma mgal> / <sup>H</sup> mã- <sup>H</sup> ŋgi/ ‘chin, jaw’	<smag? bshos?> / <sup>L</sup> mã- <sup>H</sup> χu/ ‘dinner’
<gnam> / <sup>H</sup> nã/ ‘sky, heaven’	<snabs> / <sup>H</sup> nã/ ‘snivel, snot’
<myig> / <sup>H</sup> ɲi/ ‘eye’	<smyin> / <sup>H</sup> ɲi/ ‘ripen’
<rngon> / <sup>H</sup> ŋuẽ/ ‘hunt’	<sngon> / <sup>H</sup> ŋuẽ/ ‘front’

#### 3.1.2.2 OT liquids

The development of OT *l-* is conditioned by the presence or absence of a prefixal consonant. Unprefixed *l-* undergoes a relatively unusual development, whereby it becomes /j/ in Kami, e.g.:

<lag> /<sup>L</sup>jɔ/ ‘hand’  
 <lo> /<sup>L</sup>ju/ ‘year’

On the other hand, when preceded by an OT consonantal prefix, the root initial *l-* remains unchanged in Kami. For example:<sup>27</sup>

<sup>27</sup> The WT *sr-* and *sl-* clusters are traditionally analyzed as the root initial *s-* followed by medials *-r-* and *-l-*. They are therefore discussed in the section on consonant clusters (§3.1.3).

<gla> /<sup>H</sup>lɔ/ ‘musk deer’  
 <glo> /<sup>H</sup>lu/ ‘bellyband, saddle girth’

While held as infrequent and unusual until recently, the change from OT *l-* to *j-* in unprefixated syllables is being discovered in a growing number of dialects, centering around the historical frontier areas between Tibet and China. Tibetan dialects, in which this change has been documented include Báimǎ (Zhāng 1994a:13; Zhang 1997; Huáng & Zhāng 1995:91), Dōngwàng (Bartee, this volume), and many dialects of Dìqíng Prefecture and of Déróng 得榮 <sde rong>, Xiāngchéng 鄉城 <phyag phreng>, and Dàochéng 稻城 <dab pa> Counties, as reported by Suzuki (2008).

OT *r-* remains unchanged in Kami, e.g.:

<ra> /<sup>L</sup>rɔ/ ‘sheep; garden’  
 <bu ram> /<sup>L</sup>pə-<sup>H</sup>rã/ ‘brown sugar’

### 3.1.2.3 OT approximants

The OT glide *w-* remains unchanged in Kami. The glide *y-*, on the other hand, underwent a rather unusual development, whereby it changed to spirant /ʒ/ (/z/ in the speech of my other consultants). (A similar development from *y-* to *z-* has also been reported in Zhongu, Sun 2003:797, and Dōngwàng, Bartee, this volume.) Consider some Kami examples:

<wa> /<sup>L</sup>wɔ/ ‘fox’  
 <yob> /<sup>L</sup>ʒu/ (/<sup>L</sup>zu/) ‘stirrup, steps’

OT syllables with no consonantal initial (WT *a-chung* and *a-chen*) mostly correspond to syllables beginning with a vowel in Kami. For example:

<‘a ma> /<sup>H</sup>a-<sup>H</sup>mǎ/ ‘mother’  
 <‘ug pa> /<sup>H</sup>u-<sup>H</sup>hu/ ‘owl’

### 3.1.3 OT clusters with prefixal *m-* and *n-*

OT nasal prefixes *m-* and *n-* merge before obstruent root initials, resulting in Kami nasal-stop and nasal-affricate clusters. The nasal prefix *m-* elides before another nasal. For example:

<mgo> /<sup>H</sup>ŋgu/ ‘head’  
 <mdzod> /<sup>H</sup>ŋdzue/ ‘room, chamber’

<mna> /<sup>H</sup>nǎ/ ‘oath’  
 <mna> /<sup>H</sup>nɛ/ ‘press’

<dar> /<sup>H</sup>Ndɛ/ ‘shiver, tremble’  
 <bri> /<sup>H</sup>Ndzə/ ‘female yak’

Some additional observations concerning the developments of OT clusters with nasal prefixes in Kami can be made:

(1) When prefixed to a voiceless aspirated stop (and in some instance, also to a voiced stop), *m-* and *n-* often elide without any ostensible trace. Consequently, modern Kami reflexes of such initial clusters exhibit developments of a simple root initial, as if a nasal prefix were not there in the first place. (A similar development has also been reported for Dégé, Häslér 1999: 34; Zhōngdiàn, Wang 1996:62; and Dōngwàng, Btree, this volume.) For example:

<khru> /<sup>H</sup>tɕə/ ‘wash’  
 <thung> /<sup>H</sup>tʰũ/ ‘drink’  
 <phug> /<sup>H</sup>pʰu/ ‘punch a hole’  
 <bri> /<sup>H</sup>tɕə/ ‘write’

<mchin pa> /<sup>H</sup>tɕʰi-<sup>H</sup>Nbɔ/ ‘liver’  
 <mthong> /<sup>H</sup>tʰɕ/ ‘see’  
 <mtsho> /<sup>H</sup>tsʰu/ ‘lake’  
 <mkhris pa> /<sup>L</sup>tɕʰi-<sup>H</sup>pɔ/ ‘gall bladder’

(2) In many instances the prefixation of *m-* and *n-* to a voiced root initial fails to condition the development of high tone, as in the following words (to be further discussed in §3.3):

<grang> /<sup>L</sup>Ndzɕ/ ‘have one’s fill’  
 <bu> /<sup>L</sup>Nbə/ ‘insect, bug’  
 <mje> /<sup>L</sup>Ndzi/ ‘penis’  
 <mdzub> /<sup>L</sup>Ndzui/ ‘finger’

(3) Some reflexes of Tibetan etymons with a prenasalized cluster initial with the prefixed *n-* have a plain nasal initial reflex in Kami. Such reflexes are mostly in free variation with regular reflexes with a nasal-stop cluster. For example, <di> /<sup>H</sup>Nde-<sup>H</sup>ne/ ‘this’, <bag> /<sup>L</sup>Nba-<sup>L</sup>ma/ ‘mask’, <sbrang> /<sup>L</sup>Nbɕ-<sup>L</sup>mɕ/ ‘bee; wasp’ (the change from *sbr-* to /Nb-*m*/ is discussed in §3.1.5).

(4) Finally, some WT words with a plain initial or those with an initial preceded by an oral prefixed consonant have Kami equivalents with a nasal-stop initial cluster. For example, <zam pa> /<sup>L</sup>Ndza-<sup>H</sup>Nbɔ/, <thang rag> /<sup>L</sup>Ndu-<sup>H</sup>ra/ ‘silver fir’, <dgun ka> /<sup>L</sup>Nga-<sup>H</sup>Ngɔ/ ‘winter’, <pus mo> /<sup>H</sup>pa-<sup>H</sup>Nbu/ ‘knee’, <phu thung> or <phu dung> /<sup>L</sup>pʰə-<sup>H</sup>Ndũ/ ‘sleeve’.

### 3.1.4 OT cluster initials with medials (-w-, -r-, -y-)

#### 3.1.4.1 Medial -w- (*wa zur*)

WT *wa zur*, whose precise OT phonetic value remains uncertain, and which at least in some instances appears to be a purely graphic convention to distinguish certain homophones, has zero reflex in Kami, as in most Tibetan dialects. For example:

<dang po> /<sup>L</sup>tɕ<sup>H</sup>Nbu/ ‘first’  
 <dwangs mo> /<sup>L</sup>tɕ<sup>H</sup>mo/ ‘clear’

<sha> /<sup>H</sup>xɔ/ [ʰχɔ] ‘meat’  
 <shwa ba> /<sup>L</sup>xɔ/ [ʰχɔ] ‘deer’

#### 3.1.4.2 Medial -r- (*Pr-, Tr-, Kr-*)

OT *Pr-*, *Tr-* and *Kr-* clusters all merge as retroflexed affricates in Kami (the developments of the OT spirant-based clusters *sr-* and *hr-* are considered in §3.1.5). For example:

<phrad> /<sup>H</sup>tɕ<sup>h</sup>ue/ ‘meet’  
 <brag> /<sup>L</sup>tɕa/ ‘rock, cliff’  
 <sbrang> /<sup>H</sup>dzɕ/ ‘honey; sugar’  
 <drug> /<sup>L</sup>tɕuu/ ‘six’  
 <skra> /<sup>H</sup>tɕɔ/ ‘(human) hair’  
 <khrag> /<sup>H</sup>tɕ<sup>h</sup>a/ ‘blood’  
 <gro> /<sup>L</sup>tɕu/ ‘wheat’

#### 3.1.4.3 Medial -y- (*Py-, Ky-, My-*)

OT palatal medial -y- can combine with bilabial and velar stops, as well as with the bilabial nasal *m-*. The bilabial nasal *m-*, followed by the medial -y-, becomes Kami /ɲ/, as in /<sup>H</sup>ɲi<sup>H</sup>Nbɔ/ <smyon pa> ‘madman, lunatic’.

OT velar stops taking the -y- medial change into postalveolar affricates in the speech of my main consultant and into alveopalatal affricates in the speech of my other consultants. For example:

<gyang> /<sup>L</sup>tɕɕ/ (/<sup>L</sup>teɕɕ/) ‘wall’  
 <khyod> /<sup>H</sup>tɕ<sup>h</sup>ue/ (/<sup>L</sup>te<sup>h</sup>e/, note the irregular tone of this form) ‘thou’

OT bilabial stops taking the -y- medial, on the other hand, change into postalveolar fricatives in the speech of my main consultant and into dental fricatives in the speech of my other consultants. For example:<sup>28</sup>

<bya> /<sup>L</sup>ʃɔ/ (/<sup>L</sup>sɔ/) ‘bird; chicken’  
 <dbyar ka> /<sup>L</sup>ʒɛ-<sup>H</sup>k<sup>h</sup>ɔ/ (/<sup>H</sup>ʒɛ-<sup>H</sup>k<sup>h</sup>ɔ/) ‘summer’  
 <mar dpyang> /<sup>H</sup>ma-<sup>L</sup>ʃɔ/ (<yar dpyang> /<sup>L</sup>ja-<sup>H</sup>sɔ/) ‘hang’  
 <phyags> /<sup>H</sup>ʃ<sup>h</sup>a/ (/<sup>H</sup>s<sup>h</sup>a/) ‘sweep’  
 <phyen> /<sup>H</sup>ʃ<sup>h</sup>ɛ/ (/<sup>H</sup>s<sup>h</sup>ɛ/) ‘fart’

Before the original OT front vowels *i* and *e*, modern reflexes of OT *Ky*- and *Py*- clusters merge with those of OT postalveolars. For example:

<bye> or <byi'u> /<sup>L</sup>ɛi/ (/<sup>L</sup>ɛi-<sup>H</sup>ka/ or /<sup>H</sup>ɛi-<sup>H</sup>ka/) ‘little bird; sparrow’  
 <phye> /<sup>H</sup>ɛi/ (/<sup>L</sup>ja-<sup>H</sup>si/) ‘close (verb)’  
 <shig> /<sup>H</sup>ɛi/ (also /<sup>H</sup>ɛi/ for my other consultants) ‘louse’ (note the irregular lack of aspiration in the latter two words)

In addition, the ongoing process of palatalization before modern front vowels continues to transform some (mostly high frequency) words with postalveolar initials into those with alveolopalatal initials. For example: <brgyad> /<sup>H</sup>dze/ ‘eight’, <rgyan bzhag> [<sup>H</sup>tɛɛ<sup>L</sup>ka] ‘place a bet’.

Altogether, it is conceivable that the complex developments attested in the speech of my main consultant reflect a stage predating those in the speech of my other consultants. This would entail that Kami reflexes of OT *Ky*- and *Py*- clusters (i.e. postalveolar affricates and fricatives) were originally distinct from those of OT postalveolar affricates and fricatives (i.e. alveolopalatal affricates and fricatives and uvular fricatives in Kami). Subsequently, a sound change may have occurred to avoid the typologically highly marked opposition between postalveolars and alveolopalatals, a change that converted postalveolar affricates into alveolopalatal affricates, and postalveolar fricatives into dental fricatives. Tentatively, it is further possible that the latter change (i.e. from postalveolar fricatives to dental fricatives) was motivated by the stability of the latter series (i.e. dental fricatives) in terms of the overall number of words with dental fricative initials (so that the motivation was to join the existing series, rather than creating a new series).

<sup>28</sup> One exception can be noted, namely <phyi> ‘outside, back’ /<sup>L</sup>p<sup>h</sup>ie/. The WT root <phyi> has two reflexes in Kami: (1) /<sup>L</sup>p<sup>h</sup>ie/ in the meaning ‘outside, back’, and (2) /<sup>H</sup>ʃɔ/ in the meaning ‘be late’. Note that the latter reflex is irregular in that it lacks aspiration.

### 3.1.5 Miscellaneous changes of OT initial clusters

This subsection is dedicated to the development in Kami of OT initials and clusters that are known for the heterogeneity of their modern reflexes (Zhāng 1996, Sun 2003:787-790). It includes WT <m>, the clusters *lh-*, *sl-*, *sr-*, *hr-*, *zl-*, the prefixed *Ky-* and *Py-* clusters and the cluster *sbr-*. The emphasis of the subsection is on comparing Kami reflexes of these clusters with those in Zhōngdiàn and Dōngwàng, as potentially diagnostic of the purported close relationship between these dialects.

#### 3.1.5.1 *m-*

WT *m-* stands in part for an earlier OT cluster *my-*, as reflected in Old Tibetan texts and modern Tibetan dialects. WT *m-* before the original front vowels is realized in Kami as /p/, merging with the reflexes of WT *my-* clusters. Before the original non-front vowels, on the other hand, WT *m-* is realized as Kami /m/. (This is in fact a common development in many Kham and Amdo dialects, e.g. Dégé, Häslér 1999:43; Zhōngdiàn, Wang 1996:57.) For example:

<mying> /<sup>L</sup>ɲũ/ ‘name’  
 <mye> /<sup>L</sup>ɲi/ ‘fire’  
 <mar> /<sup>L</sup>mɛ/ ‘butter’  
 <mo khiyi> /<sup>L</sup>mu-<sup>H</sup>tʃʰə/ ‘bitch, female dog’

#### 3.1.5.2 *lh-*

On the basis of dialectal data, the WT script sequence *lh-* has been argued to have once represented a proto-sonorant cluster (Beyer 1992:46, fn.9; Zhāng 1996:23; Sun 2003:787-788). Kami offers additional evidence to this claim. In this dialect, WT *lh-* has two reflexes: (1) one as a cluster, /hʃ/, and (2) another as a voiceless lateral fricative, /l̥/.<sup>29</sup> Both changes can be observed in the modern Kami reflexes of the WT etymon *lha* ‘god, deity’, representing two distinct lexical layers: (1) one presumably more archaic, <lha> /<sup>H</sup>hʃɔ/ ‘god, Buddha’, and (2) another, more recent, /<sup>H</sup>l̥ɔ/. The latter word, /<sup>H</sup>l̥ɔ/, refers to ‘lesser gods, mountain and water spirits’.

Overall, /hʃ/, is attested only in a handful of words, e.g. <lham> /<sup>H</sup>hʃã/ ‘shoes, boots’, whereas /l̥/ is more frequent. For example:

<lhan> /<sup>H</sup>l̥ẽ/ ‘paste, stick, glue’  
 <lhud?> /<sup>H</sup>li/ ‘take off’<sup>30</sup>  
 <lho> /<sup>H</sup>lu/ ‘south’

<sup>29</sup> This is identical to Dōngwàng (Bartee, this volume), whereas in Zhōngdiàn, WT *lh-* changed to /h/ and /t/ (Wang 1996:62).

<sup>30</sup> Compare: Bātáng /tʃʰɔ<sup>53</sup>/, tentatively from <lhud?>, Gésāng (1989:345).

### 3.1.5.3 *sl-*

Many Kham dialects (e.g. Dégé, Häsler 1999:46) have two reflexes of the OT cluster *sl-*, i.e. *ts-* and *t-* (i.e. in Dégé, <sleb> /ts̄e/ ‘arrive’, <slob grwa> /t̄ō:t̄ṣā/ ‘school’; tone notation as in the original, where a macron above a vowel marks high register tone). Kami, however, has only one reflex of this OT cluster, /l̄/, hence merging with modern reflexes of the WT *lh-* cluster.<sup>31</sup> Consider the following Kami examples:

<sleb> /<sup>H</sup>l̄e/ ‘arrive’  
 <bslab> /<sup>H</sup>l̄ṣ/ ‘teach’

### 3.1.5.4 *hr-*

The only example in my data that potentially reflects the OT cluster *hr-*, ‘tear up, rip’, WT <hral> or <ral>, yields the initial /r/ in Kami, /<sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ri/.<sup>32</sup>

### 3.1.5.5 *sr-*

The OT cluster *sr-* becomes Kami /s/, hence developing a reflex identical to that of the OT simple initial *z-*, albeit with a different tone.<sup>33</sup> Words related to WT etymons with the *sr-* cluster are high-toned in Kami, whereas words related to WT etymons with the initial *z-* are low toned. For example:

<srab> / <sup>H</sup> sṣ/ ‘shallow’	<zab mo> / <sup>L</sup> sṣ- <sup>H</sup> mu/ ‘deep’
<srog> / <sup>H</sup> so/ ‘life, destiny’	<zug> / <sup>L</sup> su/ ‘bark (verb)’

### 3.1.5.6 *zl-*

Similar to the OT cluster *lh-*, the OT cluster *zl-* has two reflexes in Kami: (1) /l̄/, as in the word for ‘moon’, <zla> /<sup>H</sup>l̄o/; and (2) the cluster /Nd/ for the word ‘month’, <zla ba> /<sup>L</sup>Nda-<sup>H</sup>wo/. The latter change is a regular development in most varieties of Kham Tibetan. The former change is less frequent. Notably, it is shared by Kami with Dōngwàng (Bartee, this volume),

<sup>31</sup> One more source of Kami /l̄/ is the OT *rl-* cluster (conceivably, through the intermediate change from OT *rl-* to *sl-*). For example, <rlag> /<sup>H</sup>l̄a/ ‘take apart, dismantle’, <rba rlab> /<sup>H</sup>pa-<sup>H</sup>l̄ṣ/ ‘wave’. The development of the OT cluster *sl-* in Kami is identical to the development of this cluster in Bātáng (Gésāng 1989:339), Dégé (Häsler 1999:46), and Zhōngdiàn (Wang 1996:59). In Dōngwàng, on the other hand, *sl-* develops into /l̄ḡ/ and /fi/ (Bartee, this volume).

<sup>32</sup> Comparative note: OT *hr-* becomes /ṣ/ in Zhōngdiàn (Wang 1996:62), and /r̄/ in Dōngwàng (Bartee, this volume).

<sup>33</sup> This development is identical to that in Zhōngdiàn (Wang 1996:61), Dōngwàng (Bartee, this volume), Bātáng (Gésāng 1989:339) and Dégé (Häsler 1999:33).

which also has two reflexes of *z*l- identical to those in Kami.

### 3.1.5.7 Prefixed *Ky*- and *Py*- clusters

OT complex initial *Ky*- and *Py*- clusters with oral prefixes by and large merge in Kami with the reflexes of OT unprefixes *Ky*- and *Py*- clusters. This is to say that they become postalveolar fricatives in the speech of my main consultant and dental stops in the speech of my other consultants. For example:

<skyi> /<sup>H</sup>fə/ (/<sup>H</sup>sə/) ‘borrow (money)’  
 <skiid po> /<sup>H</sup>ei-<sup>H</sup>pu/ (/<sup>H</sup>si-<sup>H</sup>pu/) ‘comfortable’  
 <dpyi> /<sup>H</sup>fə/ (/<sup>H</sup>sə/) ‘hip’  
 <dbyar kha> /<sup>L</sup>ʒɛ-<sup>H</sup>kʰə/ (/<sup>H</sup>zɛ-<sup>H</sup>kʰə/) ‘summer’

At the same time, some of the OT *Ky*- and *Py*- clusters with the OT prefix *s*- show an irregular development in the speech of my other consultants, whereby they become /ʃ/ instead of the otherwise expected /s/. Compare:

<bya> /<sup>L</sup>fə/ ‘bird’ vs. <spyang> /<sup>H</sup>fə/ ‘wolf’ (my main consultant)  
 <bya> /<sup>L</sup>sə/ ‘bird’ vs. <spyang> /<sup>H</sup>ʃə/ ‘wolf’ (my other consultants)  
 <skyur> /<sup>H</sup>fju-<sup>H</sup>kua/ ‘sour’ vs. <skyugs> /<sup>H</sup>fju/ ‘vomit’ (my main consultant)  
 <skyur> /<sup>H</sup>ʃu-<sup>H</sup>kua/ ‘sour’ vs. <skyugs> /<sup>H</sup>su/ ‘vomit’ (my other consultants)

The development of OT unprefixes *Ky*- and *Py*- clusters in Kami is mostly identical to that in Zhōngdiàn, as described in Wang (1996:62). Unlike Kami, however, the OT *sky*- becomes Zhōngdiàn /tɕ/, whereas *spy*- becomes /ɕ/, and occasionally, also /ɣ/ (Ellen Bartee, p.c.). Dōngwàng (Bartee, this volume) exhibits similar yet distinct developments, whereby (1) OT unprefixes *Ky*- clusters become alveopalatal fricatives, (2) unprefixes *Py*- clusters become dental fricatives, and (3) prefixed *Ky*- and *Py*- clusters merge into /s/.

### 3.1.5.8 *sbr*-

The development of the OT cluster *sbr*- is complex in Kami, with two different types of reflexes. On the one hand, it exhibits the regular development of OT *Pr*- clusters into a retroflexed affricate. For example:

<sbrul> ‘snake’ /<sup>H</sup>dzu-<sup>H</sup>lɛ̃/

On the other hand, in one word, <sbrang ma> ‘bee; wasp’, *sbr*- develops into Kami /Nb~m/, viz. /<sup>L</sup>Nb̃~<sup>L</sup>m̃/. A similar development of the *sbr*- cluster in this word has been attested in a

number of peripheral Tibetan dialects, e.g. /Nbuma/ in Dári 達日 <dar lag> (Golog <mgo log>, Qīnghǎi Province), /Nba<sup>4</sup>se<sup>3</sup>/ in Déqīn 德欽 <bde chen> (Díqìng) (Zhāng 1996:24), or /bing<sup>35</sup>ma<sup>55</sup>~bing<sup>55</sup>ma<sup>53</sup>/ in Ménbā 門巴 <mon pa> (Tibet) (Lù 2002:356).<sup>34</sup>

Similar to the WT words <lha> and <zla>, WT <sbrang> has two reflexes in Kami: /<sup>L</sup>Nbǝ~<sup>L</sup>mǝ/ for ‘bee; wasp’, and /<sup>H</sup>dzǝ/ for ‘honey; sugar’.<sup>35</sup>

No characteristic changes of the clusters considered in this section appear to be shared exclusively by Kami, Zhōngdiàn, Dōngwàng, and not by other dialects. Hence, if the three dialects can be grouped into one cluster, as proposed by Qú & Jīn (1981), the considered changes bear no witness to it.

### 3.2 History of Kami rhymes

In conformity with general Kham developments, the original complex WT rhyme structure, yielding over 70 distinct rhymes, has been drastically simplified in Kami. All original consonantal codas are lost, transforming all closed syllables into open syllables. All OT simple rhymes develop shifted vowel qualities, whereas various OT closed rhymes containing old codas are transformed to replenish the vacated vowel space and to generate innovative vowels or diphthongs. The observed correspondences between OT and modern Kami rhymes in monosyllabic words are summarized in Table 6. The diphthong /ua/ has been attested only in roots of uncertain etymology. For this reason, this diphthong is not included in the table below.

**Table 6:** Kami rhymes and their OT origins

Kami	OT
i	al, ib(s), id, ig(s), il, ir, is, e, el, es, ud, ul, ol
e	ad, eb(s), ed, er, ul, od
ɛ	ar
a	ag(s), eg(s)
ə	i, u, us
ɯ	ug(s), ig(s), ul
u	o, ub(s), ug(s), ob(s)
ɤ	ab(s), og(s), od
o	og(s), ob(s)
ɔ	a, a <sup>36</sup>

<sup>34</sup> See also Róna-Tas (1966:183).

<sup>35</sup> Comparative note: in the neighbouring Zhōngdiàn, Wang (1996:62), and Dōngwàng, Barte (this volume), *sbr-* uniformly becomes a voiced retroflex fricative.

<sup>36</sup> WT *a-chung*, used to write the absence of a consonant in the syllable-initial, word-medial or coda position, is known to have no attestable influence on the development of the rhyme, which is that of a simple nucleus vowel (e.g. Dégé, Häsler 1999:55; Yùshù <yul shul>, Huáng et al. 1994:121).

ĩ	ing, eng
ẽ	an, en, em(s), in, ing, im(s), un, on
ã	am(s), root vowel + -ma
ũ	ung
ũ	um(s)
õ	ang(s), om(s), ong, root vowel + -ma/-mo
ei	as, el, ul, ol, os
ui	ub(s), ur
ue	is, od, or
uẽ	on

In disyllabic words, sound changes in the first syllable of the word may be distinct from those summarized in Table 6. One reason for this dissimilarity is the process of resyllabification, as discussed in §3.4.4. For example, <skam po> /<sup>H</sup>ka-<sup>H</sup>Nbu/ ‘dry’ or <‘khor lo> /<sup>H</sup>k<sup>hu</sup>-<sup>H</sup>lu/ ‘wheel’. In addition, a recurrent yet marginal change observed in the first syllable of disyllabic words is that of the original OT rhyme in the first syllable into Kami /a/. For example, <sen mo> /<sup>L</sup>sha-<sup>H</sup>mõ/ ‘nail, fingernail’, <pus mo> /<sup>H</sup>pa-<sup>H</sup>Nbu/ ‘knee’, <thod pa> /<sup>L</sup>t<sup>h</sup>a-<sup>H</sup>põ/ ‘forehead’.

### 3.2.1 OT simple rhymes

All five OT simple rhymes *a*, *i*, *e*, *u* and *o* develop shifted vowel qualities in Kami. OT *a* develop into Kami /ɔ/, *i* to /ə/, *e* to /i/, *u* to /ə/ and *o* to /u/.<sup>37</sup> Conforming to the important areal pattern in the Amdo and Kham regions, Kami merge the OT high vowels *i* and *u* into schwa (cf. a similar development in Zhongu, Sun 2003:791). For example:

<ba> / <sup>L</sup> pɔ/ ‘cow’	<ra> / <sup>L</sup> rɔ/ ‘sheep; garden’
<‘bri> / <sup>H</sup> Ndzə/ ‘female yak’	<ri> / <sup>L</sup> rə/ ‘mountain’
<bye> or <byi’u> / <sup>L</sup> ei/ ‘sparrow’	<spre’u> / <sup>H</sup> tʃi/ ‘monkey’
<bu> / <sup>H</sup> pə/ ‘son’	<lu > / <sup>L</sup> jə/ ‘cough’
<‘bo> / <sup>L</sup> pu/ ‘overflow, spill’	<ro> / <sup>L</sup> ru/ ‘corpse’

### 3.2.2 OT rhymes with consonantal codas

As in other Kham dialects (Gésāng 1989:349-350; Gésāng & Gésāng 2002:78), the depletion of OT consonantal codas in Kami result in the development of (i) innovative vowels, e.g. OT *-ar* > Kami /ɛ/, e.g. <dar> /<sup>L</sup>tɛ/ ‘flag’, and *-ang* > /ɔ̃/, e.g. <tshang> /<sup>H</sup>ts<sup>h</sup>ɔ̃/ ‘family, house; nest’, and (ii) diphthongs. The developments of OT closed rhymes containing

<sup>37</sup> One exception to the *a* to /ɔ/ change is <ga~gar> ‘where’, Kami /<sup>L</sup>ka~<sup>L</sup>kɛ/.

consonantal codas are summarized in Table 7.<sup>38</sup> The variation between the modern reflexes of the OT rhymes *-od*, *-or* and *-on* (a simple vowel, /e/ and /ẽ/, vs. a diphthong, /ue/ vs. /uẽ/, respectively) appears to be phonologically conditioned by the modern initial of the word. Namely, words with bilabial initials cannot combine with the rising diphthong. For example, <bod> /<sup>L</sup>pe/ ‘Tibet, Tibetan’ vs. <mdzod> /<sup>H</sup>Ndzue/ ‘room, chamber’, <bor> /<sup>L</sup>pe/ ‘throw, toss, discard’ vs. <lag kor> /<sup>L</sup>ja-<sup>H</sup>kue/ ‘bracelet’, <dpon> /<sup>H</sup>pẽ/ ‘official’ vs. <rngon> /<sup>H</sup>ŋuẽ/ ‘hunt’.

**Table 7:** OT rhymes with consonantal codas and their Kami reflexes

	<i>b(s)</i>	<i>d</i>	<i>g(s)</i>	<i>l</i>	<i>r</i>	<i>s</i>	<i>n</i>	<i>ng(s)</i>	<i>m(s)</i>
<i>a</i>	<i>ɤ</i>	<i>e</i>	<i>a</i>	<i>i</i> <sup>39</sup>	<i>ɛ</i>	<i>ei</i> <sup>40</sup>	<i>ẽ</i>	<i>õ</i>	<i>ã</i>
<i>i</i>	<i>i</i>	<i>i</i>	<i>i</i> <sup>41</sup>	<i>i</i>	<i>i</i>	<i>i</i> <sup>42</sup>	<i>ẽ</i>	<i>ĩ</i> <sup>43</sup>	<i>ẽ</i>
<i>e</i>	<i>e</i>	<i>e</i>	<i>a</i> <sup>44</sup>	<i>ei</i> or <i>i</i> <sup>45</sup>	<i>e</i>	<i>i</i>	<i>ẽ</i>	<i>ĩ</i>	<i>ẽ</i>
<i>u</i>	<i>ui</i> or <i>u</i> <sup>46</sup>	<i>i</i>	<i>u</i> <sup>47</sup>	<i>ei/e/i/u</i> <sup>48</sup>	<i>ui</i>	<i>i</i> or <i>ə</i> <sup>49</sup>	<i>ẽ</i>	<i>ũ</i>	<i>ũ</i>
<i>o</i>	<i>u</i> or <i>o</i> <sup>50</sup>	<i>e</i> or <i>ue</i> <sup>51</sup>	<i>o</i> <sup>52</sup>	<i>ei</i> or <i>i</i> <sup>53</sup>	<i>e</i> or <i>ue</i>	<i>ei</i>	<i>ẽ</i> or <i>uẽ</i>	<i>õ</i>	<i>õ</i>

<sup>38</sup> Table 7 lists modern Kami reflexes supported by the majority of examples. Sporadic sound changes are listed in footnotes.

<sup>39</sup> Some sporadic examples of the change from OT *-al* to Kami /e/ have also been attested. For example, /<sup>L</sup>k<sup>h</sup>e-<sup>H</sup>lɔ/ <mkhal ?> ‘kidney’, /<sup>H</sup>bu-<sup>H</sup>te<sup>h</sup>e/ <sub chāl> ‘cymbals’.

<sup>40</sup> An exception to this change is the word ‘ladder’, <skas>, Kami /<sup>H</sup>kie/.

<sup>41</sup> An alternative development of this OT rhyme in Kami, as attested in one single word, is /u/, <kha tig> /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tu/ ‘bitter’.

<sup>42</sup> A different development of this OT rhyme in Kami, attested in one single word, is /ue/, i.e. <gnyis> /<sup>L</sup>ŋue~<sup>H</sup>ŋue/ ‘two’.

<sup>43</sup> An alternative development of this rhyme in some Kami words is /ẽ/, e.g. <ring> /<sup>L</sup>rẽ/ ‘long’.

<sup>44</sup> For example, <sreg> /<sup>H</sup>sa/ ‘burn; hot (as of weather); spicy (as of food)’, <dzeg> /<sup>L</sup>Ndza/ ‘climb’, <dreg> or <breg> /<sup>L</sup>dza/ ‘cut one’s hair’.

<sup>45</sup> For example, <shel> /<sup>H</sup>e<sup>h</sup>ei/ ‘glass’, <khrel> /<sup>H</sup>t<sup>h</sup>hi/ ‘shy, bashful’.

<sup>46</sup> For example, <mdzub> /<sup>L</sup>Ndzui/ ‘finger’, <gtub> /<sup>H</sup>tu/ ‘cut off, sever; cut up, slice’.

<sup>47</sup> Some sporadic exceptions to this sound change include <dug> /<sup>L</sup>Ndɔ/ ‘be; sit; dwell’, and <dbug> /<sup>L</sup>bu/ ‘breath’.

<sup>48</sup> For example, <shul> /<sup>H</sup>e<sup>h</sup>ei/ ‘mark, trace’, <dngul> /<sup>H</sup>ŋe/ ‘silver; money’, <gul> /<sup>H</sup>ŋgi/ ‘push’, <brtul> /<sup>L</sup>tə-<sup>H</sup>tu/ ‘blunt’.

<sup>49</sup> For example, <lus po> /<sup>L</sup>li-<sup>H</sup>pu/ ‘body’, <rus pa> /<sup>L</sup>rə-<sup>H</sup>po/ ‘bone’.

<sup>50</sup> There are only two examples of this rhyme in the sample, <yob> /<sup>L</sup>zu/ ‘stirrup, steps’ and <spobs> /<sup>H</sup>po/ ‘dare, have courage’.

<sup>51</sup> A different development of this rhyme is attested in the word /<sup>H</sup>ɣ/ <lhod> ‘relaxed, loose’.

<sup>52</sup> For example, <srog> /<sup>H</sup>so/ ‘life, fate, destiny’. In a small number of words, this regular reflex of the OT rhyme *-og*, viz. /o/, appears to have followed an additional change, viz. from /o/ to /u/, as in <thog> /<sup>H</sup>t<sup>h</sup>u/ ‘grain, crops’. Finally, some words with this OT rhyme result in Kami /s/, e.g. <og> /<sup>L</sup>xɣ/ ‘below’.

<sup>53</sup> For example, <gshol> /<sup>H</sup>e<sup>h</sup>ei/ ‘plow’, <sol ba> /<sup>L</sup>s<sup>h</sup>i-<sup>H</sup>wɔ/ ‘charcoal’, <skol> /<sup>H</sup>ki/ ‘boil, stew’.

The marginally attested diphthong /ie/ is likely to result from the ongoing process of palatalization conditioned by modern Kami front vowels. Hence, <skas> /<sup>H</sup>kie/ ‘ladder’ is likely to have developed through the following stages: <skas> > /kei/ > /kie/.

Overall, the drastic rhyme attrition is considered as one of the characteristic features of Kham dialects (e.g. Gésāng & Gésāng 2002:78). While the precise developments of OT closed syllables containing codas are extremely variegated in Kham, the major trends, as characteristic for such well documented Kham dialects, as Bātáng (Gésāng 1989:348) and Dégé (Häsler 1999:51-75), can be summarized as follows (Hú 1991:192):

- OT *-b/-d/-g* > V? (short checked syllables)  
 OT *-m/-n/-ŋ* >  $\tilde{V}$  (long nasalized syllables)  
 OT *-r/-l/-s* >  $\emptyset$  (long open syllables)

In addition, a number of OT closed syllables containing codas develop into modern diphthongal rhymes, e.g. Bātáng /eĩ/ derives from OT *-en* and *-an*; /eiʔ/ from *-ed*, and /auʔ/ from *-ab* and *-ob* (Gésāng 1989:349).

The number of diphthongs deriving from original OT closed syllables with codas varies considerably among Kham dialects and can thus be of interest for subgrouping purposes. It appears that dialects with large inventories of diphthongs are centered around Gännán 甘南 <kan lho> Tibetan Autonomous Prefecture in Gānsù Province (represented by such dialects as Zhuóní 卓尼 <co ne> and Zhōuqǔ 舟曲 <brug chu>) and around Díqìng Prefecture, with the dialects of which Kami is grouped in one sub-cluster (Qú 1991:25-26). For example, Zhōngdiàn, one of the best-recorded Díqìng dialects has, in different analyses, as many of 23 diphthongs (Lù 1990:150), or 11 or 9 diphthongs (Wang 1996:63-64; Hongladarom 1996:76, respectively). The major source for diphthongs in these dialects is OT rhymes with the codas *-s*, *-l*, *-n*, and *-d*. Consider some examples from Qú (1991:45-47):

- OT *-Vb* > *-Vu*, e.g. Zhōngdiàn <thab> /t<sup>h</sup>ou<sup>53</sup>/ ‘solution, means, method’  
 OT *-Vl* > *-Vi*, e.g. Zhōngdiàn <skol> /kui<sup>55</sup>/ ‘boil’, <drel> /tʂui<sup>13</sup>/ ‘donkey’  
 OT *-Vd* > *-Ve*, e.g. Zhōuqǔ <bdud> /tye<sup>22</sup>/ ‘demon’  
 OT *-Vn* > *-Ve*, e.g. Zhōuqǔ <gon> /kye<sup>44</sup>/ ‘put on’, <dran> /tʂie<sup>44</sup>/ ‘think’  
 OT *-os* > *-ue/-ui*, e.g. <dgos> ‘want’: Zhōngdiàn /gue<sup>55</sup>/, Dōngwàng /gui<sup>53</sup>/

The developments of OT rhymes with consonantal codas in Kami are similar to those described in Qú (1991:25-26). One way to account for these developments in Kami is to hypothesize that *all* OT closed syllables with consonantal codas develop through a stage of diphthong reflexes of the original OT rhymes.<sup>54</sup> In this analysis, the original OT rhymes develop into

<sup>54</sup> These developments are also seen in other dialects with many diphthong reflexes of OT rhymes with codas (Qú 1991). In Kami, they additionally include (i) many innovative vowels (of which some are phonetically diphthongized), (ii) many diphthongs, (iii) absence of glottal stop codas.

diphthongs, in which the first target reflects the original OT nucleus vowel, and the second target reflects the original OT coda. In addition, OT rhymes with back rounded vowels *u* and *o* develop into rising diphthongs, e.g. <me thur> /<sup>L</sup>mo-<sup>H</sup>thui/ ‘matches’, <rna kor> /<sup>H</sup>na-<sup>H</sup>gue/ ‘round earrings’. OT nasal codas contribute to the nasalization of the second target, e.g. <don> /<sup>H</sup>Nduẽ/ ‘read out loud, learn’. Notably, when the trajectory between the two targets in a diphthong is large, the two targets coalesce into one target, resulting in many cases into an innovative vowel, e.g. OT *-ab* > Kami /ɤ/, OT *-ar* > Kami /ɛ/. When, on the other hand, the trajectory between the two targets is short, Kami retains a diphthong, e.g. OT *-el* > Kami /ej/.

Based on the developments as summarized in Table 7, the development of OT rhymes with consonantal codas in Kami can be schematically presented as follows:

(a) rhymes with *-l*, *-r*, *-s* coalesce in /i/, e.g. <ru> /<sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ri/ ‘rot’ (with the directional prefix /p<sup>h</sup>a-/ ‘outward’), <zur> /<sup>L</sup>sui/ ‘corner’, <? lus> /<sup>H</sup>wu-<sup>H</sup>li/ ‘cat’

(b) rhymes with *-d* develop into /e/, e.g. <red> /<sup>L</sup>re/ ‘copula verb’, whereas *-n* develops into /ẽ/, e.g. <dren> /<sup>H</sup>Ndzẽ/ ‘thread (a needle)’

(c) in rhymes with grave codas (*-b*, *-m*, *-g*, *-ng*), the stop finals are lost, while the original OT nasals leave their trace as the nasalization of the vowels. Before these changes, the velar finals conditioned the vowel /u/ to become /u/. In sum, OT *-ub* becomes /u/, *-ug* first becomes *-uŋ* and then /u/, *-um* becomes /ũ/, and *-ung* first becomes *\*-uŋ* and then /ũ/. For example, <gtub> /<sup>H</sup>tu/ ‘cut off, sever, cut up, slice’, <gtsug> /<sup>H</sup>tsu/ ‘calvaria, top of the head’, <mig btsum> /<sup>H</sup>ji-<sup>H</sup>tsũ/ ‘blink, wink’, <dung> /<sup>L</sup>tũ/ ‘conch shell’.

The diphthong /ua/ occurs only in words of unclear etymology. For example, /<sup>L</sup>gua-<sup>H</sup>ju/ ‘yak’ and /<sup>L</sup>k<sup>h</sup>ua-<sup>H</sup>la/ ‘basin’, cf. Shǐxīng /<sup>LH</sup>q<sup>h</sup>wɛlɛ/, Pǔmǐ /k<sup>h</sup>uA<sup>35</sup>lA<sup>35</sup>/, Lizu /<sup>HL</sup>q<sup>h</sup>wɛlɛ/ ‘basin’.

The development of OT closed syllables with codas in Kami with no modern glottal stop codas and no feature of length is quite unique both as compared to the best-documented Kham dialects and to the neighbouring dialects of Dìqìng Prefecture. The development of OT rhymes with consonantal codas in Kami is closely related to the development of tones in this dialect, as will be discussed in the following section.

### 3.3 Development of tones

Kami tones fall under two registers, High and Low. Their development is conditioned by two factors: (1) desonorization of initial consonants, and (2) the loss of prefixal consonants. Both are among the major trends in the development of tonal registers in Tibetan dialects (cf. Huáng 1995:50; e.g. Dégé, Häslér 1999:75).

The main trends in the development of tonal registers in Kami, as elsewhere in Kham, are for OT syllables with obstruent onsets to induce low register when the latter are voiced,

and high register otherwise. In addition, OT syllables with sonorant onsets develop low register if OT prefixal consonants are absent and high register otherwise. For example:

<zhing> / <sup>L</sup> ɕĩ/ ‘land’	<shing> / <sup>H</sup> ɕĩ/ ‘wood, tree’
<nga> / <sup>L</sup> ŋɖ/ ‘I’	<lnga> / <sup>H</sup> ŋɖ/ ‘five’
<nyan> / <sup>L</sup> ŋe/ ‘listen’	<dngul> / <sup>H</sup> ŋe/ ‘silver; money’

Some of Kami tones appear irregular from the point of view of standard written Tibetan orthography. These irregular cases further fall into three categories:

(1) high tone in words related to OT words with voiced initial in the absence of a prefix, e.g. <myig> /<sup>H</sup>ɲi/ ‘eye’, <bu> /<sup>H</sup>pə/ ‘son’

(2) low tone in words with a voiceless initial related to WT unprefixated words with a voiceless initial or to OT words with a voiceless prefix, e.g. <char pa> /<sup>L</sup>tɕ<sup>h</sup>ɔ/ ‘rain’, <shwa ba> ‘deer’ /<sup>L</sup>ɕɔ/, <sna> /<sup>L</sup>ŋã/ ‘nose’

(3) low tone (or variable tone) in words related to words with a OT voiced prefixal consonant and a voiced initial, e.g. <dbug> /<sup>L</sup>bu/ ‘breath’, <dbun> /<sup>L</sup>dẽ~<sup>H</sup>dẽ/ ‘seven’, <grang> /<sup>L</sup>Ndzɔ̃/ ‘have one’s fill’, <mdzub> /<sup>L</sup>Ndzui/ ‘finger’, <dgon> /<sup>L</sup>guẽ/ ‘abbey’.<sup>55</sup>

These three categories are considered in turn below.

(1) The first category covers those etymons that have a prefix in OT, whereas this prefix is no longer reflected in WT. One of the most frequently quoted examples of such etymons is WT <mig> ‘eye’. The reflexes of this word in many dialects point to the OT form \**C-myig*. This word is also attested as <dmyig> or <gmyig> in Dūnhuáng manuscripts (Huáng et al. 1994: 121). In Kham dialects, this word often carries a high tone reflex in Kham dialects, as it does in Kami, hence equally pointing to an earlier prefix.<sup>56</sup>

The same explanation may be in order in the case of the word for ‘son’, /<sup>H</sup>pə/, OT <bu>, or in the case of the word for ‘body’, OT <lus po>, variously /<sup>L</sup>li-<sup>H</sup>pu/, for my main consultant, or /<sup>H</sup>li-<sup>H</sup>pu/ for my other consultants. The latter word is irregular both in terms of its initial (for the OT unprefixated root initial /- normally becomes /j/ in Kami) and in terms of its high tone (the /L-H/ tone patten for the main consultant may be due to the iambic stress pattern). An elided prefixal consonant potentially offers an explanation for both the unchanged initial and the high tone.

<sup>55</sup> The anonymous reviewer notes that this is common in many Southern Kham dialects. The low tone in such cases is attributed to the second syllable that has coalesced with the root. This process is said to drop the tone down.

<sup>56</sup> The prefix is in fact directly preserved in Amdo, cf. Mdzod.dge /<sup>h</sup>ŋəy/ (Sun 1986:210).

(2) The second category groups together cases, in which low tone is conditioned by one of the morphologically opaque OT nominal suffixes *-ba*, *-bo*, *-bu*, *-pa*, *-po*, *-ma*, *-mo*, *'i*, and *'u*. Two additional points are in order. First, the initial of all suffixes may lenite to *-w-* (in the case of *-pa*, *-po* through the intermediate stage of voicing, and in the case of *-ma*, *-mo* with an accompanying nasalization). For example:

- (i) *-b-* > *-w-*, e.g. <kha ba> /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>wɔ/ ‘snow’  
 (ii) *-p-* > *-b-* > *-w-*, e.g. <sgog pa> > \*sgog ba > /<sup>L</sup>gu-<sup>H</sup>wɔ/ ‘garlic’, <thag pa> > \*thag ba > /<sup>L</sup>t<sup>h</sup>a-<sup>H</sup>wɔ/ ‘rope’  
 (iii) *-m-* > *-w-* (+ nasalization), e.g. <tsher ma> /<sup>L</sup>ts<sup>h</sup>ə-<sup>H</sup>wã/ ‘thorn’, <ba mo> /<sup>L</sup>pã/ ‘frost’, <so ma> /<sup>H</sup>sã/ ‘hemp’

Second, the outcome of the changes above, i.e. the intervocalic *-w-*, may be further lenited to zero, leading to the coalescence of open root syllable with the prefix into a diphthong, e.g. [ɔɔ] as in /<sup>L</sup>t<sup>h</sup>ɔ/ [t<sup>h</sup>ɔɔ<sup>13</sup>] ‘rope’, or the simple vowel [ɔ], without a trace of lengthening. For example: <shwa ba> /<sup>L</sup>χɔ/ ‘deer’, <char pa> > \*char ba > /<sup>L</sup>t<sup>h</sup>ɔ/ ‘rain’, <sna ba> or <sna ma> /<sup>L</sup>ŋã/ ‘nose’.<sup>57</sup>

Coalescence of open root syllables with the OT nominal suffixes is the predominant source of modern long tones in Tibetan dialects, analyzed as low register induced by rhyme length (Huáng 1995:57; Sun 2001:40). In view of Kami disyllabic examples such as /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>wɔ/ ‘snow’ and /<sup>L</sup>t<sup>h</sup>a-<sup>H</sup>wɔ/ ‘rope’, in which low register appears to have developed before coalescence, somewhat surprisingly suggests that low register may be induced by a suffix with a voiced initial, with syllable coalescence and length being secondary results in this process.<sup>58</sup> Alternatively, such words may be examples of a contracted syllable expanded again at a later stage (see §3.4.4).

(3) The third category brings together words related to OT etymons with a voiced initial and a OT voiced prefixal consonant. It can be further distinguished into:

- (i) words with variable tones, e.g.:

<sup>57</sup> The nasalization of the rhyme triggered by the nasal onset, as possibly exemplified by <sna> /<sup>L</sup>ŋã/ ‘nose’, is another idiosyncratic feature of Kami. This development is attested in a considerable number of basic vocabulary words, e.g. <nya> /<sup>L</sup>ŋɔ/ ‘fish’, <ngu> /<sup>L</sup>ŋũ/ ‘cry’, <nga> /<sup>L</sup>ŋɔ̃/ ‘I’, <lnga> /<sup>H</sup>ŋɔ̃/ ‘five’, <ma> ‘mother’, <rma> ‘wound, injury’, both /<sup>L</sup>mɔ̃/.

<sup>58</sup> For some consultants, the process of syllable coalescence does lead to a long vowel, i.e. [k<sup>h</sup>ɔ:<sup>11</sup>] ‘snow’. Note that length is not contrastive in this dialect and the number of words undergoing syllables coalescence is restricted (hence precluding such syllables as a source for the rise of contrastive length). It is therefore conceivable that such words with non-phonemic long vowels will lose the feature length to develop into an open syllable with a low tone, similar to the examples above, i.e. /<sup>L</sup>k<sup>h</sup>ɔ/.

<gnyis> /<sup>L</sup>ɲue~<sup>H</sup>ɲue/ ‘two’  
<dbun> /<sup>L</sup>dẽ~<sup>H</sup>dẽ/ ‘seven’

(ii) words with a modern voiced initial and a low tone, e.g.:

<dbug> /<sup>L</sup>bu/ ‘breath’ (this word is also irregular in terms of the development of the OT rhyme)  
<bu> /<sup>L</sup>Nbə/ ‘insect, bug’

The development of OT clusters consisting of voiced initials and voiced prefixes is known for its heterogeneity in Tibetan dialects. This development, conditioned by the gradual process of devoicing of OT voiced obstruents, in which process prefixed obstruents are affected later than simplex obstruents (Sun 2001:39), may variously lead to unstable tones, as in Dégé (Gésāng & Gésāng 2002:109) and Kami, or to a distinct mid register, as in <rdza rdo> Zádūō 雜多 Tibetan of Yùshù in Qīnghǎi Province (Sun 2001:38), and, possibly, Dōngwàng (Bartee, this volume).

The situation in Kami is characterized by the pronounced tendency to correlate the endpoint of the process of devoicing with a stable low tone (cf. Häsler 1999:88). Before the process of devoicing is completed, syllables with variable tones in Kami may tentatively be considered as atonal at this point of their development.

### 3.4 Word-internal phonological processes

Comparison with OT etymons reveals in Kami a number of phonological processes that target intervocalic consonants in the second-syllable-initial position. These processes include lenition and voicing, which, in turn, may be accompanied by lenition and resyllabification. In terms of frequency in the corpus, lenition and voicing affecting velar stop initials, on the one hand, and resyllabification involving OT nominal suffixes, on the other hand, are most common. Altogether, these processes are not regular in Kami, and for some initials, even marginal and sporadic. All these processes in Kami have close parallels both in the best-recorded Kham dialects (Bātāng, Gésāng 1989:340-342; Dégé, Häsler 1999:13-16; Gésāng & Gésāng 2002: 99-102) and in the dialects of Dìqīng Prefecture (Zhōngdiàn, Lù 1990:156-158; Dōngwàng, Bartee, this volume).

#### 3.4.1 Lenition

The process of lenition primarily targets the voiceless aspirated velar stop /k<sup>h</sup>/, which, in the second-syllable-initial position, is often produced as a velar fricative, e.g.:

- <sog khang> /<sup>H</sup>s<sup>ho</sup>-<sup>H</sup>xõ/ ‘thatched house’  
 <pho khebs> /<sup>H</sup>p<sup>hu</sup>-<sup>H</sup>xε/ ‘quilt, blanket’  
 <a khu> /<sup>L</sup>a-<sup>H</sup>xə/ ‘uncle’  
 <dud khug> /<sup>L</sup>ti-<sup>H</sup>xu/ ‘tobacco pouch’

Compared to, for instance, Dégé, where aspirated velar stops in the second-syllable-initial position are exceedingly rare and possibly limited to careful speech (Häsler 1999:14), this process is irregular in Kami, where aspirated velar stops in the second-syllable position are common. For example:

- <sman khang> /<sup>H</sup>mẽ-<sup>H</sup>k<sup>h</sup>õ/ ‘hospital’  
 <gru khug> /<sup>L</sup>tʂə-<sup>H</sup>k<sup>h</sup>u/ ‘elbow’  
 <a ? rang> /<sup>L</sup>a-<sup>L</sup>k<sup>h</sup>ə-<sup>H</sup>rã/ ‘we, first person plural inclusive pronoun’

The remaining examples of lenition are sporadic. They include the following changes:

(1) /p<sup>h</sup>/ to /h/, e.g.:

- <pho phag> /<sup>L</sup>p<sup>h</sup>u-<sup>H</sup>ha/ ‘boar, hog, male pig’  
 <mo phag> /<sup>L</sup>mu-<sup>H</sup>ha/ ‘sow, swine’  
 <dpal? phor> /<sup>L</sup>pi-<sup>H</sup>hue/ ‘incense burner, perfuming pan’

(2) /tɕ<sup>h</sup>/ to /fj/ or /j/, e.g.:

- <lag cha> /<sup>L</sup>ja-<sup>H</sup>fjə/ ‘tool, instrument’  
 <mig chu> /<sup>H</sup>ji-<sup>H</sup>fjə/ ~ /<sup>H</sup>ji-<sup>H</sup>tɕ<sup>h</sup>ə/ ‘tears’  
 <rdza chu> /<sup>L</sup>dza-<sup>H</sup>jə/ ~ /<sup>L</sup>dza-<sup>H</sup>tɕ<sup>h</sup>ə/ ‘Mekong’  
 <kha chu> /<sup>H</sup>k<sup>h</sup>a-<sup>H</sup>jə/ ‘saliva’

(3) /n/ or /ɲ/ to /j/

- <gnang nyin> /<sup>H</sup>nõ-<sup>H</sup>jĩ/ ‘the day after tomorrow’  
 <na ning> /<sup>L</sup>na-<sup>H</sup>jĩ/ ‘last year’

### 3.4.2 Intervocalic voicing and lenition

The sporadic process of intervocalic voicing changes voiceless unaspirated stops and fricatives into their voiced counterparts, e.g.:

- <rna kor> /<sup>H</sup>na-<sup>H</sup>gue/ ‘round earrings’  
 <ka to ra> /<sup>H</sup>ka-<sup>H</sup>də-<sup>H</sup>rɔ/ ‘metal dish, round copper basin’  
 <chu bya> /<sup>H</sup>tɕ<sup>h</sup>ə-<sup>H</sup>ʒɔ/ ‘water bird’

The process of voicing can be accompanied by that of lenition. For example:

<rdo dkar> /<sup>L</sup>du-<sup>H</sup>kɛ~<sup>L</sup>du-<sup>H</sup>γɛ/ ‘white stone’<sup>59</sup>  
 <rgya gar> /<sup>L</sup>dʒa-<sup>H</sup>γɛ/ ‘India’  
 <dkiyl kung?> or <dkiyl gung?> /<sup>H</sup>tɕi-<sup>H</sup>γũ/ ‘center, middle part’

To this category also belongs the word ‘rabbit’. Despite its WT spelling as <ri bong>, dialectal reflexes of this word suggest rather a voiceless velar stop initial in the second syllable. For example, in Lhasa Tibetan /ri<sup>13</sup>koŋ<sup>55</sup>/ (Zhāng 1996:24), Ménbā /re<sup>35</sup>koŋ<sup>55</sup>~ri<sup>35</sup>koŋ<sup>55</sup>/ (Lù 2002:354), Bātáng /zɿ<sup>55</sup>-γũ<sup>55</sup>/, Kami /<sup>L</sup>rə-<sup>H</sup>γũ/.<sup>60</sup>

Also to this category belong cases of intervocalic voicing involving OT suffixes, i.e. of *-p-* to *-b-*, with a subsequent lenition of *-b-* to *-w-*, as discussed above.

### 3.4.3 Rhotacism

The process of the intervocalic voicing of /t/ to /d/ as discussed above is further followed in a number of words by the rhotacism of /d/ to /r/. Some relevant examples include <mchu to> /<sup>H</sup>tɕhə-<sup>H</sup>ru/ ‘lips’, <sgo them> /<sup>L</sup>gu-<sup>H</sup>rɛ̃/ ‘doorsill, threshold’, <go thal> ‘ashes/cinders in a hearth’ > Kami /<sup>L</sup>ku-<sup>H</sup>rɛ/ ‘hearth’.

### 3.4.4 Resyllabification

The process of resyllabification applies with great frequency in Kami disyllabic words. It can be further distinguished into, on the one hand, compressions of earlier disyllabic collocations or expansions of an earlier monosyllabic form, and, on the other hand, syllable boundary re-adjustment, making the original coda part of the following onset syllable. Resyllabification is very common in OT as well as in modern Tibetan dialects (e.g. for OT, Beyer 1992:96; for Bātáng, Gésāng 1989:340; for Zhōngdiàn, Lù 1990:156).

#### 3.4.4.1 Syllable compression and expansion

Kami provides additional evidence on the so-called ‘syllabic cycle’ in Tibetan, whereby words alternately compressed and expanded into monosyllabic and disyllabic forms (Beyer 1992:96). Syllable coalescence involving the open root coalescence with nominal suffixes has been discussed and exemplified in §3.3.

<sup>59</sup> The same development involving the word for ‘white’ <dkar> has been described for Bātáng (Gésāng 1989:341), Zhōngdiàn (Lù 1990:156), and Zhongu (Sun 2003:793).

<sup>60</sup> Interestingly, the corresponding form in the Amdo dialect of Tiānjùn 天峻 has *-rgoŋ* as the second compound element (Huá 2002:81). I am grateful to Jackson Sun for this observation.

In our surveyed sample, the process of expansion of earlier monosyllabic forms into disyllabic forms has to do essentially with the consonant codas *-r* and *-b*. For example:

<phor> > \*pho ri > /<sup>L</sup>p<sup>h</sup>a-<sup>H</sup>rə/ ‘bowl’  
 <srab leb> > \*sra bi leb > /<sup>H</sup>sə-<sup>H</sup>bə-<sup>H</sup>le/ ‘flat’

### 3.4.4.2 Syllable boundary re-adjustment

The process of syllable boundary re-adjustment, whereby the original coda forms part of the following onset, creates consonant clusters in the second-syllable initial position. These newly formed initial clusters further follow the regular development of such clusters in non-resyllabified words. A nasal vowel or a nasal coda in the first syllable leads to the formation of nasal-stop or nasal-affricate clusters in the second-syllable-initial position. For example:

<bum pa> > \*bu mba > /<sup>L</sup>pa-<sup>H</sup>Nbɔ/ ‘vase’  
 <ngon khyi> > \*rngo ngyi > /<sup>H</sup>ŋue-<sup>H</sup>Ndʒə/ ‘hunting dog’

An oral coda in combination with the initial *l*- preserves the initial quality of this initial, e.g. <khlor lo> > \*kho rlo > /<sup>H</sup>k<sup>h</sup>u-<sup>H</sup>lu/ ‘wheel’.

An oral coda in combination with a voiceless fricative initial acts as a buffer against aspiration of this initial, e.g. <yug sa> > \*yu gsa > /<sup>L</sup>ʒu-<sup>H</sup>sɔ/ ‘widow’.

An oral coda in combination with the initial *r*- in some cases develops into a retroflex initial, e.g. <phug ron> > \*phu gron > /<sup>L</sup>p<sup>h</sup>u-<sup>H</sup>dʒuẽ/ ‘pigeon’.

Finally, the coda *-d* in combination with the initial *r*- has been attested in one case to develop into Kami /r/, i.e. <bod rag> /<sup>L</sup>pe-<sup>H</sup>ra/ ‘Tibetan liquor’, cf. <a rag> /<sup>H</sup>a-<sup>H</sup>ra/ ‘arak, strong liquor, alcoholic drink’.

## 3.5 Irregularities and dialect mixture

Most Kami words are readily identifiable with known Tibetan roots with the knowledge of (regular and more sporadic) sound correspondences and phonological processes in disyllabic words as outlined above. The percentage of Kami words of unclear origin is relatively low and makes up approximately 15% in the surveyed sample of ca. 2,000 words. Compared to other peripheral dialects, such as Bāsōng <brag gsum> (Qú et al. 1989), Yùshù (Huáng et al. 1994), Báimǎ (Zhāng 1994a, 1994b; Zhang 1997; Huáng & Zhāng 1995), or Zhongu (Sun 2003:792), this percentage is relatively insignificant.

Kami by and large evidences regular changes from the phonological system of OT. The major source of irregularities and multiple sound correspondences is dialect interference, leading to the stratification of Kami lexicon into at least two basic layers: (1) one indigenous and altogether relatively archaic (and exhibiting such changes as OT *lh*- to Kami /h/, *zl*- to /l/,

*sbr-* to /Nb~m/), and (2) one of mostly culturally-bound inter-dialectal loans.<sup>61</sup> The latter layer is further stratifiable into a number of sub-layers as per different sound change, suggesting different donor dialects. Consider some examples:

<rma bya> /<sup>H</sup>ma-<sup>H</sup>jɔ/ ‘peacock’ (OT *by-* > /j/, Kami *by-* > /ʃ/)  
 <bya baʔ> /<sup>L</sup>ea-<sup>H</sup>pə/ ‘thing (to do), activity, task’ (OT *by-* > /ɛ/, Kami *by-* > /ʃ/)  
 <sbrang yab> /<sup>L</sup>dzã-<sup>H</sup>jɿ/ ‘mosquito net’ (OT *y-* > /j/, Kami *y-* > /z/)  
 <g.yung drung> /<sup>H</sup>jũ-<sup>H</sup>dzũ/ ‘swastika’ (OT *g.y-* > /j/, Kami *g.y-* > /z/)  
 <tshe ring zhwa mo> /<sup>H</sup>tsʰə-<sup>H</sup>rẽ <sup>L</sup>ea-<sup>H</sup>mu/ ‘traditional Tibetan hat’ (OT *zh(w)-* > /ɛ/, Kami *zh(w)-* > /χ/)

Kami words with unclear etymology, on the other hand, are dispersed all over the lexicon, including:

(1) a small number of basic vocabulary items, e.g. /<sup>H</sup>a-<sup>H</sup>mi/ ‘breast’ (by extension, also ‘milk’), cf. OT <snying ga> or <nu ma>; /<sup>L</sup>a-<sup>H</sup>ju/ ‘good’, cf. OT <bzang po> or <yag po>; /<sup>L</sup>a-<sup>H</sup>bɛ/ ‘bad’, cf. OT <ngan> or <sduŋ po>

(2) some cultural vocabulary, e.g. /<sup>H</sup>pi/ ‘boat’, cf. OT <gru><sup>62</sup>

(3) a number of kinship terms, e.g. /<sup>H</sup>a-<sup>H</sup>Nbu/ ‘maternal uncle’, cf. OT <zhang>

(4) some animal and plant names, as common in peripheral dialects, e.g. /<sup>L</sup>pʰə-<sup>L</sup>wu-<sup>L</sup>ma-<sup>H</sup>ki/ ‘bat’ (of unclear origin), cf. OT <lpags bye'u> or <rga wang krad kyi>; /<sup>L</sup>ku-<sup>H</sup>du/ ‘walnut’ (from Naxi /gɿ<sup>33</sup>dy<sup>31</sup>/), cf. OT <star kha>

The following observations about the Kami words of obscure origin can be made.

(1) Some words of unclear origin (including those that belong to basic lexicon) are shared with the neighbouring dialects of Dìqìng Prefecture. Consider some examples from Kami and Dōngwàng:

<sup>61</sup> The stratification of Kami lexicon is an issue of considerable complexity, given the sheer number of sound changes discussed above. The challenging task of grouping various changes per layer merits a separate study.

<sup>62</sup> Based on the entry for ‘boat’ in Dài & Huáng (1992:201), that lists this word in 50 Tibeto-Burman languages, the word for ‘boat’ in Kami bears a surface resemblance with the root ‘boat’ in some little-researched languages of the border areas between China and India, e.g. Taraon /pej<sup>35</sup>/, Idu /pej<sup>35</sup>/.

‘breast’: Kami /<sup>H</sup>a-<sup>H</sup>mi/, Dōngwàng /mi<sup>?</sup>53/  
 ‘good’: Kami /<sup>L</sup>a-<sup>H</sup>ju/, Dōngwàng /a<sup>13</sup>ju<sup>55</sup>/  
 ‘bad’: Kami /<sup>L</sup>a-<sup>H</sup>bɛ/, Dōngwàng /a<sup>55</sup>bæ<sup>?</sup>55/  
 ‘maternal uncle’: Kami /<sup>H</sup>a-<sup>H</sup>Nbu/, Dōngwàng /a<sup>55</sup>mbə<sup>55/63</sup>/

(2) Perhaps, somewhat surprisingly, most of remaining words of unclear origin are not shared with the neighboring Qiangic languages. For example, ‘walnut’, Kami /<sup>L</sup>ku-<sup>H</sup>du/, Shǐxīng /<sup>LH</sup>q<sup>h</sup>ɛ.ɛ/, Lizu /<sup>HL</sup>k<sup>h</sup>ɛ.ɛ/, Pǔmǐ /<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>ra/.

Furthermore, local Qiangic languages appear, at times, to have donors for their Tibetan loanwords other than Kami. This is evidenced by the dissimilarity of the loan and the corresponding Kami word, and by sound correspondences of the loan with OT, which are distinct from those in Kami. For example, the word for ‘the universe, the external world’ is /<sup>H</sup>dzi-<sup>H</sup>tɕ-<sup>H</sup>k<sup>h</sup>ɕ/ in Shǐxīng, OT <’jig rten khams>, and /<sup>L</sup>Ndzā-<sup>H</sup>li/ in Kami, OT <’dzam gling>. The word for ‘flower’ is /<sup>L</sup>Nbu-<sup>H</sup>ru/ in Kami, and /<sup>LH</sup>mɛ-tɛo/ or /<sup>LH</sup>mɛ-to/ in Lizu, and /mi<sup>55</sup>-tɛo<sup>31</sup>/ in Nàmùzī, OT <me tog>.

#### 4. Summary and discussion

Characteristic features of Kami as dissimilar from general Kham tendencies can be summarized as follows:

- (1) Conditioned split of OT postalveolars, leading to the development of distinct uvular reflexes before OT non-high non-front vowels.
- (2) OT *Ky*- and *Py*- clusters become postalveolar affricates and fricatives respectively for some speakers, and alveolopalatal affricates and dental fricatives respectively for others. For the latter category of speakers, OT *sky*- becomes /s/ in certain words.
- (3) OT *y*- becomes /z/ for some speakers and /ʒ/ for others.
- (4) Unprefixed OT root initial *l*- becomes /j/.
- (5) OT *lh*- becomes /h/ and /l/. In the latter case, some reflexes of OT *lh*- merge with the reflexes of the OT cluster *sl*-.
- (6) OT *zl*- becomes /l/ and /Nd/.
- (7) OT *sbr*- becomes /Nb~m/ and /dz/.

<sup>63</sup> Tentatively, this may be an irregular development of OT <zhang bu>, cf. Bātáng /xǎ<sup>13</sup>mbu<sup>53</sup>/.

(8) OT closed syllables with consonantal codas develop into innovative vowels and diphthongs, without generating the glottal stop coda or contrastive vowel length.

(9) Kami has a simple tone system with the basic register distinction, High vs. Low (and tone is non-distinct in a number of roots which derive from OT prefixed clusters with a voiced initial, undergoing the process of devoicing).

(10) A register tone system is combined in Kami with a system of metrical stress (with a iambic pattern for nominal constructions and a trochaic pattern for verbal constructions).

These characteristic features can be further divided into those that have so far been documented only in Kami, such as (1), (8) or (10), and those that are attested in other peripheral Tibetan dialects, such as (3), (4) and (11).

In terms of its connection to the dialects of Diqing Prefecture, of which only Zhōngdiàn and Dōngwàng have been documented to date, and with which Kami has been argued to constitute one sub-cluster, the following conclusions can be made. In view of its characteristic developments as summarized above, Kami is highly distinct from Zhōngdiàn. At the same time, Kami is closer to Dōngwàng, with which it shares some innovative sound changes, e.g. (3)-(6), and some words of unclear Tibetan etymology. Conversely, ~~the innovative developments, such as (11), as well as also~~ some words of unclear Tibetan etymology, shared by Kami and Dōngwàng, are not restricted to these two dialects, and are being discovered in a growing number of lesser-known Tibetan dialects spoken in the historical frontier areas between Tibet and China.

The two prominent features of Kham dialects are, on the one hand, an unusually high degree of heterogeneity and individual innovation and the lack of common phonological innovations; and, on the other hand, the presence of unusual morphosyntactic innovations, setting these dialects apart from OT and Tibetan dialects outside of the area. In my analysis, both features result from contact-induced change—the defining conditioning factor in the formation of Tibetan dialects of the historically multilingual border areas between Tibetan and China. Hence, the high degree of heterogeneity and the lack of common innovations are attributable to local mechanisms of contact-induced change such as convergence of articulation modes and positions between the individual Kham Tibetan dialects and their respective (non-Tibetan) contact languages, incorporation of new phonemes, reorganization of the phonological system resulting in the substitution of some inherited phonemes by borrowed phonemes, and profound restructuring of the prosodic organization (for discussion, see Chirkova 2012). Consequently, further advances in Kham dialect research are critically contingent on careful case studies that delve into the causal contact-induced mechanisms in the area and carefully place each dialect in its immediate linguistic context.

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## Appendix I

### Summary Table of Kami Initials and Their OT Origins

The following additional conventions apply to the summary table of Kami initials (based on the speech of my main consultant) and their OT origins.

1. ‘(C)’ indicates one or two optional prefixal consonants. For example, ‘(C)k-’ stands for *bk-*, *dk-*, *sk-*, *lk-*, *rk-*, *bsk-* and *brk-*.

2. If one of a set of possible prefixal consonants triggers changes distinct from the remaining prefixal consonants that may be taken by the same initial, combinations of this prefixal consonant with this initial are listed separately. For example, combinations of the prefixal consonant *s-* with the root initial *n-* (resulting in / $\eta$ /) are listed separately from those of this initial with the prefixal consonants *g-*, *r-*, and *m-* (all resulting in /*n*/). In addition, combinations of a root initial with the nasal prefixes *m-* and *n-* (WT <’>) are always listed separately, as Kami reflexes of OT clusters with these prefixal consonants are irregular (§ 3.1.3).

3. ‘i’ stands for high front vowels, ‘a’ stands for non-high, non-front vowels.

4. A consonant between two dashes, e.g. *-kh-*, stands for the initial of the second syllable of a disyllabic word, as in /<sup>L</sup>a-<sup>H</sup>xə/ <a khu> ‘uncle’.

Kami	OT
Ø	Ø, [ʔ] (WT <i>a-chen</i> , <i>a-chung</i> )
p	p, (C)p, b, 'b
p <sup>h</sup>	ph, 'ph
b	(C)b
Nb	'b, sbr (as in / <sup>L</sup> Nb $\tilde{\omega}$ ~ <sup>L</sup> m $\tilde{\omega}$ / <sbrang> ‘bee; wasp’)
t	(C)t, d(w)
t <sup>h</sup>	th, mth, 'th
d	(C)d
Nd	md, 'd, zl (as in / <sup>L</sup> Nda- <sup>H</sup> w $\omega$ / <zla ba> ‘month’)
k	(C)k, g(w)
k <sup>h</sup>	kh(w), mkh, 'kh
g	(C)g
Ng	mg, 'g
ts	tsw, (C)ts, (C)tsw, dz
ts <sup>h</sup>	tsh(w), mtsh, 'tsh
dz	(C)dz
Ndz	mdz, 'dz
tʂ	(C)kr, gr(w), (C)gr, 'khr, mkhr, dr, (C)pr, br, 'br, dr, 'dr
tʂ <sup>h</sup>	khr, mkhr, 'khr, phr, 'phr
dʒ	(C)gr, (C)br
Ndʒ	mgr, 'gr, 'br

tʃ	(C)ky+a, 'ky+a, gy+a, 'gy+a
tʃ <sup>h</sup>	khy+a, mkhy+a, 'khy+a
dʒ	(C)gy+a
Ndʒ	mgy+a, 'gy+a
tɕ	(C)c, j, (C)ky+i
tɕ <sup>h</sup>	ch, mch, 'ch
dʒ	(C)j
Ndʒ	mj, 'j
s	(C)s, sr, z
s <sup>h</sup>	s
z	(C)z
ʃ	py+a, (C)py+a, by+a, sky+a, spy+a, dpy+a
ʃ <sup>h</sup>	phy+a, 'phy+a
ʒ	(C)by+a, 'by+a, y, g.y
ɕ	(C)sh+i, (C)zh+i, by+i
ɕ <sup>h</sup>	sh+i, phy+i
ʒ	(C)j, (C)zh+i
x	', -kh-
ɣ	-k-, -g-
ʎ	sh(w)+a, (C)sh+a, zh(w)+a
ʎ	(C)zh+a, 'j? (as in / <sup>H</sup> ʎɔ/, from WT <'ja'>, OT <gzha'> 'rainbow')
h	h, h(w)?
ʎj	lh
m	m, (C)m, 'b (as in / <sup>L</sup> Nba~ <sup>L</sup> ma/ <'bag'> 'mask'), sbr (as in / <sup>L</sup> Nbõ~ <sup>L</sup> mõ/ <sbrang'> 'bee; wasp')
m̥	sm
n	n, (C)n, 'd, md (as in / <sup>L</sup> nã- <sup>H</sup> sõ / <sup>H</sup> ʃə- <sup>H</sup> gə/ <mdang song ?> 'last night')
n	sn
ɲ	ny(w), (C)ny, m+i, (C)m+i, my, (C)my
ɲ̥	sny, sm+i, smy
ŋ	ng, (C)ng
ŋ̥	sng
w	w, -b-
r	r(w), hr?, -d-, -t-
ʀ	-th-, -d + -r- (as in / <sup>L</sup> pe- <sup>H</sup> ra/ <bod rag'> 'Tibetan liquor')
j	l, -w-
l	(C)l, zl
l̥	lh, sl

## Appendix II

### English-Kami Word List

The following English-Kami word list comprises circa 1,500 common lexical items with their suggested etymologies. Following Sun (2003:803), I provide Tibetan etymologies underlying the modern Kami forms in question rather than their standard Written Tibetan meaning equivalents. Combinations of etymons corresponding to Kami expressions that are not attested in WT, as based on the Rangjung Yeshe Tibetan-English dictionary ([www.nitartha.org/dictionary.html](http://www.nitartha.org/dictionary.html)), are marked with an asterisk. For example, /<sup>L</sup>ju<sup>-H</sup>ka/ ‘(swept) garbage, waste’, <\*phyags rdul>; /<sup>L</sup>Nbu<sup>-H</sup>ru<sup>L</sup>no/ <\*me tog nad> ‘smallpox, measles’.

Uncertain origins are indicated by question marks in the corresponding syllable slot. For example, /<sup>L</sup>ju<sup>-H</sup>ka/ <lug ?> ‘lamb, young sheep’, where the etymology of the diminutive root /ka/ is unknown. Alternatively, question marks beside suggested etymons signal that the etyma in question are tentative. For example, /<sup>H</sup>dō<sup>L</sup>t<sup>h</sup>ō/ <gdong? mthong?> ‘give birth; child delivery’, is taken to be tentatively related to the etyma <gdong> ‘face’ and <mthong> ‘see’. This is based on a parallel formation in the neighboring Shixing language, where the meaning ‘give birth; child delivery’ is denoted by the expression that literally means ‘see the (child’s) face’.

Exceptions to the sound correspondences, as discussed in the main part of the chapter, are highlighted by boldface. For example, the Kami word for ‘mouse, rat’ /<sup>L</sup>ju<sup>-H</sup>wɔ/ is likely to be related to <byi ba>, but the first syllable of the Kami word is at variance with the expected correspondence OT -i > Kami /ə/.

abbey; / <sup>L</sup> guē <dgon>, / <sup>L</sup> guē- <sup>H</sup> bɔ <dgon pa>	ankle; / <sup>L</sup> ts <sup>hi</sup> - <sup>H</sup> bɔ <tshigs pa>
ache, be sick; / <sup>L</sup> nō <na>, / <sup>L</sup> ze <gzer>	answer, reply; / <sup>L</sup> jē- <sup>H</sup> te <lan ster>
adam’s apple, larynx; / <sup>L</sup> sē- <sup>H</sup> kō	ant; / <sup>L</sup> dza- <sup>H</sup> tsu <? grog>
add; / <sup>H</sup> ja- <sup>L</sup> dō <yar sdom>	anus; / <sup>L</sup> ṣ- <sup>H</sup> Nge <bshang ?>
afternoon, evening; / <sup>H</sup> ḡ- <sup>H</sup> gə < <b>phyi</b> rgas?>	aperture, hole; / <sup>H</sup> ts <sup>h</sup> ṣ <tshang>
again; / <sup>L</sup> ṣō <yang>	apron; / <sup>L</sup> hjä- <sup>H</sup> Nge < <b>phang</b> khebs>
agaric, wood ear; / <sup>L</sup> ni- <sup>H</sup> gei <sup>H</sup> na- <sup>H</sup> wu <mi rgas rna bo>, literally, ‘old man’s ears’	arak, strong liquor, alcoholic drink; / <sup>H</sup> a- <sup>H</sup> ra <a rag>; (Tibetan liquor) / <sup>L</sup> pe- <sup>H</sup> ra <bod rag>
air; / <sup>L</sup> hū- <sup>H</sup> pɔ <rlung pa>	arm, forearm; / <sup>L</sup> jo <lag>
airplane; / <sup>H</sup> tea- <sup>H</sup> ṣɔ <lcags bya>	arrive; / <sup>H</sup> je <sup>L</sup> fū <sleb byung>
alive (not dead); / <sup>L</sup> ma= <sup>H</sup> e <sup>h</sup> ə <sup>L</sup> ṣō <ma shi snang>	arrow; / <sup>L</sup> Ndɔ <mda’>
all; / <sup>H</sup> ts <sup>h</sup> ṣ- <sup>H</sup> mō <tshang ma>	arrow head; / <sup>L</sup> Nda- <sup>H</sup> tsi <mda’rtse>
aluminium; / <sup>L</sup> ji, possibly from Chinese 鋁, SWM /ny <sup>53</sup> /, MC /joX. This is an early loan, for it followed the change /- > /j/	arse, buttocks, hinder part; / <sup>L</sup> ts <sup>h</sup> ṣ- <sup>H</sup> rɔ <tshang ra>
angry, take offence; / <sup>H</sup> ni <sup>L</sup> k <sup>h</sup> ɔ <snying ?>	ashes; / <sup>L</sup> t <sup>hi</sup> - <sup>H</sup> wɔ <thal ba>
animals; / <sup>L</sup> rə- <sup>H</sup> da <ri dwags>	ask, question; / <sup>H</sup> tsi <’dri>
	asthma, shortness of breath; / <sup>H</sup> bu- <sup>L</sup> p <sup>h</sup> ṣ

<\*dbugs phong>; <sup>H</sup>bu <sup>L</sup>ga <\*dbugs ?>  
aubergine, eggplant; <sup>L</sup>ge, cf. Shǐxīng /<sup>L</sup>gje/,  
Pǔmǐ /gie<sup>35</sup>/, Lizu /<sup>LH</sup>Ngətsə/  
aunt (father's sister); <sup>H</sup>a-<sup>H</sup>rē <a sring?>  
aunt (wife of father's older brother); <sup>H</sup>a-<sup>H</sup>mǎ  
<a ma>; <sup>H</sup>a-<sup>H</sup>rē <a sring?>  
aunt (wife of father's younger brother); <sup>L</sup>a-  
<sup>H</sup>sū <a sru mo?>  
aunt (mother's sister); <sup>H</sup>a-<sup>H</sup>rē <a sring?>  
aunt (wife of mother's brother); <sup>H</sup>a-<sup>H</sup>rē <a  
sring?>  
autumn; <sup>H</sup>tā-<sup>H</sup>Ngə <ston ka>  
axe; <sup>H</sup>ta-<sup>H</sup>rə <sta re>  
back; <sup>L</sup>ee-<sup>H</sup>gǎ <\*phyi? gong>  
back of hand; <sup>L</sup>ja-<sup>H</sup>gǎ <\*lag gong>  
back up, retreat; <sup>H</sup>ei-<sup>H</sup>Ndzēi <\*phyir 'bros>  
bad, evil; <sup>L</sup>a-<sup>H</sup>be; <sup>L</sup>ma=<sup>H</sup>zǎ <mi bzang>  
bag, sack; <sup>L</sup>ke-<sup>H</sup>ɿ <\*bkal do?>  
balance, scale (large, e.g. for weighing skins);  
<sup>H</sup>sǎ <srang>  
balance, steelyard (small); <sup>L</sup>tei <'jal?>  
bamboo; <sup>L</sup>nū-<sup>H</sup>wā <smyug ma>  
bamboo joint; <sup>L</sup>nū-<sup>H</sup>ts<sup>hi</sup> <smyug tshigs>  
bamboo shoot; <sup>L</sup>nū-<sup>H</sup>gə <smyug ?>  
bank; <sup>H</sup>ye-<sup>H</sup>k<sup>h</sup>ǎ <dn̄gul khang>  
bark (v); <sup>L</sup>su <zug>  
bark (of a tree) (N); <sup>L</sup>ei-<sup>H</sup>pa <shing lpags>  
barley; <sup>L</sup>shu-<sup>H</sup>wə <so ba>  
basin (wooden); <sup>L</sup>k<sup>h</sup>ua-<sup>H</sup>la, cf. Shǐxīng  
/<sup>LH</sup>q<sup>h</sup>wəɿ/, Pǔmǐ /k<sup>h</sup>uA<sup>35</sup>IA<sup>35</sup>/, Lizu  
/<sup>HL</sup>q<sup>h</sup>wəɿ/  
basket (for carrying a child); <sup>L</sup>dzǎ-<sup>H</sup>Nga  
bat; <sup>L</sup>p<sup>h</sup>ə-<sup>L</sup>wu-<sup>L</sup>ma-<sup>H</sup>ki  
be, copula verb; <sup>L</sup>re <red>  
beads, rosary; <sup>H</sup>ts<sup>h</sup>ǎ <phreng ba>  
beam, rafter; <sup>H</sup>p<sup>h</sup>o <phog>  
bean (*Phaseolus vulgaris*); <sup>H</sup>sa-<sup>H</sup>mǎ <sran  
ma>  
bear (fruit); <sup>H</sup>shē <sup>L</sup>ta <\*sil? (tog?) btag?>  
beard; <sup>L</sup>a-<sup>H</sup>ts<sup>h</sup>ǎ <ag tshom>

beautiful, good-looking; <sup>L</sup>tce-<sup>H</sup>tsu  
bed; <sup>H</sup>ts<sup>h</sup>ə <khri>  
bedbug; <sup>L</sup>te-<sup>H</sup>ei <? shig>  
bee, wasp; <sup>L</sup>Nbǎ-<sup>L</sup>mǎ <sbrang>  
beehive; <sup>L</sup>Nbǎ-<sup>H</sup>ts<sup>h</sup>ǎ <sbrang tshang>  
beer; <sup>H</sup>te<sup>h</sup>ǎ <chang>; (malt dregs after  
brewing beer) <sup>H</sup>p<sup>h</sup>ə  
beg (for food); <sup>H</sup>ǎ <slong>, <sup>H</sup>xu-<sup>L</sup>ǎ <bshos?  
slong>  
beige, light blue-grey; <sup>H</sup>fa-<sup>H</sup>bu-<sup>H</sup>lo <skya  
bo ?>  
bell; <sup>L</sup>tsi-<sup>H</sup>bə <dril bu>  
bellows, instrument for blowing a fire; <sup>H</sup>bi-  
<sup>H</sup>po <sbud pa>  
belly, abdomen; <sup>L</sup>sə-<sup>H</sup>po <gsus pa>  
bellyband, saddle girth; <sup>H</sup>lu <glo>  
below; <sup>L</sup>xr-<sup>H</sup>rə <\*'og ra?>  
bet, place a bet; <sup>H</sup>te-<sup>L</sup>ka <rgyan bzhang>  
bid sb welcome, greet; <sup>L</sup>ga <sup>H</sup>tsu <dga' bro?>  
big; <sup>H</sup>te<sup>h</sup>i <che>, <sup>L</sup>te<sup>h</sup>ə-<sup>H</sup>wu <che ba>  
birch; <sup>H</sup>ts<sup>h</sup>e <gro ?>  
bitter; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tu <kha tig>  
black; <sup>L</sup>na-<sup>H</sup>rǎ <nag ?>  
black bear; <sup>L</sup>tǎ <dom>  
blacksmith; <sup>L</sup>Nga-<sup>H</sup>rə <mgar ba>  
bladder; <sup>L</sup>ts<sup>h</sup>a-<sup>L</sup>mu-<sup>H</sup>rə  
blade of a knife; <sup>L</sup>tsə-<sup>H</sup>su <gri so>  
blanket, rug; <sup>L</sup>fa-<sup>H</sup>rə <phya ra>  
blind; <sup>L</sup>na-<sup>H</sup>ku <myig ?>  
blink, wink; <sup>H</sup>ni-<sup>H</sup>tsū <myig btsum>  
blister; <sup>H</sup>p<sup>h</sup>ə-<sup>H</sup>dui <phol ?>  
block up, plug; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>ts<sup>h</sup>ǎ <phar tshang>  
blood; <sup>H</sup>ts<sup>h</sup>a <khrag>  
blossom, bloom; <sup>H</sup>xo <bzhad?>  
blow (as of wind); <sup>H</sup>lǎ <sup>L</sup>ǎ <rlung 'ong>  
blow away (as of a speck of dust); <sup>H</sup>pə  
<sbar?>  
blue; <sup>L</sup>ŋū-<sup>H</sup>ŋū <\*sngon sngon>; (heaven's  
blue) <sup>H</sup>nǎ-<sup>H</sup>Ndo <\*gnam mdog>  
blunderbuss; <sup>H</sup>pǎ-<sup>H</sup>Ndo <? mda?>

- blunt, not sharp; <sup>L</sup>tə-<sup>H</sup>tu <\*brtul brtul>  
board for kneading dough; <sup>L</sup>tɛ<sup>h</sup>a-<sup>H</sup>ʁɔ̃  
<? gzhong>  
board, plank; <sup>H</sup>pɔ̃-<sup>H</sup>he <spang leb?>  
boat; <sup>H</sup>pi  
bodkin, awl; <sup>H</sup>Nbu-<sup>H</sup>lɛ̃ <'bur len>  
body; <sup>L</sup>li-<sup>H</sup>pu <lus po>  
body (upper part of the body); <sup>L</sup>k<sup>h</sup>o-<sup>H</sup>tue  
<khog stod>  
body (lower part of the body); <sup>L</sup>k<sup>h</sup>o-<sup>H</sup>m̃ɛ̃  
<khog smad>  
boil (a porridge), stew; <sup>L</sup>ts<sup>h</sup>ɔ̃-<sup>H</sup>ki <tsha?  
bkol>  
Bon priest, dōngbā 東巴; <sup>H</sup>a-<sup>H</sup>ji <a myes>;  
<sup>L</sup>gi-<sup>H</sup>ʃɔ̃ <dge slong>  
bone; <sup>L</sup>rə-<sup>H</sup>pɔ̃ <rus pa>  
book; <sup>H</sup>pe-<sup>H</sup>tɛ<sup>h</sup>ɔ̃ <dpe cha>  
borrow (money); <sup>H</sup>ʃɔ̃ <skyi>  
borrow (objects); <sup>H</sup>ʃɛ <g.yar>  
bottle; <sup>L</sup>kɛ, <sup>H</sup>ɛ<sup>h</sup>ei-<sup>H</sup>gɛ̃ <shel ?>  
boundary, border; <sup>L</sup>s<sup>h</sup>a-<sup>H</sup>Ndzã̃ <sa mtshams>  
bow; <sup>H</sup>ʁə̃ <gzhu>; <sup>H</sup>lu  
bowl (eating bowl); <sup>H</sup>xu <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>rə̃ <bshos?  
phor>  
bowl (one full bowl of smth); <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>rə̃ <sup>H</sup>kɔ̃  
<phor gang>  
box, trunk; <sup>H</sup>gã̃ <sgam>  
bracelet; <sup>L</sup>ja-<sup>H</sup>kue <lag kor>  
braid, plait, pigtail; <sup>L</sup>na-<sup>H</sup>rɔ̃; <sup>H</sup>s<sup>h</sup>ɔ̃-<sup>H</sup>Ngu  
brains; <sup>H</sup>la-<sup>H</sup>pɔ̃ <klad pa>  
branch; <sup>L</sup>ɛ̃-<sup>H</sup>ja <shing yal?>  
brass; <sup>L</sup>ra <rag>  
bread, cake; (baked flat cake) <sup>L</sup>t<sup>h</sup>a-<sup>H</sup>bɔ̃; (thin  
pancake) <sup>L</sup>t<sup>h</sup>a-<sup>H</sup>sa <? sreg>; (flat bread)  
<sup>L</sup>k<sup>h</sup>a-<sup>H</sup>rɔ̃ <khur> or <khu ra>  
break (thunderbolt); <sup>H</sup>lu <sup>L</sup>Ndzui <\*glog 'gyur>  
break, smash (TR); <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>tʂo <phar dkrog?>  
break, snap (INTR); <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>tɛ<sup>h</sup>a <phar 'chag>  
breakfast; <sup>L</sup>χo-<sup>H</sup>xu <zhog bshos?>  
breast; <sup>H</sup>a-<sup>H</sup>mi  
breast feed, suckle; <sup>H</sup>sɛ̃  
breath; <sup>L</sup>bu <dbugs>  
brick; <sup>H</sup>tsi-<sup>H</sup>du <rtsig rdo>  
bridge; <sup>L</sup>Ndza-<sup>H</sup>Nbɔ̃ <zam pa>  
bridge of nose; <sup>L</sup>ŋã̃-<sup>H</sup>kɔ̃ <sna sgang>  
bridle; <sup>H</sup>sɾ <srab>  
broom; <sup>L</sup>f<sup>h</sup>a-<sup>H</sup>mɔ̃ <phyags ma>  
brother; (older brother) <sup>L</sup>a-<sup>H</sup>ju; <sup>L</sup>a-<sup>L</sup>ju-<sup>H</sup>ka, cf.  
Shíxīng <sup>L</sup>H a-ju/; (younger brother) <sup>L</sup>mũ  
<nu bo>; <sup>H</sup>pɛ̃-<sup>H</sup>ʂɔ̃ <spun skya>  
brother's wife; <sup>H</sup>na-<sup>H</sup>ʂɔ̃ <mna' ma>  
brown bear; <sup>L</sup>tʂe <dred>  
brown sugar; <sup>L</sup>pə-<sup>H</sup>rã̃ <bu ram>  
brush, whisk; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>zə̃ <phag ze>  
brush, paint (v); <sup>H</sup>dɛ̃ <rdar>  
bucket; (metal bucket) <sup>L</sup>zɔ̃-<sup>H</sup>bi <zom>; (large  
wooden bucket for fetching water, pail)  
<sup>L</sup>tɛ<sup>h</sup>ə-<sup>H</sup>t<sup>h</sup>u <chu ?>; (swill tub) <sup>L</sup>sa-<sup>H</sup>la  
buckwheat; (sour buckwheat) <sup>L</sup>tʂa-<sup>H</sup>wu <bra  
bo>; (sweet buckwheat) <sup>L</sup>ʒã̃, <sup>L</sup>dʒa-<sup>H</sup>ʒã̃  
<rgya ?>  
bud, sprout; <sup>L</sup>gɔ̃, <sup>L</sup>ga-<sup>H</sup>wɔ̃  
buffalo; <sup>H</sup>tɛ<sup>h</sup>ə-<sup>H</sup>lã̃ <chu glang>  
build by laying bricks or stones; <sup>H</sup>tsi <rtsig>  
bull; <sup>H</sup>lã̃ <glang>  
bullet; <sup>H</sup>Ndi <mde'u>  
burn (wood); <sup>H</sup>tʃui  
burn incense sticks, make a smoke offering;  
<sup>H</sup>sɔ̃-<sup>L</sup>tɔ̃ <bsangs btang>  
bury (a dead person); <sup>H</sup>bɔ̃ <sba>, <sup>H</sup>ma-<sup>L</sup>bɔ̃  
<mar sba>  
businessman; <sup>H</sup>ts<sup>h</sup>ɔ̃-<sup>H</sup>pɛ̃ <tshong dpon>  
busy; <sup>H</sup>ts<sup>h</sup>u  
butcher, slaughter; <sup>H</sup>χɔ̃ <bsha'>  
butter; <sup>L</sup>mɛ̃ <mar>  
butterfly; <sup>L</sup>fã̃-<sup>L</sup>ka-<sup>H</sup>le <phye ma ? leb>  
button, clasp; <sup>L</sup>dʒo-<sup>H</sup>li <sgrog ril?>  
buy; <sup>L</sup>juũ <nyo>  
cabbage; <sup>L</sup>tɛ<sup>h</sup>i-<sup>H</sup>ɣɛ̃ <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tse <\*che? dkar kha  
tshal?>

calculate, count; <sup>H</sup>tse-<sup>H</sup>tʂu <rtsi bro?>  
 calf; <sup>L</sup>pə-<sup>H</sup>tə <be'u ?>  
 calf of leg; <sup>L</sup>fə-<sup>H</sup>Nbɔ <byin pa>  
 calvaria, top of the head; <sup>H</sup>tsu <gtsug>  
 camel; <sup>H</sup>ŋa-<sup>H</sup>mɔ̃ <rnga mong>  
 candle; <sup>L</sup>ma-<sup>H</sup>ʃu <mar rkyong>  
 capital; <sup>H</sup>tsʰɔ̃-<sup>H</sup>tsɔ <tshong rtsa>  
 carbon, charcoal; <sup>L</sup>sʰi-<sup>H</sup>wɔ <sol ba>  
 carpenter; <sup>H</sup>ɛ̃-<sup>H</sup>zu <shing bzo>  
 carry on the back, bear; <sup>L</sup>Nba <'ba'>  
 carry on the shoulder; lift with both hands;  
<sup>H</sup>zɛ  
 carve, engrave; <sup>H</sup>ku <rko>  
 cast dice, mo divination; <sup>L</sup>mɔ̃-<sup>H</sup>tr <mo btab>  
 castrate, sterilize; (pigs) <sup>H</sup>tɛe <gcod pa>;  
 (horses or bulls) <sup>H</sup>mɛ̃ <sman>  
 cat; <sup>H</sup>wu-<sup>H</sup>li <? lus>  
 cat (female cat); <sup>L</sup>mu-<sup>H</sup>li <mo lus>  
 cat (tomcat, male cat); <sup>L</sup>pʰu-<sup>H</sup>li <pho lus>  
 cat (kitten); <sup>L</sup>wu-<sup>H</sup>ka; <sup>L</sup>wu-<sup>H</sup>tʂʰə <? phrug>  
 cat (wild cat); <sup>H</sup>si-<sup>H</sup>rɔ̃ <bye la?>  
 catch (fire), be on fire; <sup>L</sup>Nbe <'bar>, <sup>L</sup>ni-<sup>H</sup>Nbe  
 <mye 'bar>  
 catch a cold / flu; <sup>L</sup>sʰa-<sup>H</sup>su  
 catch up; <sup>L</sup>te <ded>  
 cattle, ox, cow; <sup>L</sup>pa-<sup>H</sup>jɔ̃ <ba lang>  
 cave (mountain); <sup>L</sup>tʂa-<sup>H</sup>tʂʰu <brag ?>  
 ceiling; <sup>H</sup>nã-<sup>H</sup>tɛ̃ <\*gnam gcal?>  
 cent, one cent; <sup>H</sup>ka <sup>H</sup>tɛi <skar (ma) gcig>  
 center, middle part; <sup>H</sup>tɛi-<sup>H</sup>γũ <\*dkyil  
 gung?>  
 central pillar; <sup>L</sup>tɛi-<sup>H</sup>kɔ̃ <dkyil ka>  
 chaff; <sup>L</sup>be-<sup>H</sup>la, cf. Pümi /be<sup>55</sup>la<sup>35</sup>/  
 chaff, husk; <sup>L</sup>Ndʒei-<sup>H</sup>xɔ̃ <'bras shun>  
 change, exchange; <sup>L</sup>pʰa-<sup>H</sup>zi <phar brje>  
 chase after; follow after; <sup>H</sup>kɛ̃  
 cheap, inexpensive; <sup>L</sup>kɔ̃ <sup>H</sup>ɔ̃ <\*gong sla>; <sup>L</sup>kɔ̃  
<sup>H</sup>ɔ̃ <gong ?>  
 cheek; <sup>H</sup>na-<sup>H</sup>tsɔ̃ <rna rtsa>; <sup>L</sup>kʰe-<sup>H</sup>lɔ̃  
 <mkhur ?>

cheese, milk curd; <sup>H</sup>tʰi <thud>, <sup>L</sup>pa-<sup>H</sup>tʰi <ba  
 thud>  
 chess; <sup>H</sup>Ndʒi <sup>L</sup>dʒɜ <\*'brel rgyab>  
 chest; <sup>L</sup>tʂã-<sup>H</sup>Nga <brang kha>  
 chest, cupboard; <sup>H</sup>ta-<sup>H</sup>dʒɔ̃ <sgam sgrom>  
 chew; <sup>L</sup>tɛʰɔ̃ <'cha' ba>  
 chick; <sup>L</sup>ei-<sup>H</sup>ka <byi'u ?> or <bye ?>  
 chicken; <sup>L</sup>fɔ̃ <bya>  
 chicken (hen); <sup>L</sup>fa-<sup>H</sup>mɔ̃ <bya mo>  
 chicken (cock, rooster); <sup>L</sup>fa-<sup>H</sup>wu <bya po>  
 child; <sup>L</sup>a-<sup>H</sup>ka; <sup>L</sup>a-<sup>H</sup>wɔ̃ <a wa>  
 chimney, skylight; <sup>L</sup>ka-<sup>H</sup>xũ <skar khung>  
 China, inland; <sup>L</sup>dʒa-<sup>H</sup>na <rgya nag>  
 Chinese; <sup>H</sup>dʒɔ̃ <rgya>  
 Chinese characters; <sup>L</sup>dʒa-<sup>H</sup>zi <rgya yig>  
 chin, jaw; <sup>H</sup>mã-<sup>H</sup>Ngi <ma mgal>  
 chisel; <sup>H</sup>zɔ̃ <gzong>  
 choke on food; <sup>H</sup>nɔ̃ <rnan>  
 choose, select; <sup>H</sup>se <gsed>  
 chop (firewood) into chunks; <sup>H</sup>tʂo  
 chop down (trees); <sup>H</sup>tsɜ <gtsab>; <sup>H</sup>ɛ̃ <sup>H</sup>tsɜ  
 <shing gtsab>  
 chop, mince, cut (meat); <sup>H</sup>tsɜ <gtsab>  
 chopsticks; <sup>L</sup>χə-<sup>H</sup>ũ  
 churn; <sup>L</sup>tɛa-<sup>H</sup>Ndɔ̃ <ja mdong>  
 cigarette; <sup>L</sup>ti-<sup>H</sup>dʒi <du sgril>  
 circle, wheel; turn round; <sup>H</sup>kʰue <'khor>  
 city, town; <sup>H</sup>dʒa-<sup>H</sup>dʒɔ̃ <rgya grong>  
 clay baking pot; <sup>L</sup>za-<sup>H</sup>ɔ̃ <rdza ma>  
 clean; <sup>H</sup>tsɔ̃-<sup>H</sup>mɔ̃ <gtsang>  
 clear (know); <sup>L</sup>ku-<sup>H</sup>mu <go ?>  
 clear (water); <sup>L</sup>tɔ̃-<sup>H</sup>mo <dwangs mo>  
 clear (weather), sunny; <sup>H</sup>ji <sup>H</sup>zɔ̃ <yul bzang>  
 clever, intelligent; <sup>L</sup>tʂʰɔ̃-<sup>H</sup>pɔ̃ <khram pa?>  
 climb; <sup>L</sup>Ndza <'dzeg>  
 clock, hour; watch; <sup>L</sup>tɛʰi-<sup>H</sup>tsʰe <chu tshod>  
 close (the door); <sup>H</sup>ti, possibly related to  
 <rtul> 'gather into a place' or <btus>  
 'gather together', with a semantic shift  
 from 'collect' to 'close'

close (the mouth) slightly; <sup>H</sup>k<sup>h</sup>ɔ̄ <sup>L</sup>ma-<sup>L</sup>tsɔ̄  
 <kha mar 'dzum>  
 close, near; <sup>L</sup>t<sup>h</sup>a-<sup>H</sup>t<sup>h</sup>ũ̄ <thag thung>, <sup>H</sup>ka-<sup>H</sup>tsɔ̄  
 <? rtsa>  
 cloth; <sup>L</sup>rei <ras>  
 cloth button; <sup>L</sup>rei <sup>L</sup>dzo-<sup>H</sup>li <ras sgrog ril?>  
 clothes; <sup>L</sup>kei <gos>  
 cloud; <sup>H</sup>t<sup>s</sup>ẽ̄ <sprin>  
 cloudy, overcast; <sup>H</sup>nã <sup>L</sup>na <gnam nag>  
 cobbler, shoemaker; tailor, dressmaker; <sup>L</sup>zu-  
<sup>H</sup>bɔ̄ <bzo ba>  
 coffin; <sup>L</sup>ru-<sup>H</sup>gã̄ <ro sgam>  
 cold; <sup>L</sup>t<sup>s</sup>ɔ̄-<sup>H</sup>kua <grang ?>, with the suffix  
 /kua/  
 collar; <sup>L</sup>kɔ̄ <gong>, <sup>L</sup>kɔ̄-<sup>H</sup>wa <gong ba>  
 color; (dyestuff) <sup>H</sup>ts<sup>h</sup>ei-<sup>H</sup>k<sup>h</sup>ɔ̄ <tshos kha>;  
<sup>L</sup>Ndo-<sup>H</sup>k<sup>h</sup>ɔ̄ <mdog kha>  
 comb (N); <sup>H</sup>sə-<sup>H</sup>ũ̄ <shad ma?>  
 comb (V); <sup>H</sup>ɛ̄ <shad>, (comb hair) <sup>H</sup>t<sup>s</sup>ɔ̄ <sup>L</sup>ɛ̄  
 <skra shad>  
 come; <sup>L</sup>ɔ̄ <'ong>, (IMP) <sup>H</sup>xo <shog>  
 come loose; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>la <phar glod?>  
 come out; <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>pi <tshur 'bud>  
 come out (as of the sun); <sup>L</sup>nɔ̄ <sup>H</sup>χ̄ɛ̄ <nyi ma  
 shar>  
 comet; <sup>H</sup>kẽ̄-<sup>H</sup>Ndo <skar mda'>  
 comfortable; <sup>H</sup>ei-<sup>H</sup>pu <skyid po>  
 common people; <sup>L</sup>mi-<sup>H</sup>mɔ̄ <mi dmangs>  
 conch shell; <sup>L</sup>tũ̄ <dung>  
 conifer, fir; (Faber's Fir, *Abies fabri*) <sup>H</sup>sɔ̄-<sup>H</sup>xə̄  
 <gsom ?>; (silver fir, *Cathaya*  
*argyrophylla*) <sup>L</sup>Ndu-<sup>H</sup>ra <thang rag>  
 consciousness; <sup>H</sup>ja-<sup>L</sup>ts<sup>h</sup>ue <yar tshor>  
 cook; <sup>L</sup>zu <bzo>  
 cooked, ripe; <sup>L</sup>ja-<sup>H</sup>ts<sup>h</sup>ei <yar 'tshos>  
 cooking pot; <sup>H</sup>di  
 copper; <sup>L</sup>sɔ̄ <zangs>  
 copper pot; <sup>L</sup>sɔ̄ <sup>L</sup>lu-<sup>H</sup>ko <zangs ? ?>  
 corn, maize; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>ɛ̄<sup>h</sup>ə̄  
 corner; <sup>L</sup>sui <zur>, e.g. (corner of the eye)

<sup>H</sup>ni-<sup>H</sup>zui <myig zur>  
 corpse, carcass; <sup>L</sup>ru <ro>  
 cotton; <sup>H</sup>t<sup>s</sup>i-<sup>H</sup>Nbi <srin bal>  
 cough; <sup>L</sup>jə̄ <lu ba>  
 country; <sup>L</sup>dza-<sup>H</sup>k<sup>h</sup>u <r<sup>g</sup>yal khab>  
 county; <sup>H</sup>dzɔ̄ <rdzong>  
 courtyard; <sup>L</sup>k<sup>h</sup>ue-<sup>H</sup>rɔ̄ <khor ra>; <sup>L</sup>ta-<sup>H</sup>rɔ̄ <do  
 ra>  
 cover up; <sup>H</sup>kr̄ <bkab>, e.g. cover (the mouth)  
<sup>H</sup>t<sup>h</sup>ə̄-<sup>H</sup>ru <sup>L</sup>kr̄ <mchu to bkab>  
 cover, hide from view; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>zue <phar  
 byibs>  
 cow; <sup>L</sup>pɔ̄ <ba>  
 craftsman; <sup>H</sup>k<sup>h</sup>a-<sup>H</sup>mɔ̄ <mkhan pa?>  
 crawl, crumble off; <sup>L</sup>ko <gog>  
 cremation grounds, cemetery; <sup>L</sup>ti-<sup>H</sup>t<sup>s</sup>h<sup>h</sup>e <dur  
 khrod>  
 cross (a river); <sup>H</sup>Ngɔ̄ <'gom>  
 crow (sound of chicken); <sup>L</sup>se  
 crow, raven; <sup>L</sup>fa-<sup>H</sup>ro <bya rog>  
 cry, weep; <sup>L</sup>ŋũ̄ <ngu>  
 cuckoo; <sup>H</sup>ku-<sup>H</sup>ku <ku ku>  
 cucumber; <sup>L</sup>du-<sup>H</sup>kue <rdo gon?>, cf. Shīxīng,  
 /<sup>HL</sup>dwɜ-xu/, Lizu /<sup>HL</sup>teuq<sup>h</sup>wə/, Pǔmǐ  
 /do<sup>35</sup>k<sup>h</sup>A<sup>53</sup>/

curved, become curved; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>Ngue <phar  
 sgor?>  
 cut (meat, grass), mow; <sup>H</sup>ŋɔ̄ <rnga>  
 cut (cloth); <sup>L</sup>kei-<sup>H</sup>ts<sup>h</sup>e <gos 'tshem>  
 cut off, sever (a rope); cut up, slice; <sup>H</sup>tu  
 <gtub>  
 cut one's hair, have one's hair cut; <sup>L</sup>dza  
 <dreg> or <'breg>  
 cutting board; <sup>L</sup>tsa-<sup>H</sup>tẽ̄ <gtsab gdan>  
 cymbals; <sup>H</sup>bu-<sup>H</sup>te<sup>h</sup>e <subub chal>  
 cypress; <sup>H</sup>ts<sup>h</sup>ã̄-<sup>H</sup>dẽ̄ <tsan dan>  
 dance (N); <sup>L</sup>t<sup>s</sup>u <bro>  
 dance (V); <sup>H</sup>t<sup>h</sup>ã̄ <'cham>  
 dandruff; <sup>H</sup>lu-<sup>H</sup>gu, with the suffix /gu/  
 dare, have courage; <sup>H</sup>po <spobs>

dark; <sup>L</sup>na-<sup>H</sup>gu <nag ?>  
 daughter; young girl, young woman; <sup>L</sup>pə-<sup>H</sup>ũ  
     <bu mo>  
 daughter-in-law, son's wife; <sup>H</sup>na-<sup>H</sup>ṣ̄ <mna'  
     ma>  
 dawn (of the day); light (bright); <sup>H</sup>si <gsal>;  
     <sup>L</sup>si-<sup>H</sup>tē <gsal ston>; <sup>L</sup>si-<sup>H</sup>mu <gsal mo>  
 day; <sup>L</sup>nṣ̄ <nyi ma>  
 day after tomorrow; <sup>H</sup>nṣ̄-<sup>H</sup>jī <gnangs nyin>  
 day before yesterday; <sup>L</sup>ka-<sup>H</sup>Nbe <kha ?>  
 day, daytime; <sup>L</sup>nũ-<sup>H</sup>Ngṣ̄ <nyin gung>  
 daybreak, dawn; <sup>L</sup>nā-<sup>H</sup>si <gnam gsal>  
 deaf; <sup>L</sup>za-<sup>H</sup>bṣ̄, cf. Shīxīng /<sup>L</sup>H z3-bṣ̄/, Pǔmǐ  
     /zb<sup>35</sup>-bṣ̄<sup>35</sup>/, Lizu /<sup>L</sup>H nēNbo/  
 debt; <sup>L</sup>pu-<sup>H</sup>lē <bu lon>  
 deceive, cheat; <sup>H</sup>ju <slu>  
 deep; <sup>L</sup>sr-<sup>H</sup>mu <zab mo>  
 deer; <sup>L</sup>χṣ̄ <shwa ba>  
 dew; <sup>L</sup>si-<sup>H</sup>hu <zil pa>  
 dhole, wild dog; <sup>H</sup>p<sup>h</sup>a-<sup>H</sup>rṣ̄ <'phar>  
 diarrhea, have diarrhea; <sup>H</sup>Ndzē <'grim?>;  
     <sup>L</sup>sə-<sup>H</sup>pṣ̄ <sup>L</sup>Ndzē <\*gsus pa 'grim>  
 die; <sup>H</sup>e<sup>h</sup>ə <shi>  
 die out (as of fire), extinguish; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ti <phar  
     gtul?>  
 difficult, hard; <sup>L</sup>jei-<sup>H</sup>kā <las dka' mo?>  
 dig, scoop out, excavate; <sup>H</sup>ku <rko>  
 diligent, conscientious; <sup>H</sup>hu-<sup>H</sup>t<sup>h</sup>a <hur thag>  
 dimple; <sup>L</sup>Ndzē-<sup>H</sup>k<sup>h</sup>u <\*dzum khug>  
 dinner, supper; <sup>L</sup>Ndu-<sup>H</sup>xu <\*du? bshos?>;  
     <sup>L</sup>mā-<sup>H</sup>xu <\*smag? bshos?>  
 dirty; <sup>L</sup>ma-<sup>H</sup>tsṣ̄ <mi gtsang>  
 dirty, muddy water; <sup>H</sup>fa-<sup>H</sup>dũ  
 disagreeable, disgusting; <sup>L</sup>mu-<sup>H</sup>gṣ̄ <mi dga'>  
 disappear; <sup>H</sup>p<sup>h</sup>a-<sup>H</sup>tue <phar gtor?>  
 divide, share (things); <sup>H</sup>gu <bgo>  
 do, be in business; <sup>H</sup>ts<sup>h</sup>ṣ̄ <sup>L</sup>dzr <tshong rgyab>  
 do, make; <sup>L</sup>fe <byed>; <sup>H</sup>Ngī <'gul>  
 dog; <sup>H</sup>t<sup>h</sup>ə <khyi>  
 dog (bitch, female dog); <sup>L</sup>mu-<sup>H</sup>t<sup>h</sup>ə <mo khyi>

dog (male dog); <sup>L</sup>p<sup>h</sup>u-<sup>H</sup>t<sup>h</sup>ə <pho khyi>  
 dog (puppy, pup); <sup>L</sup>t<sup>h</sup>ə-<sup>H</sup>ka <khyi ?>  
 dog (hunting dog); <sup>H</sup>g<sup>h</sup>ue-<sup>H</sup>Ndzə <rngon  
     khyi>  
 dog tooth, tusk; (human front teeth) <sup>L</sup>g<sup>h</sup>ue-<sup>H</sup>su  
     <sngon so>; (fang, canine teeth) <sup>L</sup>te<sup>h</sup>ui-  
     <sup>H</sup>wṣ̄ <mche ba>  
 domestic animals, livestock; <sup>H</sup>s<sup>h</sup>ē-<sup>H</sup>teē <sems  
     can>  
 donkey; <sup>L</sup>tea-<sup>H</sup>wu <**rkyang** po>  
 door; <sup>H</sup>gu <sgo>; (inner door) <sup>L</sup>nṣ̄-<sup>H</sup>gu <nang  
     sgo>; (middle door) <sup>L</sup>pe-<sup>H</sup>gu <bar sgo>;  
     (outside door) <sup>H</sup>dzə-<sup>H</sup>gu <\*skyi? sgo>  
 door planks, shutters; <sup>L</sup>gu-<sup>H</sup>de <sgo ?>  
 doorframe; <sup>H</sup>gu-<sup>H</sup>rṣ̄ <sgo ra?>  
 doorsill, threshold; <sup>L</sup>gu-<sup>H</sup>rē <sgo them>  
 doorway; <sup>L</sup>gu-<sup>H</sup>Ndzā <sgo ?>  
 doubt; <sup>L</sup>tu-<sup>H</sup>po <sup>L</sup>xue <\*dogs pa 'khur?>  
 doufu, bean curd; <sup>L</sup>s<sup>h</sup>uē-<sup>H</sup>di <\*son rdul>  
 dove (turtledove); <sup>H</sup>tu-<sup>H</sup>du <**dud dud**>  
 dove (pigeon); <sup>L</sup>p<sup>h</sup>u-<sup>H</sup>dzuē <phug ron>  
 doze, fall asleep; <sup>H</sup>ni <sup>L</sup>tsu <gnyid bro?>  
 drag for, dredge up; <sup>L</sup>ja-<sup>H</sup>teu <yar bcug?>  
 dragon; <sup>L</sup>Ndzū <'brug>  
 dragonfly; <sup>L</sup>te<sup>h</sup>ə-<sup>L</sup>Nbə <sup>L</sup>gu-<sup>H</sup>dũ <chu 'bu ?>  
 dream (N); <sup>H</sup>ni-<sup>H</sup>ja <rmi lam>  
 dream (V); <sup>H</sup>g<sup>h</sup>ue <sup>L</sup>ni <gnyid nyal>  
 dregs, residue; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>di <\*phyags rdul>  
 drink; <sup>H</sup>t<sup>h</sup>ũ <'thung>  
 drop (N); <sup>H</sup>ti <thigs>; (one drop of water)  
     <sup>H</sup>te<sup>h</sup>ə <sup>H</sup>t<sup>h</sup>i <sup>H</sup>tei <chu thigs gcig>  
 drop (V), fall from a height; <sup>H</sup>ma-<sup>L</sup>h<sup>j</sup>ũ <mar  
     **lung**>  
 drum; <sup>H</sup>gṣ̄ <rnga>  
 drumstick; <sup>H</sup>ga-<sup>H</sup>tea <rnga lcags>  
 drunk; <sup>L</sup>zə <bzi>  
 dry; <sup>H</sup>ka-<sup>H</sup>Nbu <skam po>  
 dry (clothes) in the air; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>kā <phar skam>  
 dung beetle; <sup>H</sup>t<sup>h</sup>a-<sup>H</sup>mṣ̄ <sup>H</sup>li-<sup>H</sup>li <skyag ?>  
 dung; manure; <sup>L</sup>pa-<sup>H</sup>tṣ̄ <ba skyag>

dusk, evening, dawn; <sup>L</sup>mā-<sup>H</sup>χo <smag ?>  
dust; <sup>L</sup>thi-<sup>H</sup>wɔ <thal ba>  
dustpan, winnowing fan; <sup>H</sup>nū-<sup>H</sup>gue <\*snyigs  
kor?> or <\*smyug kor?>  
dye; <sup>H</sup>ts<sup>h</sup>ei <sup>L</sup>tō <\*tshos btang>; <sup>H</sup>ts<sup>h</sup>ei <sup>L</sup>tsu  
<\*tshos btso>  
dyestuff, paint; <sup>H</sup>ts<sup>h</sup>ei <tshos>  
dzo, a male hybrid of a yak and a domesti-  
cated cow; (male) <sup>L</sup>Ndzu <mdzo>;  
(female) <sup>L</sup>Ndzū <mdzo mo>  
ear; <sup>H</sup>na-<sup>H</sup>wu <rna po>  
earlobe; <sup>H</sup>na-<sup>H</sup>tsɔ <rna rtsa>  
early; <sup>L</sup>ηā <snga po>  
earrings; <sup>H</sup>na-<sup>H</sup>lū <rna long>; (round  
earrings) <sup>H</sup>na-<sup>H</sup>gue <rna kor>; <sup>H</sup>na-<sup>H</sup>ts<sup>h</sup>e  
earth, soil; <sup>H</sup>s<sup>h</sup>ɔ <sa>  
earthquake; <sup>H</sup>s<sup>h</sup>a-<sup>H</sup>Ngi <sa 'gul>  
earwax; <sup>L</sup>na-<sup>H</sup>pr <rna spabs>  
east; <sup>H</sup>χe <shar>  
easy, simple; <sup>H</sup>lei-<sup>L</sup>lɔ <las sla>  
eat; <sup>L</sup>te<sup>h</sup>ɔ <'cha' ba>; (IMP) <sup>L</sup>te<sup>h</sup>u <'chos>  
edibles, food; <sup>L</sup>sa-<sup>H</sup>mō <bza' ma>  
egg; <sup>L</sup>go-<sup>H</sup>wā <sgo nga>  
egg white; <sup>L</sup>gō-<sup>H</sup>te<sup>h</sup>ɔ <sgong chu>  
egg yolk; <sup>L</sup>gō-<sup>H</sup>se <sgong ser>  
eggshell; <sup>L</sup>gō-<sup>H</sup>ko <\*sgong lkogs?>  
egg of a louse; <sup>H</sup>ei <sup>L</sup>gō-<sup>L</sup>wa <shig sgo nga>  
eight; eighth; <sup>L</sup>dze <brgyad>  
eight hundred; <sup>H</sup>dza-<sup>H</sup>dɔɔ <brgyad brgya>  
eighteen; <sup>H</sup>teɔ-<sup>H</sup>dze <bcu brgyad>  
eighth day of the month; <sup>H</sup>ts<sup>h</sup>e-<sup>L</sup>dze <tshes  
brgyad>  
eighth lunar month; <sup>L</sup>dza-<sup>H</sup>pɔ <brgyad pa>  
eighty; <sup>H</sup>dza-<sup>H</sup>jə <brgyad cu>  
elbow; <sup>L</sup>tsə-<sup>H</sup>ku <gru khug>  
elephant; <sup>H</sup>lō-<sup>H</sup>Nbu-<sup>H</sup>te<sup>h</sup>i <glang po che>  
eleven; <sup>L</sup>teɔ-<sup>H</sup>ji <bcu gcig>  
eleventh lunar month; <sup>L</sup>teɔ-<sup>H</sup>ji-<sup>L</sup>pɔ <bcu gcig  
po>  
embrace, hug; <sup>H</sup>ts<sup>h</sup>a-pō <tshur pang>

embroider; <sup>L</sup>Nbu-<sup>H</sup>ru <sup>H</sup>zu <me tog bzo>  
emperor; <sup>L</sup>kō-<sup>H</sup>mō <gong ma>  
empty; <sup>L</sup>to-<sup>H</sup>Nbɔ <stong pa>; empty-handed;  
<sup>L</sup>ja-<sup>H</sup>tō <lag stong>  
enemy; <sup>H</sup>dɔɔ <dgra>; <sup>H</sup>dza-<sup>H</sup>wu <dgra po>  
enough; <sup>H</sup>te<sup>h</sup>o <chog>  
enter (a house); <sup>L</sup>ja-<sup>H</sup>tō <yar 'ong>  
escape, run away; flee; <sup>H</sup>Ndzēi <sup>L</sup>Ndzu <'bros  
'gro>  
esophagus, throat; <sup>L</sup>sē-<sup>H</sup>zə <? yu>  
everyday; <sup>L</sup>ni-<sup>H</sup>mō <nyin mo?>  
excrement; <sup>H</sup>fa-<sup>H</sup>wɔ <skyag pa>  
exhale, breathe; <sup>H</sup>bu <sup>L</sup>p<sup>h</sup>ō <\*dbugs phong>  
exist, be; (as of oneself) <sup>L</sup>Ndə <'dug>; (as of  
other people) <sup>H</sup>ηō <snang>  
expensive; <sup>L</sup>kō <sup>H</sup>tu <gong ?>  
eye; <sup>H</sup>ni <myig>  
eyeball; <sup>L</sup>ni-<sup>H</sup>lu <myig zlum>  
eyebrow, eyelash; <sup>L</sup>zə-<sup>H</sup>tō <rdzi ma>; <sup>L</sup>zə-<sup>H</sup>pɔ  
<rdzi pa>  
eyelid; <sup>L</sup>ni-<sup>H</sup>pa <myig lpags>  
face; <sup>L</sup>dō-<sup>H</sup>ku <gdong ?>  
faint, lose consciousness; <sup>L</sup>mu=<sup>H</sup>ts<sup>h</sup>ue <mi  
tshor>  
fall down, collapse; <sup>L</sup>di <rdib>  
fall ill, become sick; <sup>L</sup>nō <na>  
false, fake; <sup>L</sup>dzē <rdzun>  
family, household; <sup>L</sup>ni-<sup>H</sup>ts<sup>h</sup>ō <mi tshang>  
far, distant; <sup>H</sup>thā-<sup>H</sup>rē <thag ring>  
farmland, field; <sup>L</sup>ei <zhing>; <sup>H</sup>s<sup>h</sup>a-<sup>H</sup>zī <sha  
zhing>; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>zī <? zhing>  
fart; (N) <sup>H</sup>fē <phyen>; (V) <sup>H</sup>fē <sup>L</sup>tō <phyen  
btang>  
fasten (a belt); <sup>H</sup>dā <bsdams>  
fat; <sup>L</sup>Ndza-<sup>H</sup>pɔ <rgyags pa>  
fat (meat); <sup>H</sup>ke <(sha) dkar>  
father; <sup>H</sup>p<sup>h</sup>ɔ <pha>; <sup>H</sup>a-<sup>H</sup>ba <a pa>  
father-in-law; <sup>H</sup>a-<sup>H</sup>ba <a pa>  
fear, be afraid of; <sup>H</sup>tsa <skrag>; <sup>H</sup>tsa-<sup>L</sup>tsa  
<\*skrag drag?>

feather, plumage; <sup>L</sup>fa-<sup>H</sup>pə <bya spu>  
 feed; fill in, stuff; (as of people) <sup>H</sup>xu <sup>L</sup>zē  
     <bshos? ?>, (as of animals) <sup>H</sup>ju  
 feeding trough, manger; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>wɔ <? ba>  
 feel dizzy, giddy; <sup>H</sup>ngu <sup>L</sup>k<sup>h</sup>ue <mgo 'khor>  
 female genitals, vagina; <sup>L</sup>kɔ̃ <gzhang>  
 fence; <sup>L</sup>ra-<sup>H</sup>rɔ <ra ra>  
 ferment (as of wine); (literally, 'boil') <sup>H</sup>te<sup>h</sup>ɔ̃-  
     <sup>H</sup>tsu <\*chang btso>; (literally, 'rise')  
     <sup>H</sup>te<sup>h</sup>ɔ̃ <sup>L</sup>jɔ̃ <chang lang>  
 fertile, rich (soil); <sup>L</sup>sr-<sup>H</sup>mu <zab mo>  
 fertilizer, manure; <sup>L</sup>ji <lud>  
 fester, suppurate; <sup>H</sup>na <sup>H</sup>hji <\*rnags lhags?>  
 field, rice field; <sup>H</sup>ndzei-<sup>H</sup>zĩ <'bras zhing>  
 fifteen; <sup>H</sup>teē-<sup>H</sup>ɲɔ <bco lnga>  
 fifth; fifth lunar month; <sup>H</sup>ɲa-<sup>H</sup>pɔ <lnga pa>  
 fifth day of the month; <sup>H</sup>ts<sup>h</sup>e-<sup>H</sup>ɲɔ <tshes  
     lnga>  
 fifty; <sup>H</sup>ɲa-<sup>H</sup>teə <lnga bcu>  
 fight, wrestle; <sup>H</sup>da-<sup>H</sup>dũ <rdung rdung?>  
 figure out answer, guess right; <sup>H</sup>te <sup>L</sup>dzi  
     <? zin>  
 fill in, stuff into, cork; <sup>H</sup>ja-<sup>L</sup>dzɔ̃ <yar rdzong>,  
     <sup>H</sup>ma-<sup>L</sup>dzɔ̃ <mar rdzong>  
 filter, strain, sift; <sup>H</sup>tɔ̃ <btags>  
 find; <sup>L</sup>jē <len?>  
 fine, in small particles; <sup>L</sup>ei-<sup>L</sup>kə-<sup>H</sup>rə <zhib ?>  
 finger; <sup>L</sup>ndzui <mdzub>  
 finger (thumb); <sup>L</sup>ta-<sup>H</sup>te<sup>h</sup>ē <theb chen>  
 finger (index finger); <sup>L</sup>kɔ̃-<sup>H</sup>ndzui <gong  
     mdzub>  
 finger (middle finger); <sup>L</sup>pe-<sup>H</sup>ndzui <bar  
     mdzub>  
 finger (ring finger); <sup>L</sup>s<sup>h</sup>ē-<sup>H</sup>la <srin ?>  
 finger (little finger); <sup>L</sup>ndzui-<sup>H</sup>ka <mdzug ?>  
 finger tip to finger tip of outstretched arms;  
     <sup>L</sup>nda-<sup>H</sup>nbɔ <sup>L</sup>kɔ̃ <'dom pa gang>  
 fingerprint; <sup>L</sup>rə <ri>; <sup>H</sup>ts<sup>h</sup>u <mtsho>  
 finish, exhaust; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>se <phar zad>  
 fir; <sup>H</sup>sũ-<sup>H</sup>xr <som ?>

fire; <sup>L</sup>ni <mye>  
 fireplace, stove, hearth; <sup>H</sup>t<sup>h</sup>r <thab>; <sup>L</sup>ku-<sup>H</sup>re  
     <go thal>  
 firetongs; <sup>L</sup>ka-<sup>H</sup>nbɔ <skam pa>  
 firewood; <sup>H</sup>ei <shing>  
 first; <sup>L</sup>tɔ̃-<sup>H</sup>nbu <dang po>  
 first day of the month; <sup>H</sup>ts<sup>h</sup>e-<sup>H</sup>ji-<sup>H</sup>ts<sup>h</sup>e-<sup>H</sup>tei  
     <tshes gcig>  
 first lunar month; <sup>L</sup>nda-<sup>H</sup>wɔ <sup>L</sup>tɔ̃-<sup>H</sup>nbu <zla  
     ba dang po>  
 fish (N); <sup>L</sup>jɔ̃ <nya>  
 fish (V); <sup>L</sup>ja-<sup>H</sup>k<sup>h</sup>r <sup>L</sup>p<sup>h</sup>ɔ̃ <nya khab phong>  
 fishbone; <sup>L</sup>ja-<sup>H</sup>rə <nya rus>  
 fisherman; <sup>L</sup>ja-<sup>H</sup>wɔ <nya pa>  
 fishing hook; <sup>L</sup>ja-<sup>H</sup>k<sup>h</sup>r <nya khab>  
 fishing net; <sup>L</sup>ja-<sup>H</sup>dɔ̃ <nya rgya>  
 fist; <sup>L</sup>k<sup>h</sup>o-<sup>H</sup>dã <? dam?>  
 five; <sup>H</sup>ɲɔ̃ <lnga>  
 five hundred; <sup>H</sup>ɲa-<sup>H</sup>dɔ̃ <lnga brgya>  
 flag; <sup>L</sup>te <dar>; (prayer flag) <sup>L</sup>ta-<sup>H</sup>teo <dar  
     lcog>  
 flame; <sup>L</sup>ni-<sup>H</sup>ts<sup>h</sup>a <mye tshag?>  
 flat; (as of an object) <sup>H</sup>sə-<sup>H</sup>bə-<sup>H</sup>le <srab leb>;  
     (as of a piece of land) <sup>L</sup>da-<sup>H</sup>nda  
 flea; <sup>L</sup>dzi-<sup>H</sup>wɔ <lji ba>  
 fleece, wool; <sup>L</sup>ra-<sup>H</sup>tsi <ra rtsid>  
 fling, toss, throw (over here); <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>p<sup>h</sup>ɔ̃  
     <tshur phong>  
 flint; <sup>L</sup>du-<sup>H</sup>ye-<sup>L</sup>du-<sup>H</sup>ke <rdo dkar>  
 float; <sup>H</sup>dĩ <lding>  
 floor; <sup>L</sup>teē <gcal>  
 flour; <sup>L</sup>ts<sup>h</sup>a-<sup>H</sup>ri <? ril>  
 flow (as of water); <sup>H</sup>te<sup>h</sup>ə <sup>L</sup>ndzu <chu 'gro>  
 flower; <sup>L</sup>nbu-<sup>H</sup>ru, possibly related to <me  
     tog>. The rhyme of the second syllable  
     of this word possibly results from  
     changes from OT -og > first to Kami /o/  
     > then to Kami /u/  
 flute; <sup>H</sup>ts<sup>h</sup>a-<sup>H</sup>lĩ <phred gling>  
 fly (N); <sup>L</sup>dzã <sbrang bu?>

fly (v); <sup>H</sup>*dī* <lding>  
foam, bubble; <sup>L</sup>*bu*-<sup>H</sup>*ru* <lbu ?>  
fog; <sup>L</sup>*mū*-<sup>H</sup>*zu* <rmug~smug yod?>  
foggy; <sup>L</sup>*mū*-<sup>H</sup>*zu* <sup>H</sup>*te*<sup>hi</sup> <rmug~smug ?>  
fold up (a quilt); <sup>L</sup>*ja*-<sup>H</sup>*tea* <yar ?>  
folk song; <sup>H</sup>*zei* <gzhas>  
food, cooked rice; <sup>H</sup>*xu* <bshos?>  
food steamer; <sup>H</sup>*pu*-<sup>H</sup>*ro*, cf. Shǐxīng /<sup>H</sup>pʰu/,  
Pǔmǐ /bu<sup>35</sup>/  
foot of a mountain; <sup>L</sup>*rə*-<sup>H</sup>*tsə* <ri rtsa>  
foot, leg; <sup>L</sup>*ku*-<sup>H</sup>*Nbə* <rkang pa>  
footprint; <sup>H</sup>*kə*-<sup>H</sup>*zi* <rkang rjes>  
forehead; <sup>L</sup>*tʰa*-<sup>H</sup>*pə* <thod pa>  
foreign county, literally, ‘other country’;  
<sup>L</sup>*dʒa*-<sup>H</sup>*kʰu* <sup>L</sup>*kʰa*-<sup>H</sup>*xə* <rgyal khab?  
gzhan?>  
forest, wood; <sup>L</sup>*na* <nags>  
forget; <sup>L</sup>*ze* <rjed>  
four; <sup>H</sup>*zə* <bzhi>  
four hundred; <sup>H</sup>*zə*-<sup>H</sup>*dʒə* <bzhi brgya>  
fourteen; <sup>H</sup>*te*<sup>ə</sup>-<sup>H</sup>*zə* <bcu bzhi>  
fourth; fourth lunar month; <sup>H</sup>*zə* <bzhi>, <sup>L</sup>*zə*-  
<sup>H</sup>*pə* <bzhi pa>  
fourth day of the month; <sup>H</sup>*tsʰe*-<sup>H</sup>*zə* <tshes  
bzhi>  
fourty; <sup>L</sup>*zə*-<sup>H</sup>*te*<sup>ə</sup> <bzhi bcu>  
fowl, wild bird; <sup>L</sup>*fə* <bya>; <sup>L</sup>*rə*-<sup>H</sup>*ʒə* <ri bya>  
fox; <sup>L</sup>*wə* <wa (mo)>  
frequently, often; <sup>L</sup>*a*-<sup>H</sup>*tə* <sup>L</sup>*a*-<sup>H</sup>*tə* <da lta?>  
friend, companion, partner; <sup>L</sup>*ro* <rogs>; <sup>L</sup>*ro*-  
<sup>H</sup>*pu* <rogs ?>  
frighten, scare; <sup>H</sup>*tʰə* <drogs>  
frog; <sup>L</sup>*bi*-<sup>H</sup>*ʒə* <sbal pa>  
front side, in front of; <sup>L</sup>*ŋu*<sup>ə</sup>-<sup>H</sup>*ʃə* <sngon  
phyogs>  
frost; <sup>L</sup>*pā* <ba mo>  
fruit; <sup>H</sup>*sʰe*-<sup>H</sup>*ru* <sil? tog>. The rhyme of the  
second syllable of this word possibly  
results from changes from OT -og >  
first to Kami /o/ > then to Kami /u/

fry, stir fry; <sup>H</sup>*ŋū* <rngə>  
full, filled up; <sup>L</sup>*kə* <gang>  
full, have one’s fill; <sup>L</sup>*Ndʒə* <'grang>  
fungi, mushroom; <sup>L</sup>*χā* <sha mo>  
gall bladder; <sup>L</sup>*tʰi*-<sup>H</sup>*pə* <mkhris pa>  
gall, bile; <sup>L</sup>*tʰi*-<sup>H</sup>*te*<sup>hə</sup> <mkhris chu>  
garbage, waste, dust; <sup>L</sup>*di* <rdul>; (swept dust)  
<sup>L</sup>*ʃa*-<sup>H</sup>*di* <\*phyags rdul>; (used tea  
leaves) <sup>L</sup>*te*<sup>ə</sup>-<sup>H</sup>*ru* <ja ro>  
garden; <sup>L</sup>*rə* <ra>; (vegetable garden) <sup>L</sup>*kʰa*-  
<sup>H</sup>*tse* <sup>L</sup>*rə* <kha tshal? ra>  
garlic; <sup>L</sup>*gu*-<sup>H</sup>*wə* <sgog pa>  
garrotte, strangle; <sup>H</sup>*pʰa*-<sup>H</sup>*se* <phar gsod>  
gather, assemble; <sup>H</sup>*tsʰā* <sup>H</sup>*Ndʒū* <tshang  
'dzom>  
general; <sup>H</sup>*ma*-<sup>H</sup>*pə* <dmag dpon>  
germinate, sprout; <sup>L</sup>*gə*  
get, acquire, obtain; <sup>L</sup>*ra* <rag>, <sup>H</sup>*ra* <sup>L</sup>*ʃū* <rag  
byung>  
ghost, evil spirit; (male ghost) <sup>H</sup>*si*-<sup>H</sup>*pʰu* <sre  
pho>; (female ghost) <sup>H</sup>*si*-<sup>H</sup>*mə* <sre mo>  
ginger; <sup>L</sup>*ga*-<sup>H</sup>*te*<sup>ə</sup> <sga skya>  
girdle, waistband; (traditional) <sup>L</sup>*ka*-<sup>H</sup>*rā*  
<ska/rked rags>; (contemporary) <sup>H</sup>*te*<sup>ə</sup>-  
<sup>H</sup>*ŋu* <lcags mgo?>  
give a name; <sup>L</sup>*ŋū* <sup>H</sup>*ta* <mying btags>  
give birth; child delivery; <sup>H</sup>*də* <sup>L</sup>*tʰə* <gdong?  
mthong?>, cf. Shǐxīng /<sup>H</sup>pʰə̃ <sup>H</sup>də̃/ ‘give  
birth’, literally, ‘see (the child’s) face’  
give or have an injection; <sup>H</sup>*kʰr* <sup>L</sup>*dʒr* <khab  
rgyab>  
glasses; <sup>H</sup>*ŋi*-<sup>H</sup>*e*<sup>h</sup>*ei* <myig shel>  
glede, eagle, hawk; <sup>H</sup>*ʃa* <glag>  
glove; <sup>L</sup>*ja*-<sup>H</sup>*xu* <lag shubs>  
gnaw, scrape; <sup>L</sup>*Ndʒe* <'brad>  
go; <sup>L</sup>*Ndʒu* <'gro>, (IMP) <sup>H</sup>*sʰə* <song>  
go downstairs; <sup>H</sup>*ma*-<sup>L</sup>*Ndʒu* <mar 'gro>; <sup>L</sup>*ma*-  
<sup>H</sup>*ʒə* <mar 'ong>  
go upstairs; <sup>H</sup>*ja*-<sup>L</sup>*Ndʒu* <yar 'gro>; <sup>L</sup>*ja*-<sup>H</sup>*ʒə*  
<yar 'ong>

go out; <sup>H</sup>*p<sup>h</sup>a-Lpi* <phar 'bud> or <phar bud>  
 go to war, battle; <sup>H</sup>*dzɔ-Ldʒɹ* <\*dgra rgyab>  
 goat; <sup>L</sup>*rɔ* <ra>  
 goat (she-goat); <sup>L</sup>*ra-Hmɔ̃* <ra mo>  
 goat (he-goat, billy goat); <sup>L</sup>*ra-Hfui* <ra ?>  
 goat (wild goat); <sup>L</sup>*ra-Hgue* <ra rgod>  
 god, deity, Buddha; <sup>H</sup>*hɟɔ* <lha>  
 gold; <sup>H</sup>*se* <gser>  
 gong; <sup>L</sup>*k<sup>h</sup>ɛ-Hɟɔ* <mkhar rnga>  
 good; (a general term) <sup>L</sup>*a-Hju*; (as of people)  
<sup>H</sup>*zɔ̃* <bzang>  
 government; <sup>L</sup>*lei-Hk<sup>h</sup>ɔ̃* <las khang>  
 grab, grasp, clasp (hands); <sup>H</sup>*Ndzə* <'ju>  
 grain, crops; <sup>H</sup>*t<sup>h</sup>u* <thog>  
 granddaughter; <sup>H</sup>*ts<sup>h</sup>a-Hā* <tsha mo>  
 grandfather; <sup>H</sup>*a-Hni* <a myes>  
 grandmother; <sup>H</sup>*a-Hmɔ̃* <a mo>  
 grandson; <sup>L</sup>*ts<sup>h</sup>a-Hwu* <tsha bo>  
 grape; <sup>L</sup>*le-Hdzɪ*, cf. Lizu /<sup>HL</sup>laNdzə/ <rtswa>  
 grass; <sup>H</sup>*tsu-Hwɔ̃* <rtswa>  
 grassland, meadow; <sup>L</sup>*Ndzɔ-Hpɔ̃* <'brog pa>  
 green; <sup>L</sup>*ɲū-Hɲū* <\*sngon sngon>  
 grey, khaki; <sup>L</sup>*s<sup>h</sup>ā-HNdo* <sa mdog>  
 grind (flour); <sup>L</sup>*t<sup>h</sup>ə-Hkue* <sup>L</sup>*ta* <chu 'khor  
 btags>  
 ground, foundation of a building; <sup>H</sup>*mi*  
 <rming>  
 group, one group of people; <sup>L</sup>*nə* <sup>L</sup>*ta-Hla*  
 <mi ?>  
 grow (a boil); <sup>H</sup>*mɔ̃* <sup>L</sup>*fjū* <rma byung?>  
 grow up; <sup>H</sup>*ɛi* <skye>  
 gruel, porridge; <sup>L</sup>*ts<sup>h</sup>ɔ̃* <tsha?>  
 guest; <sup>L</sup>*Ndzə-Hmu* <mgron po>  
 guinea pepper; <sup>H</sup>*zə-Hwɔ̃* <ljags pan>  
 guitar, lute, violin; <sup>H</sup>*pi-Hwɔ̃* <pi wang>  
 gully, gutter; <sup>H</sup>*kɔ̃* <rka>  
 gums; <sup>H</sup>*su-Hkē* <so rkan>  
 gun; <sup>L</sup>*ni-HNdo* <mye mda>  
 gun powder; <sup>H</sup>*Ndzei* <rdzas>  
 hail; <sup>L</sup>*s<sup>h</sup>a-Hrɔ̃* <se ra>

hair (of animals), fur; <sup>H</sup>*pə* <spu>  
 hair (of humans); <sup>H</sup>*tɟɔ* <skra>  
 half; <sup>L</sup>*ʃa-Hk<sup>h</sup>ua* <phyed ka>  
 half a day; <sup>L</sup>*ni-Hʃe* <nyin phyed>  
 hammer; <sup>H</sup>*t<sup>h</sup>u-Hwɔ̃* <tho ba>  
 hand; <sup>L</sup>*ɟɔ* <lag pa>  
 hand over, pass, give; <sup>H</sup>*te* <ster>  
 handful of rice; <sup>H</sup>*pa-Hrə* <sup>L</sup>*kɔ̃* <spar gang>  
 handle; <sup>L</sup>*jū* <lung>; <sup>L</sup>*jū-HNda* <lung ?>  
 hand print, finger print; <sup>L</sup>*ja-Hzi* <lag rjes>  
 hang (on the wall); <sup>H</sup>*ma-Lʃɔ̃* <mar dpyang>  
 happy, glad, comfortable; <sup>H</sup>*Ngə* <mgu>  
 hard; <sup>L</sup>*sa-Hkua* <sra ?>, with the suffix /kua/  
 hat; <sup>L</sup>*xu-Hwɔ̃* <zhwa>; straw hat; <sup>H</sup>*s<sup>h</sup>o-Hɟɔ̃*  
 <sog zhwa>  
 hat (traditional Tibetan hat); <sup>L</sup>*dza-Hɣɛ* <sup>L</sup>*xu-*  
<sup>L</sup>*wɔ̃* <rgya gar zhwa mo>  
 hat (festive Tibetan hat); <sup>H</sup>*ts<sup>h</sup>ə-Hrē* <sup>L</sup>*ɛa-Hmu*  
 <tshe ring zhwa mo>  
 hatch, incubate, sit on eggs; <sup>L</sup>*ɛi-Hka* <sup>L</sup>*gɔ̃*  
 <byi'u ? ?> or <bye ? ?>  
 hate; <sup>L</sup>*mu=Hgɔ̃* <mi dga'>  
 have, possess; <sup>L</sup>*Ndə* <'dug>; (old knowledge)  
<sup>L</sup>*zu* <yod>; (new knowledge) <sup>L</sup>*zā*  
 <yod.?'>; (as of others, possess) <sup>H</sup>*ɲɔ̃*  
 <snang>  
 he, she (third person singular pronoun); <sup>H</sup>*k<sup>h</sup>ə*  
 <kho>. The rhyme of this word possibly  
 followed the change from OT -o to /u/,  
 and from /u/ to /ə/.  
 his (GEN); <sup>L</sup>*k<sup>h</sup>ə=Hi* <kho'i>  
 head; <sup>H</sup>*Ngu* <mgo>  
 headache, have a headache; <sup>H</sup>*Ngu* <sup>L</sup>*nɔ̃* <mgo  
 na>; <sup>H</sup>*Ngu* <sup>L</sup>*ze* <mgo gzer>  
 heap, stack (hay, grass); <sup>H</sup>*ja-Hpɔ̃* <yar  
 dpung>  
 hear; <sup>H</sup>*ts<sup>h</sup>ue-Lfjū* <tshor byung>  
 heart; <sup>H</sup>*ɲi* <snying>  
 heat up, warm up; <sup>H</sup>*ma-Lsa* <mar sreg>  
 heavy; <sup>H</sup>*dzi* <ljid>, <sup>L</sup>*dza-Hmu* <ljid mo>

hedgehog, porcupine; <sup>H</sup>gõ <rgang>  
 height, stature, build; <sup>L</sup>pa-<sup>H</sup>Ngi <dpangs>  
 help; <sup>L</sup>ro-<sup>H</sup>dẽ <rogs ram>; <sup>L</sup>ra-<sup>H</sup>ro <\*rogs  
     rogs?>  
 hemp; <sup>H</sup>sõ <so ma>  
 hempen cloth, linen; <sup>H</sup>sõ <sup>L</sup>rei <so ras>  
 here (at our place here); <sup>L</sup>ye-<sup>H</sup>rã <sup>H</sup>Nde <nga'i  
     rang 'di>  
 hide oneself; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>kr <phar gab>  
 hide something; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>kũ <phar skung>  
 highland barley (*Hordeum vulgare*); <sup>H</sup>ka-<sup>H</sup>rã  
     <ka ru>  
 hit (a person), beat; <sup>L</sup>dũ <rdung>  
 hit the mark, strike the target; <sup>H</sup>p<sup>h</sup>o <phog>  
 hog pen; <sup>H</sup>p<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>õ <phag tshang>  
 hold (one's breath); <sup>H</sup>bu-<sup>H</sup>Ndzã <dbugs ?>  
 hold between the fingers and the thumb,  
     mould; <sup>H</sup>li  
 hole; (ditch) <sup>L</sup>tõ <dong>; (tear on clothing)  
     <sup>L</sup>ke-<sup>H</sup>ke; (trench) <sup>L</sup>põ  
 honey; <sup>H</sup>dzõ <sbrang>  
 hoof; (as of a horse or a mule) <sup>H</sup>ni-<sup>H</sup>wõ  
     <rmig pa>; (as of a cow or a bull) <sup>L</sup>s<sup>h</sup>u-  
     <sup>H</sup>teo <\*sug lcoq?>  
 horizontal; <sup>H</sup>ts<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>e <\*phred 'phred>  
 horn; <sup>L</sup>rã-<sup>H</sup>wõ <\*ru ba>; <sup>L</sup>rã-<sup>H</sup>teo <\*ru  
     lcoq?>  
 horse; <sup>H</sup>tõ <rta>  
 horse (mare); <sup>L</sup>ga-<sup>H</sup>mõ <rgod ma>  
 horse (stallion); <sup>L</sup>sa-<sup>H</sup>teo <gseb ?>; <sup>H</sup>ta-<sup>H</sup>wu  
     <rta po>  
 horse (foal, weanling); (yearling) <sup>L</sup>ti-<sup>H</sup>ka  
     <rte'u ?>; (of 2-3 years of age) <sup>H</sup>ti-<sup>H</sup>ba  
     <rte'u ?>  
 hospital; <sup>H</sup>mẽ-<sup>H</sup>k<sup>h</sup>õ <smān khang>  
 host, owner; <sup>L</sup>te<sup>h</sup>e-<sup>H</sup>mõ <khyo bo?>  
 hot; <sup>H</sup>ts<sup>h</sup>õ <tsha>; <sup>H</sup>sa <sreg>  
 house, building; <sup>H</sup>k<sup>h</sup>u-<sup>H</sup>Nbõ <khang pa>  
 house (thatched house); <sup>H</sup>s<sup>h</sup>o-<sup>H</sup>k<sup>h</sup>õ-<sup>H</sup>s<sup>h</sup>o-<sup>H</sup>xõ  
     <sog khang>

house name; <sup>L</sup>ni-<sup>H</sup>ts<sup>h</sup>õ <sup>L</sup>niũ <mi tshong  
     mying>  
 how; <sup>H</sup>tse-<sup>H</sup>Ndze <sup>L</sup>re, with the copula <red>  
 how many; <sup>L</sup>mõ-<sup>H</sup>jiũ <mang nyung>  
 huddle, curp up; <sup>L</sup>ja-<sup>H</sup>tsi <yar sgril?>  
 hug, embrace; <sup>H</sup>põ <pang>  
 hundred; <sup>H</sup>dzõ <brgya>; one hundred and  
     one; <sup>H</sup>dzõ <sup>L</sup>ni <sup>H</sup>tei <brgya gcig>;  
     numerals above one hundred are  
     formed with the intrusive conjunction  
     /ni/. This is identical to numeral  
     formation in Shīxīng.  
 hundred million; <sup>H</sup>təŋ-<sup>H</sup>ts<sup>h</sup>ə. <sup>H</sup>tei <dung  
     phyur gcig>  
 hungry; <sup>H</sup>to <ltogs>; <sup>H</sup>to <sup>L</sup>tsa <\*ltogs drag?>  
 hunt; <sup>H</sup>juẽ <rngon>  
 hunter, huntsman; <sup>H</sup>juẽ-<sup>H</sup>Nbõ <rngon pa>  
 husband; (spouse) <sup>L</sup>zõ <bza' ?>; (husband,  
     literally, man) <sup>L</sup>nə-<sup>H</sup>gue <\*mi dgon?>;  
     cf. Lizu /<sup>H</sup>ts<sup>h</sup>o <sup>H</sup>səp<sup>h</sup>ə/, literally, 'master,  
     lord'  
 I, first person singular pronoun; <sup>L</sup>ŋõ-<sup>L</sup>ŋõ  
     <nga>  
 mine, my (GEN); <sup>H</sup>je <nga'i>  
 ice; <sup>L</sup>te<sup>h</sup>a-<sup>H</sup>dzõ <chab brom>  
 idea, opinion, view; <sup>L</sup>tsẽ-<sup>H</sup>gu <dran ?>; with  
     the suffix /gu/  
 idle, have free time; <sup>L</sup>k<sup>h</sup>õ <khom>  
 immediately; <sup>L</sup>a-<sup>H</sup>tõ <da lta?>  
 in one year; <sup>H</sup>s<sup>h</sup>õ <sang?>  
 in the center, in the middle; <sup>H</sup>tei-<sup>H</sup>ke <dkiyl  
     sked?>; <sup>L</sup>pa-<sup>H</sup>la <bar la>  
 in the future, later, hereafter; <sup>H</sup>zĩ <phyi ma>  
 in the past, formerly; <sup>H</sup>ŋẽ <sngon>  
 incense (white sandal wood) burner,  
     perfuming pan; <sup>L</sup>pi-<sup>H</sup>hue <\*dpal? phor>  
 incisor, front teeth; <sup>H</sup>su-<sup>H</sup>gu <\*so mgo?>  
 increase; <sup>H</sup>ja-<sup>L</sup>mõ <yar mang>  
 infect; <sup>L</sup>rã-<sup>H</sup>Nbõ <rims pa>  
 inhale; <sup>H</sup>bu <sup>L</sup>tẽ <dbugs 'then>

- injure, hurt; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>m̄ē <phar rmas>  
 ink; <sup>L</sup>ŋa-<sup>H</sup>ts<sup>h</sup>ɔ <snag tsha>  
 insect, bug; <sup>L</sup>Nbə <'bu>  
 inside; <sup>L</sup>n̄-<sup>H</sup>jə <nang ?>; <sup>L</sup>n̄-<sup>H</sup>ji <nang ?>  
 inside, lining of clothing; <sup>L</sup>n̄-<sup>H</sup>pa <nang  
 lpags?>  
 intestines, bowels; <sup>L</sup>dʒɔ̄ <rgyu ma>; (large  
 intestine) <sup>L</sup>dʒə-<sup>H</sup>ye <rgyu dkar>; (small  
 intestine) <sup>L</sup>dʒə-<sup>H</sup>rā <rgyu ?> (the  
 second syllable of this word is possibly  
 the same as the second syllable in the  
 word for 'black', <sup>L</sup>na-<sup>H</sup>rā)  
 invite (guests); <sup>L</sup>Ndʒa-<sup>H</sup>mu <sup>L</sup>Nbei <mgron po  
 bos>  
 iron; <sup>H</sup>tca <lcags>  
 iron pot, frying pan; <sup>H</sup>tca-<sup>H</sup>zɔ <lcags ?>  
 ivory; <sup>L</sup>pa-<sup>H</sup>su <ba so>  
 jackdaw, black bird with red beak and feet;  
<sup>L</sup>fa-<sup>H</sup>tēɔ̄ <sup>H</sup>tē<sup>h</sup>ə-<sup>H</sup>mē <bya **skyung** mchu  
 dmar>  
 jar, vat; <sup>H</sup>tē<sup>h</sup>ə-<sup>H</sup>zɔ̄ <chu zom>  
 joint, section; <sup>L</sup>ts<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>i <tshag tshig>  
 jump (down); <sup>H</sup>p<sup>h</sup>i, possibly related to  
 <'phag>  
 juniper (Himalayan/black; *Juniperus indica*);  
<sup>L</sup>xu-<sup>H</sup>wɔ̄ <shug pa>  
 key; <sup>L</sup>de-<sup>H</sup>ji <Ide mig>  
 kick, striking of feet, horse's hooves; <sup>H</sup>ju,  
<sup>L</sup>dzi-<sup>H</sup>du <sup>L</sup>ju  
 kidney; <sup>L</sup>k<sup>h</sup>e-<sup>H</sup>lə <mkhal?>  
 kill (a person); <sup>H</sup>se <bsad>  
 kin, relative; <sup>L</sup>k<sup>h</sup>ue-<sup>H</sup>tei <'khor gcig?>; <sup>L</sup>k<sup>h</sup>ue-  
<sup>H</sup>tei <sup>H</sup>na-<sup>H</sup>sɔ̄ <'khor gcig ? ?>  
 kiss (v); <sup>H</sup>pu-<sup>L</sup>fei  
 knee; <sup>H</sup>pa-<sup>H</sup>Nbu <pus mo?>  
 kneel; <sup>L</sup>gu  
 knife; <sup>H</sup>tʂə <gri>; (chopper) <sup>L</sup>la-<sup>H</sup>be; (small,  
 pocket knife) <sup>L</sup>ku-<sup>H</sup>tʂə <gu? gri>  
 knife handle; <sup>H</sup>tʂə <sup>L</sup>ʒə <gri yu>  
 knife sheath; <sup>L</sup>tʂə-<sup>H</sup>xu <gri shubs>
- knot; <sup>L</sup>Ndi-<sup>H</sup>pɔ̄ <mdud pa>  
 know (to do smth), be able; <sup>H</sup>ε<sup>h</sup>i <shes>  
 know; <sup>H</sup>hɔ-<sup>L</sup>ku <ha go>; (recognize) <sup>L</sup>ŋu-<sup>H</sup>ε<sup>h</sup>i  
 <ngo shes>  
 kowtow; <sup>H</sup>ŋa-<sup>L</sup>p<sup>h</sup>i <phyag phul>  
 ladder; <sup>H</sup>ke-<sup>H</sup>kie <skas>  
 ladle; <sup>L</sup>za-<sup>H</sup>rə <za ru>  
 lake; <sup>H</sup>ts<sup>h</sup>u <mtsho>  
 lama; (ordinary) <sup>H</sup>a-<sup>H</sup>ŋɔ̄; Living Buddha;  
<sup>H</sup>la-<sup>H</sup>m̄ɔ̄ <bla ma>; <sup>H</sup>ku-<sup>H</sup>zu <sku  
 rgyud?>  
 lambswool; <sup>L</sup>ju <sup>L</sup>pi <lug bal>  
 lameness; <sup>L</sup>ɛɔ-<sup>H</sup>le <zha ?>  
 lamps lighted before deities; <sup>H</sup>tē<sup>h</sup>a-<sup>H</sup>m̄i  
 <mchod me>  
 language, speech; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>pi <kha dpe>; <sup>H</sup>ka-  
<sup>H</sup>tē<sup>h</sup>ɔ̄ <skad cha>  
 lard, pig fat; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>i <phag tshil>  
 large bamboo wicker basket; <sup>H</sup>Nbɔ̄ <'bong>  
 'round?'  
 lasso, noose; <sup>L</sup>t<sup>h</sup>a-<sup>L</sup>wɔ̄ <sup>H</sup>ka <thag (ba) bzhag>  
 last month; <sup>H</sup>hē <sup>L</sup>Nda-<sup>H</sup>wɔ̄ <sup>L</sup>tei <? zla ba  
 gcig>  
 last night; <sup>L</sup>nā-<sup>H</sup>sɔ̄ <sup>H</sup>ʃə-<sup>H</sup>gə <mdang  
 song ? ?>  
 last year; <sup>L</sup>na-<sup>H</sup>ji <na ning>  
 late, be late; <sup>H</sup>ʃə <phyi>  
 laugh, smile; <sup>L</sup>gɔ̄ <dga>  
 lay eggs; <sup>H</sup>gɔ̄, <sup>L</sup>go-<sup>H</sup>wā <sup>L</sup>gɔ̄ <sgo nga ?>  
 lazy; <sup>L</sup>ma=<sup>H</sup>hue <mi hur>  
 lead (the way); <sup>H</sup>tʂi <'khrid>  
 leaf; <sup>L</sup>da-<sup>H</sup>ma <'dab>; <sup>H</sup>εi-<sup>H</sup>lu <shing lo>  
 leak; <sup>L</sup>sa <zag>  
 lean (meat), raw meat; <sup>H</sup>mē <(sha) dmar>  
 left, leftside; <sup>L</sup>ʒə-<sup>H</sup>wu <g.yon>  
 legging, puttee; <sup>H</sup>kɔ̄-<sup>H</sup>tʂi <rkang dkris>  
 leopard; <sup>H</sup>zi <gzig>  
 lick; <sup>L</sup>da <ldag>  
 lid, cover; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>le <kha leb>  
 lie, lie down; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>ŋgi <phar 'gul?>

- life, fate, destiny; <sup>H</sup>so <srog>  
 life, lifespan; <sup>H</sup>ts<sup>hi</sup> <tshe>  
 lift (the lid); <sup>L</sup>p<sup>ha</sup>-<sup>H</sup>kua, cf. Shīxīng /<sup>L</sup>bā-  
<sup>H</sup>qwe/, Lizu /(<sup>HL</sup>hɹ̥-hɹ̥) <sup>L</sup>xwe/  
 lift up, carry, raise; <sup>L</sup>ja-<sup>H</sup>tfa <yar bkyags>  
 lift, raise (head); <sup>H</sup>Ngu <sup>L</sup>tfa <mgo bkyags>  
 light (not heavy); <sup>L</sup>ʒɔ̃ <yang>, <sup>L</sup>ʒɔ̃-<sup>H</sup>ʒɔ̃  
 <\*yang yang>  
 light a fire; <sup>L</sup>ji-<sup>H</sup>pe <mye spar>  
 light, relaxed, loose; <sup>H</sup>l̥ə <lhod po>  
 lightning; <sup>H</sup>lu <sup>H</sup>Ndo <glog ?>  
 like, love; <sup>L</sup>gɔ̃ <dga'>; <sup>H</sup>tei <brtse>  
 limbs, arms and legs; <sup>L</sup>kʒ̃-<sup>H</sup>ja <rkang lag>  
 lion; <sup>H</sup>si-<sup>H</sup>Ngī <seng ge>  
 lips; <sup>H</sup>te<sup>hə</sup>-<sup>H</sup>ru <mchu to>  
 lips (upper lip); <sup>L</sup>t̥i-<sup>H</sup>pa <steng lpags?>  
 lips (lower lip); <sup>L</sup>xr-<sup>H</sup>pa <'og lpags?>  
 listen; <sup>L</sup>ne <nyan>  
 litter, nest; <sup>L</sup>fa-<sup>H</sup>ts<sup>hə</sup> <bya tshang>; <sup>L</sup>ei-<sup>H</sup>ts<sup>hə</sup>  
 <byi'u tshang> or <bye tshang>  
 little, few; <sup>L</sup>jũ <nyung>, <sup>L</sup>jũ-<sup>H</sup>jũ <nyung  
 nyung>  
 live, reside, stay, dwell; <sup>L</sup>Ndə <'dug>  
 liver; <sup>H</sup>te<sup>hi</sup>-<sup>H</sup>Nbɔ̃ <mchin pa>  
 lock; <sup>L</sup>sa-<sup>H</sup>dzi, Chinese 鎖子, SWM /so<sup>21</sup>/,  
 MC swaX  
 lock (the door); <sup>H</sup>gu <sup>H</sup>tea <sgo lcags?>  
 loess; <sup>L</sup>s<sup>ha</sup>-<sup>H</sup>se <sa gser>  
 log raft; <sup>L</sup>t̥ɔ̃-<sup>H</sup>so <? gtong sa?>, <sup>H</sup>pi-<sup>L</sup>t̥ɔ̃-<sup>L</sup>so  
 long; <sup>L</sup>r̥ē <ring>, <sup>L</sup>re-<sup>H</sup>Nbu <ring po>  
 look at, watch; <sup>H</sup>tɔ̃ <lta>, (IMP) <sup>H</sup>tei <ltos>  
 look for, search; <sup>H</sup>tsi <btсал>  
 loom; <sup>H</sup>ta-<sup>H</sup>h̥jɔ̃ <thags ?>  
 lose (a game); <sup>H</sup>p<sup>hə</sup>ā <pham>  
 lose (battle), be defeated; <sup>L</sup>ma-<sup>H</sup>po <mar ?>  
 lose money in business, lose one's capital;  
<sup>H</sup>p<sup>hə</sup>ā <pham>  
 lose, mislay; <sup>H</sup>p<sup>ha</sup>-<sup>H</sup>p<sup>hə</sup>ɔ̃ <phar phong>  
 louse; <sup>H</sup>ei <shig>  
 low; <sup>H</sup>te<sup>hū</sup>-<sup>H</sup>jũ <chung chung>
- lower (the head), surrender; <sup>H</sup>Ngu <sup>H</sup>ma-<sup>L</sup>gu  
 <mgo mar sgu>  
 lunar eclipse; <sup>L</sup>Ndā-<sup>H</sup>Ndzē <zla 'dzin>  
 lunch; <sup>L</sup>Ndzɔ̃ <'dzar?>  
 lungs; <sup>H</sup>lu-<sup>H</sup>wɔ̃ <glo ba>  
 madman, lunatic; <sup>H</sup>ji-<sup>H</sup>Nbɔ̃ <smyon pa>  
 maggot; <sup>H</sup>χa-<sup>H</sup>Nbə <sha 'bu>  
 make money, make a profit; <sup>H</sup>k<sup>hi</sup> <khe>  
 malaria; <sup>L</sup>Nda-<sup>H</sup>rə <'dar ba>  
 male musk deer; <sup>L</sup>la-<sup>H</sup>wu <gla po>  
 man; <sup>L</sup>ji-<sup>H</sup>gue <\*mi dgon?>  
 mandarine; <sup>H</sup>teē-<sup>H</sup>du, cf. Shīxīng and Pūmī  
 /<sup>HL</sup>teīdu/  
 mark, sign; (N) <sup>H</sup>ta <rtags>; (V) <sup>H</sup>ta <sup>L</sup>tsu  
 <rtags btsugs>  
 mark, trace, vestige; <sup>H</sup>e<sup>hei</sup> <shul>  
 marrow; <sup>H</sup>kʒ̃ <rkang>, <sup>H</sup>kʒ̃-<sup>H</sup>Ndū <rkang ?>  
 marry (a woman), take as bride; <sup>H</sup>ts<sup>ha</sup>  
 marry off a woman, be given in marriage;  
<sup>L</sup>ka <bzhag>  
 marry, marriage; <sup>H</sup>te<sup>hə</sup> <sup>L</sup>t<sup>hū</sup> <chang 'thung>  
 mask; <sup>L</sup>Nba-<sup>L</sup>ma <'bag>  
 matches; <sup>L</sup>mo-<sup>H</sup>t<sup>hū</sup>i <me thur>  
 matter, business; <sup>L</sup>tsu-<sup>H</sup>wɔ̃ <brel ba?> or  
 <spros pa?>  
 mattress; <sup>H</sup>tē <gdan>  
 measure unit for dry things as well as liquids,  
 equal to 2 pints (SWM 筒 or 冲); (one  
 measure unit) <sup>L</sup>dzi-<sup>H</sup>kʒ̃ <bre gang>,  
 (two measure units) <sup>H</sup>dzi <sup>L</sup>tu <bre do>  
 meat, flesh; <sup>H</sup>χɔ̃ <sha>  
 medicine; <sup>H</sup>m̥ē <sman>  
 meet, encounter; <sup>H</sup>ts<sup>hə</sup>ue <sup>L</sup>jũ <phrad byung>  
 meldewed, become meldewed; <sup>H</sup>p<sup>ha</sup>-<sup>H</sup>hā  
 <phar ham>  
 melt, dissolve; <sup>H</sup>xə <bzhu>  
 mend, patch; <sup>L</sup>ja-<sup>H</sup>Nba <lhan pa>  
 metal dish, round copper basin; <sup>H</sup>ka-<sup>H</sup>də-<sup>H</sup>rɔ̃  
 <ka to ra>  
 middle storey of a house; <sup>L</sup>pe-<sup>H</sup>t<sup>hə</sup>o <bar thog>

- midnight; <sup>H</sup>*ts<sup>h</sup>uē* <mtshan>  
 milk; <sup>L</sup>*u<sup>-H</sup>ṣ* <'o ma>; (mother's milk) <sup>H</sup>*a<sup>-H</sup>mi*  
 mill, watermill; <sup>L</sup>*te<sup>h</sup>ə<sup>-H</sup>kue* <chu 'khor>  
 millet; <sup>H</sup>*tsi<sup>-H</sup>tsi* <tsi tse>  
 million; <sup>L</sup>*Nbṣ<sup>H</sup>tei* <'bum gcig?>  
 mirror; <sup>H</sup>*ε<sup>h</sup>ei<sup>-H</sup>gu* <shel sgo>  
 miscarriage, have a miscarriage; (as of  
 people) <sup>H</sup>*Ndzē* <'grim?>; (as of cattle)  
<sup>H</sup>*p<sup>h</sup>a<sup>-L</sup>p<sup>h</sup>ṣ* <phar phong>  
 mix (powder) with water, knead dough; <sup>H</sup>*tsu*  
 <dkrug>  
 molar teeth; <sup>L</sup>*p<sup>h</sup>ə<sup>-H</sup>su* <sbug so>, from an  
 earlier form <\*phug so>; <sup>L</sup>*rṣ<sup>-H</sup>da*  
 <'gram ?>  
 mole, freckle; <sup>L</sup>*me<sup>-H</sup>ṣ* <sme ba>  
 monastery; <sup>L</sup>*rə<sup>-H</sup>ts<sup>h</sup>ue* <ri khrod>  
 money; <sup>H</sup>*ye* <dn gul>  
 monk; <sup>L</sup>*tsa<sup>-H</sup>wə* <grwa ba>  
 monkey; <sup>H</sup>*tsi* <spre'u>  
 month; <sup>L</sup>*Nda<sup>-H</sup>wə* <zla ba>  
 month (beginning of a month); <sup>L</sup>*Nda<sup>-H</sup>Ngu*  
 <zla 'go>  
 month (middle of a month); <sup>L</sup>*Nda<sup>-H</sup>ke* <zla  
 sked>  
 month (end of a month); <sup>L</sup>*Nda<sup>-H</sup>Ndzu* <zla  
 mjug>  
 moon; <sup>H</sup>*lə* <zla>; <sup>L</sup>*Nda<sup>-H</sup>wa* <zla ba>  
 morning; <sup>L</sup>*xo<sup>-H</sup>pə* <zhog pa>; <sup>L</sup>*ṣā* <snga>  
 mortar; <sup>L</sup>*gu<sup>-H</sup>hue* <? phor?>  
 Moso, Na people; <sup>H</sup>*Ndzṣ* <'jang>  
 mosquito; <sup>L</sup>*the<sup>-H</sup>εi* <? shig>  
 mosquito net; <sup>L</sup>*dzā<sup>-H</sup>jx* <sbrang yab>  
 mother; <sup>L</sup>*mṣ* <ma>; <sup>H</sup>*a<sup>-H</sup>ma* <a ma>  
 mother-in-law; <sup>H</sup>*a<sup>-H</sup>ma* <a ma>  
 mountain; <sup>L</sup>*rə* <ri>  
 mountain (midway up a mountain); <sup>L</sup>*rə<sup>-H</sup>ke*  
 <ri sked>  
 mountain peak; <sup>H</sup>*gṣ* <sgang>  
 mountain slope; <sup>L</sup>*rə<sup>-H</sup>ba* <ri ?>; cf. Shixīng  
 /<sup>LH</sup>b3-b3/, Pūmī /ba<sup>35</sup>/
- mountain top, summit; <sup>L</sup>*rə<sup>-H</sup>Ngu* <ri mgo>  
 mountain valley, ravine; <sup>L</sup>*ji<sup>-H</sup>Nbṣ* <lung pa>  
 mountain or water spirit; <sup>H</sup>*lə* <lha>  
 mouse, rat; <sup>L</sup>*fu<sup>-H</sup>wə* <byi ba>  
 mouth; <sup>H</sup>*k<sup>h</sup>ə* <kha>  
 mouth organ (bamboo or copper); <sup>L</sup>*pē<sup>-H</sup>pṣ*  
 mouthful (of drink), bite (of food) (N); <sup>H</sup>*su*  
<sup>H</sup>*tx* <so btab>  
 move; <sup>H</sup>*pu* <spo>  
 move; stir, budge; <sup>H</sup>*Ngi* <'gul>  
 much, many; <sup>L</sup>*mṣ* <mang>; <sup>L</sup>*ma<sup>-H</sup>mu* <mang  
 mo?>  
 mud; <sup>L</sup>*Nda<sup>-H</sup>Nba* <'dam pa>  
 mulberry (Himalayan; *Morus serrata*); <sup>L</sup>*te<sup>-H</sup>se*,  
<sup>L</sup>*te<sup>-L</sup>se<sup>-H</sup>εi* <dar ? shing>  
 mule; <sup>L</sup>*tsēi* <drel>  
 multicolored, variegated, striped; <sup>H</sup>*ts<sup>h</sup>a<sup>-H</sup>ts<sup>h</sup>ə*  
 <khra khra>  
 muntjac; <sup>L</sup>*k<sup>h</sup>a<sup>-H</sup>χə* <kha sha>; tufted deer;  
<sup>L</sup>*na<sup>-H</sup>ji* <nags ?>  
 musk; <sup>H</sup>*la<sup>-H</sup>tsə* <gla rtsi>  
 musk deer; <sup>H</sup>*lə* <gla ba>; female musk deer;  
<sup>L</sup>*mu<sup>-H</sup>lə* <mo gla>  
 mute, a stupid person; (male) <sup>L</sup>*pə<sup>-H</sup>ku* <bu  
 lkugs>; (female) <sup>L</sup>*mə<sup>-H</sup>ku* <mo lkugs>  
 nail (V); beat, strike; <sup>L</sup>*du* <rdung>  
 nail (N), fingernail; <sup>L</sup>*s<sup>h</sup>a<sup>-H</sup>mṣ* <sen mo>  
 nail (N), screw; <sup>H</sup>*tea<sup>-H</sup>Ndze* <lcags? gzer?>  
 name; <sup>L</sup>*juū* <mying>  
 narrow; <sup>L</sup>*ts<sup>h</sup>ā* <'phrang?>  
 navel, belly button; <sup>H</sup>*ti<sup>-H</sup>wə* <lte ba>  
 neck; <sup>L</sup>*ki<sup>-H</sup>ts<sup>h</sup>i* <ske tshigs>  
 needle; <sup>H</sup>*k<sup>h</sup>x* <khab>  
 needle point, point of a needle; <sup>L</sup>*k<sup>h</sup>x<sup>-H</sup>tsi*  
 <khab rtse>  
 neigh; <sup>H</sup>*ts<sup>h</sup>e* <mtsher>  
 neighbour; <sup>L</sup>*ε<sup>h</sup>i<sup>-H</sup>Ndzi* <khyim mtshes>;  
<sup>L</sup>*dzə<sup>-H</sup>Nbṣ* <grong pa>  
 nephew; <sup>L</sup>*ts<sup>h</sup>a<sup>-H</sup>wu* <tsha bo>  
 nest; <sup>H</sup>*tsṣ* <sup>H</sup>*su* <tshang ?>

- new; <sup>H</sup>se-<sup>H</sup>wɔ <gsar pa>  
 next month; <sup>L</sup>ue-<sup>H</sup>lu <sup>L</sup>Nda-<sup>H</sup>wɔ <? zla ba>  
 next year; <sup>L</sup>ta-<sup>H</sup>ka <da zhag?>  
 niche, shrine; <sup>H</sup>tha-<sup>H</sup>ngu <thab mgo>; <sup>L</sup>tha-<sup>H</sup>ta <thab ?>  
 niece; <sup>H</sup>ts<sup>h</sup>a-<sup>H</sup>ã <tsha mo>  
 nine; <sup>H</sup>gã <dgu>  
 nine hundred; <sup>H</sup>gua-<sup>H</sup>dʒɔ <dgu brgya>  
 nineteen; <sup>H</sup>teã-<sup>H</sup>gã <bcu dgu>  
 ninety; <sup>H</sup>gã-<sup>H</sup>teã <dgu bcu>  
 ninth; ninth lunar month; <sup>L</sup>gã-<sup>H</sup>pɔ <dgu pa>  
 ninth day of the month; <sup>H</sup>ts<sup>h</sup>e <sup>H</sup>gã <tshes dgu>  
 nod; <sup>L</sup>ngu-<sup>H</sup>ku <mgo gug>  
 noodles; <sup>L</sup>dʒa-<sup>H</sup>thu <rgya thug>  
 noon, midday; <sup>L</sup>Ndzɔ <'dzar?>; <sup>L</sup>Ndza-<sup>H</sup>rẽ <\*'dzar? ran?>  
 north; <sup>L</sup>jɔ̃ <byang>  
 north side of a mountain, where little light comes; <sup>L</sup>sã-<sup>H</sup>ma <srib ma?>  
 nose; <sup>L</sup>ṅã <sna>  
 nostril; <sup>L</sup>ṅã-<sup>H</sup>k<sup>h</sup>ɔ̃ <sna khung>  
 Nosu; <sup>H</sup>lu-<sup>H</sup>lu  
 not be, negated copula verb; <sup>L</sup>ma=<sup>H</sup>re <ma red>  
 now, at present, nowadays; <sup>L</sup>a-<sup>H</sup>ɔ̃ <da lta?>  
 nun; <sup>H</sup>gi-<sup>H</sup>wɔ̃ <dge ma>  
 oak; <sup>L</sup>pi-<sup>H</sup>se <be shing>  
 oats; <sup>L</sup>ʒã-<sup>H</sup>ke <yu khu?>  
 obedient (child); <sup>L</sup>k<sup>h</sup>e-<sup>H</sup>to <khar ?>  
 official; <sup>H</sup>pẽ <dpon>  
 oil; <sup>H</sup>ṅũ <snum>  
 old (of an object); <sup>L</sup>gu-<sup>H</sup>re <gog ?>; (antique) <sup>H</sup>ṅĩ-<sup>H</sup>Nbɔ̃ <rmying pa>  
 old person; <sup>L</sup>gẽ-<sup>H</sup>go <rgan gog>  
 old, become old; <sup>H</sup>ma-<sup>L</sup>gei <mar rgas>  
 on the top, above; <sup>H</sup>ka-<sup>H</sup>tĩ <ka? steng>  
 one; <sup>H</sup>tei <gcig>  
 one night (e.g. stay for one night), one day and night; <sup>L</sup>cha <zhag>
- open; <sup>H</sup>ci <phye>; (open the door) <sup>H</sup>gu <sup>L</sup>ci <sgo phye>  
 open (e.g. an umbrella); <sup>H</sup>ja-<sup>L</sup>t<sup>h</sup>ẽ <yar 'then>  
 open (eyes); <sup>H</sup>ji <sup>H</sup>ja-<sup>H</sup>ɔ̃ <myig yar lta?>  
 open (the mouth); <sup>H</sup>k<sup>h</sup>ɔ̃ <sup>L</sup>dɔ̃ <kha gdang>  
 opposite side; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ko <phar ?>  
 orchid, literally, 'cuckoo flower'; <sup>L</sup>ku-<sup>H</sup>ku <sup>L</sup>Nbu-<sup>L</sup>ru <ku ku me tog>  
 orphan; <sup>L</sup>ta-<sup>H</sup>li <d(w)a ?>  
 other, the other one; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>xɔ̃ <? gzhan?>  
 otter, waterdog; <sup>H</sup>sã <sram>  
 outside; <sup>L</sup>p<sup>h</sup>ie <phyi> (this is possibly a recent loan)  
 outside (of clothing); <sup>L</sup>tei-<sup>H</sup>pa <? lpags?>  
 oval; <sup>L</sup>ts<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>e  
 overflow, spill; <sup>L</sup>pu <'bo> or <bo>  
 owl; <sup>H</sup>wu-<sup>H</sup>hu <'ug pa>  
 oxters, armpit; <sup>L</sup>te<sup>h</sup>ẽ-<sup>H</sup>la <sup>L</sup>xr-<sup>H</sup>rɔ̃ <mchan ? 'og ra?>  
 pack sedal; <sup>L</sup>dʒɔ̃ <rgyab>  
 pad, cushion, mat; <sup>H</sup>Nbei <'bol?>  
 pagoda; <sup>L</sup>te<sup>h</sup>a-<sup>H</sup>tẽ <mchod rten>  
 pair; <sup>H</sup>te<sup>h</sup>ɔ̃ <cha>, one pair; <sup>L</sup>te<sup>h</sup>a <sup>H</sup>tei <cha gcig>  
 palm of hand; <sup>L</sup>ja-<sup>H</sup>yũ <lag kung~gung>  
 pan, dish of a scale; <sup>H</sup>sã-<sup>H</sup>de <srang sder>  
 pant, gasp; <sup>H</sup>bu <sup>L</sup>ma-<sup>L</sup>t<sup>h</sup>ẽ <dbugs mar 'then>  
 paper; <sup>L</sup>χã-<sup>H</sup>wu <shog bu>  
 parents; <sup>H</sup>p<sup>h</sup>a-<sup>H</sup>mɔ̃ <pha ma>  
 paste, stick, glue; <sup>H</sup>lẽ <lhan>  
 pay salary; <sup>H</sup>te <ster>  
 pea; <sup>H</sup>suẽ-<sup>H</sup>lu <sran ?>  
 peach (*Prunus persica*); <sup>L</sup>dʒa-<sup>H</sup>xã <rgya kham>; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>mbə <kham bu>  
 peacock; <sup>H</sup>ma-<sup>H</sup>jɔ̃ <rma bya>  
 peanut; <sup>L</sup>s<sup>h</sup>a-<sup>H</sup>s<sup>h</sup>uẽ <sa son>  
 pear; <sup>H</sup>sã-<sup>H</sup>li <? gli>  
 pebble; <sup>L</sup>te<sup>h</sup>u-<sup>H</sup>du <chu rdo>  
 peck at (as done by chicken); <sup>H</sup>Ndzei <sup>L</sup>dã <'bras ?>

- pen, cattle shed, barn; <sup>L</sup>ra-<sup>H</sup>γə <ra skor?>;  
 (stall for mule) <sup>L</sup>tsei-<sup>H</sup>rɔ <drel ra>;  
 (horse corral, stable) <sup>L</sup>tɔ-<sup>H</sup>rɔ <rta ra>;  
 (goat pen) <sup>L</sup>ra-<sup>H</sup>tsʰɔ <ra tshang>; (bird's  
 cage) <sup>L</sup>fa-<sup>H</sup>kʰɔ <bya khang>  
 penis; <sup>L</sup>Ndzi <mje>  
 peppery, spicy, hot; <sup>H</sup>sa <sreg>  
 perform a shaman's trance dance; <sup>L</sup>te<sup>h</sup>ã-<sup>H</sup>Nbɔ  
<sup>L</sup>te<sup>h</sup>ã <'cham po 'cham>  
 person, people; <sup>L</sup>ɲə <mi>  
 pestle; <sup>L</sup>go-<sup>H</sup>dũ <sgog gtun>  
 petticoat, skirt; (festive) <sup>L</sup>Ndũ-<sup>H</sup>huẽ <'dung  
 phon>; (ordinary) <sup>L</sup>na-<sup>H</sup>dzu  
 pick up; <sup>H</sup>jɔ <lang> (with an irregular tone)  
 pick up (with chopsticks); <sup>L</sup>ja-<sup>H</sup>Ndzə <yar 'ju  
 ba>  
 pickled vegetables; <sup>L</sup>kʰa-<sup>H</sup>tse <sup>L</sup>fui <kha tshal?  
 skyur>  
 pig; <sup>H</sup>pʰa <phag>  
 pig (sow, swine); <sup>L</sup>ja-<sup>H</sup>mu <? mo>; <sup>L</sup>mu-<sup>H</sup>ha  
 <mo phag>  
 pig (boar, hog); <sup>H</sup>ge-<sup>H</sup>li; <sup>L</sup>pʰu-<sup>H</sup>ha <pho  
 phag>  
 pig (piglet); <sup>L</sup>pʰu-<sup>H</sup>ka <phag ?>  
 pig (wild boar); <sup>L</sup>pʰa-<sup>H</sup>gue <phag rgod>  
 pig bristles; <sup>L</sup>pʰa-<sup>H</sup>pə <phag spu>  
 pig excrements; <sup>L</sup>pʰa-<sup>H</sup>ji <phag lud>; <sup>L</sup>pʰa-<sup>H</sup>  
<sup>H</sup>tə <phag lci>  
 pig food; (pollard, bran sifted from flour)  
<sup>L</sup>pʰa-<sup>H</sup>ri <\*phag ril?>; (pig fodder)  
<sup>L</sup>pʰa-<sup>H</sup>dɔ <phag ?>; (pig swill) <sup>L</sup>pʰa-<sup>H</sup>xu  
 <phag bshos?>  
 pillar; <sup>H</sup>kɔ <ka>  
 pillow; <sup>H</sup>ŋei <sngas>  
 pilose antler, deer horn with velvet  
 containing blood; <sup>L</sup>ra-<sup>H</sup>sã <rwa ?>  
 pincers, tongs; <sup>L</sup>ka-<sup>H</sup>Nbɔ <rkam pa>  
 pine; <sup>L</sup>sɔ-<sup>H</sup>ɛĩ <gsom shing>; <sup>H</sup>so-<sup>H</sup>mi-<sup>H</sup>ɛĩ;  
<sup>L</sup>tʰɔ-<sup>H</sup>ɛĩ <thang shing>; <sup>L</sup>tʰo-<sup>L</sup>mo-<sup>H</sup>ɛĩ  
 pine mushrooms; <sup>L</sup>pi-<sup>H</sup>χɔ <dpal? sha mo>  
 pine needle; <sup>H</sup>sɔ-<sup>H</sup>Nbi <gsom bal?>  
 pipe; <sup>L</sup>ti-<sup>H</sup>rɔ <dud ra?>  
 pistil; <sup>L</sup>Nbu-<sup>H</sup>ru <sup>L</sup>sʰuẽ <me tog son>  
 place; <sup>H</sup>sʰa-<sup>H</sup>te<sup>h</sup>ɔ-<sup>H</sup>sʰa-<sup>H</sup>jɔ <sa cha>  
 plant, raise; <sup>H</sup>tsu <btsugs>; (plant trees) <sup>H</sup>ɛĩ  
<sup>H</sup>tsu <shing btsugs>  
 plate; <sup>H</sup>de <sder>  
 play the bamboo flute; <sup>H</sup>tʰa-<sup>H</sup>lĩ <sup>L</sup>pɛ <'phred  
 gling sbar?>  
 play, amuse oneself; <sup>H</sup>tsə-<sup>H</sup>mɔ <rtse mo>  
 plow (N), till; <sup>L</sup>ɛĩ-<sup>H</sup>mu <zhing rmo>  
 plow (V); <sup>H</sup>ɛei <gshol>  
 plow handle; <sup>H</sup>ɛei-<sup>H</sup>Ndɔ <gshol mda>  
 pluck (flowers), pick (fruit); <sup>H</sup>tu <btog>. The  
 rhyme of this word possibly results  
 from changes from OT -og > first to  
 Kami /o/ > then to Kami /u/  
 pocket; <sup>H</sup>po-<sup>H</sup>po, SWM 包包 /pao<sup>44</sup>pao<sup>44</sup>/  
 point at / to / out; <sup>H</sup>tẽ <bstan>  
 point of a knife; <sup>L</sup>tʰə-<sup>H</sup>tsi <gri rtse>  
 poison; <sup>L</sup>tu <dug>  
 poke, stab; <sup>L</sup>du  
 pool; <sup>L</sup>Ndzĩ <rdzing>  
 poor; <sup>L</sup>tʰə-<sup>H</sup>te<sup>h</sup>a  
 poplar; <sup>L</sup>ʒa-<sup>H</sup>wɔ <sbyar pa>  
 potato; loan from SWM 洋芋 /iaŋ<sup>21</sup>y<sup>213</sup>/  
 pound; (one pound) <sup>L</sup>tei <sup>H</sup>kɔ <'jal gang>;  
 (two pounds) <sup>L</sup>tei <sup>H</sup>tu <'jal du>; (three  
 pounds) <sup>L</sup>tei <sup>H</sup>sũ <'jal gsum>.  
 Alternatively, Kami <sup>L</sup>tei may be a loan  
 from SWM, 斤 /teĩ<sup>55</sup>/ 'pound'  
 pray; <sup>L</sup>gɔ-<sup>H</sup>pɔ <sup>L</sup>dʒɔ <\*dgongs pa rgyab>  
 precipice, cliff; <sup>L</sup>tʂa <brag>  
 pregnant; <sup>H</sup>a-<sup>H</sup>wɔ <sup>L</sup>kʰui <a wa 'khur?>; <sup>H</sup>li  
<sup>L</sup>ma=<sup>H</sup>di <lus mi bde>  
 press, push down; <sup>H</sup>nɛ <mnar>  
 price; <sup>L</sup>kɔ <gong>  
 prison, jail; <sup>H</sup>tsẽ-<sup>H</sup>kʰɔ <btson khang>  
 prisoner, be imprisoned; <sup>H</sup>tʂə-<sup>L</sup>pʰo <khirms  
 phog>

Pteromus volans, flyings quirrel; <sup>L</sup>fã-<sup>H</sup>fə  
 <bya ma byi>  
 pull up; <sup>H</sup>ji <lhud?>; (root out weeds) <sup>H</sup>dū <sup>L</sup>ji  
 <? lhud?>, cf. Bātáng /ty?<sup>53</sup>/  
 pull, tug; <sup>H</sup>hē <'then>  
 Pūmī; <sup>L</sup>rǝ-<sup>H</sup>ja <rang mi>  
 punch a hole, perforate; <sup>H</sup>p<sup>h</sup>u <phug>  
 punish; <sup>H</sup>tǝ<sup>h</sup>ē <khirms>  
 pupil (of an eye); <sup>H</sup>hjo <sup>L</sup>a-<sup>H</sup>ka <lha a ?>,   
 literally, 'deity's child'  
 pupil, disciple; <sup>L</sup>gi-<sup>H</sup>tǝ<sup>h</sup>u <dge phrug>  
 pus; <sup>H</sup>na <rñag>  
 push, shove; <sup>H</sup>gi <sgul>  
 put into a container, pack; <sup>H</sup>ju <'jog?>  
 put out to pasture, herd, drive (animals);  
<sup>L</sup>dzui <rdzi?>  
 put, place; <sup>H</sup>ma-<sup>L</sup>ka <mar bzhag>  
 put, arrange; sway, wave; <sup>L</sup>ja <sup>H</sup>zu <lag  
 g.yug>  
 quarrel, have a row; <sup>L</sup>ta-<sup>H</sup>Ndr <'thab pa ?>  
 quick, rapid, fast; <sup>L</sup>Ndzu <mgyogs>, <sup>L</sup>Ndzu-  
<sup>H</sup>po <mgyogs po>  
 quilt, blanket; <sup>H</sup>p<sup>h</sup>u-<sup>H</sup>xe <pho khebs>  
 rabbit; <sup>L</sup>rǝ-<sup>H</sup>yū <ri bong>, cf. Bātáng /zi<sup>55</sup>-  
 yū<sup>55</sup>/  
 radish; <sup>L</sup>la-<sup>H</sup>be <lab> or, alternatively, SWM  
 蘿蔔 /lo<sup>21</sup>pu<sup>213</sup>/  
 rain (N); <sup>L</sup>te<sup>h</sup>o <char pa>  
 rain (V); (<sup>L</sup>te<sup>h</sup>o) <sup>L</sup>Nbǝ <char pa 'bab>; (<sup>L</sup>te<sup>h</sup>o)  
<sup>L</sup>ǝ <char pa 'ong>  
 rainbow; <sup>H</sup>ko <'ja>, OT <gzha'>  
 raise (the hand); <sup>L</sup>jo <sup>H</sup>ja-<sup>L</sup>tǝ <lag yar  
 rkyong>  
 raw; <sup>L</sup>zē <rjen>, <sup>L</sup>ze-<sup>H</sup>Nbǝ <rjen po?>  
 razor knife for shaving the head; <sup>H</sup>tǝǝ-<sup>H</sup>ye  
 <\*gri bzhar?>  
 read; <sup>L</sup>zǝ-<sup>H</sup>gi <sup>H</sup>to <yi ge lta>; <sup>L</sup>zǝ-<sup>H</sup>gi <sup>L</sup>Nduē  
 <yi ge 'don>  
 read (out loud), learn; <sup>H</sup>Nduē <'don>  
 recall, recollect; <sup>H</sup>ja-<sup>L</sup>tǝē <yar dran>

recuperate, recover (from illness); <sup>H</sup>ja-<sup>L</sup>tǝa  
 <yar drag>  
 red; <sup>H</sup>ma-<sup>H</sup>mē <\*dmar dmar>  
 redsoil, clay; chalk, white earth; <sup>L</sup>s<sup>h</sup>a-<sup>H</sup>mē  
 <sa dmar>; <sup>L</sup>s<sup>h</sup>a-<sup>H</sup>ye <sa dkar>  
 reed, cattail; <sup>H</sup>wu-<sup>H</sup>li <sup>L</sup>Ndzu-<sup>H</sup>wǎ <? lus mjug  
 ma>  
 reins; <sup>H</sup>ta-<sup>H</sup>nt<sup>h</sup>ui <rta mthur>  
 remember; <sup>H</sup>s<sup>h</sup>e-<sup>L</sup>nǝ <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>ri <sems nang  
 tshur ?>  
 repair; <sup>L</sup>zu <bzo>  
 repay (a debt); <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ts<sup>h</sup>r <phar tshab>  
 rescue, save; <sup>H</sup>so <sup>H</sup>lǝ <srog blu>  
 rest; <sup>L</sup>ji-<sup>H</sup>su <ngal gso>  
 return, give back; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>te <phar ster>  
 return; (come back) <sup>L</sup>ts<sup>h</sup>a-<sup>H</sup>ǝ <tshur 'ong>;  
 (go back) <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>Ndzu <phar 'gro>  
 revenge, avenge; <sup>L</sup>jē-<sup>H</sup>te <lan ?>  
 reverse, back side; <sup>L</sup>p<sup>h</sup>ie <phyi> (this is  
 possibly a recent loan)  
 rhododendron (*Rhododendron*  
*trichostomum*); <sup>L</sup>sǝ-<sup>H</sup>kē <sur kar>  
 rib; <sup>H</sup>tsi-<sup>H</sup>mǝ <rtsib ma>  
 rice; <sup>H</sup>Ndzei <'bras>  
 rice wine, sweet liquor; <sup>L</sup>bǝ <sbang>  
 rich, wealthy; <sup>L</sup>zu-<sup>H</sup>ñǝ <phyug po>  
 ride a horse; <sup>H</sup>to <sup>L</sup>tǝ <rta skya>  
 right, rightside; <sup>L</sup>tǝǝ-<sup>H</sup>ja  
 ring; <sup>L</sup>Ndzui-<sup>H</sup>tǝ<sup>h</sup>ui <mdzub rgyus> or  
 <mdzub skyis>  
 ripen (as of fruit); <sup>H</sup>ji <smyin>  
 rise, go up (as of the sun from behind  
 mountain peaks); <sup>L</sup>jo <sup>H</sup>gǝ-<sup>L</sup>pi <nyi ma  
 sgang 'bud>  
 river; <sup>H</sup>te<sup>h</sup>ǝ <chu>; (Iron river <lcags chu>,   
 Shuǐluò River 水洛河) <sup>H</sup>na-<sup>H</sup>te<sup>h</sup>ǝ <snag?  
 chu>; (Mekong, Mùlǐ River 木里河)  
<sup>H</sup>dza-<sup>H</sup>jo-<sup>H</sup>dza-<sup>H</sup>te<sup>h</sup>ǝ <rdza chu>  
 river (lower reaches of a river); <sup>L</sup>te<sup>h</sup>ǝ-<sup>H</sup>Ndzu  
 <chu mjug>

- river (middle reaches of a river); <sup>L</sup>te<sup>hə</sup>-<sup>H</sup>ke  
<chu sked>
- river (upper reaches of a river); <sup>H</sup>te<sup>hə</sup>-<sup>H</sup>Ngū  
<chu mgo>
- road, path; <sup>L</sup>jā <lam>; mountain path; <sup>L</sup>rə-  
<sup>H</sup>jā <ri lam>; highway; <sup>L</sup>ga-<sup>L</sup>tṣi <sup>H</sup>jā  
<**kha khre?** lam>
- roe of fish; <sup>L</sup>nṣ-<sup>L</sup>go-<sup>H</sup>wā <nya sgo nga>
- roll, roll down (as of a stone from a  
mountain); <sup>H</sup>p<sup>hə</sup>
- roof; <sup>H</sup>k<sup>hə</sup>-<sup>H</sup>tī <khang steng>
- room, chamber; <sup>H</sup>Ndzue <mdzod>
- root; <sup>H</sup>tsɔ <rtsa ba>; (root of a tree) <sup>L</sup>εi-<sup>H</sup>tsɔ  
<**shing** rtsa>
- rope; <sup>L</sup>t<sup>hə</sup>-<sup>H</sup>wɔ <thag pa>
- rot (as of food) <sup>H</sup>p<sup>hə</sup>-<sup>L</sup>Nbo <phar 'bam>; (as  
of clothes or objects) <sup>L</sup>p<sup>hə</sup>-<sup>H</sup>ri <phar  
rul>
- round; <sup>H</sup>gue-<sup>H</sup>gue <sgor sgor>
- rub, smear; <sup>H</sup>de <bdar>
- run; <sup>L</sup>dʒu <rgyug>
- rust; <sup>H</sup>tsɔ <gtsa'>
- saber, small sword; <sup>H</sup>ti-<sup>H</sup>dza
- saddle and saddle blanket; <sup>H</sup>gɔ <sga>
- saddle's crupper (front); <sup>L</sup>kṣ-<sup>H</sup>Nda <gong  
thag>
- saddle's crupper (back); <sup>H</sup>ṃē <rmed~smed>
- salary, wages; <sup>H</sup>p<sup>hə</sup> <phogs>
- saliva, dribble; <sup>H</sup>k<sup>hə</sup>-<sup>H</sup>jə <kha chu>
- salt; <sup>H</sup>ts<sup>hə</sup> <tshwa>
- salty; <sup>H</sup>ts<sup>hə</sup>-<sup>H</sup>xə <tshwa khu>
- sand; <sup>L</sup>ḡ <bye ma>
- saw; <sup>H</sup>s<sup>hə</sup>-<sup>H</sup>ji <sog le>
- sawdust; <sup>L</sup>s<sup>hə</sup>-<sup>H</sup>tsā <sog ?>
- scallion, onion; <sup>H</sup>tsṣ-<sup>H</sup>gu <tsong ?>, with the  
suffix /gu/
- scalp; <sup>L</sup>Ngū-<sup>H</sup>pa <mgo pags>
- scarf; (head wrapping cloth) <sup>L</sup>Ngū-<sup>H</sup>tṣi <mgo  
dkris>; (neck wrapping cloth) <sup>H</sup>ki-<sup>H</sup>tṣi  
<ske dkris>
- scatter; <sup>H</sup>tr <btab>; (scatter seeds) <sup>L</sup>s<sup>hə</sup>ē <sup>H</sup>tr  
<son btab>
- school; <sup>H</sup>ḡ-<sup>H</sup>k<sup>hə</sup>ṣ <\*bslab khang>
- scissor, cut with scissors; <sup>H</sup>na
- scissors; <sup>L</sup>tca-<sup>H</sup>Ndzə, SWM 剪子 /tɕian<sup>53</sup>tsɿ<sup>53</sup>/
- scold, curse; <sup>L</sup>fe <sup>H</sup>fe-<sup>L</sup>fe <sup>H</sup>tfe <byad byed?>
- scoop up (water), ladle out; <sup>H</sup>teə <bcu>
- scratch, scrape; <sup>L</sup>Ndzε <'brad>
- script, letter, syllable; <sup>L</sup>zə-<sup>H</sup>gi <yi ge>;  
Tibetan alphabet <sup>L</sup>pe-<sup>H</sup>zi <bod yig>
- seal; <sup>H</sup>t<sup>hi</sup> <the'u> or <thel>
- second; <sup>H</sup>jue-<sup>H</sup>Nbɔ <gnyis pa>
- second day of the month; <sup>H</sup>ts<sup>hə</sup>-<sup>H</sup>jue <tshes  
gnyis>
- second lunar month; <sup>L</sup>Nda-<sup>H</sup>wɔ <sup>H</sup>nā-<sup>H</sup>Nbɔ  
<zla ba gnyis pa>
- see; <sup>H</sup>t<sup>hə</sup>-<sup>L</sup>fū <mthong byung>
- see oneself in the mirror; <sup>H</sup>ε<sup>hə</sup>ei-<sup>H</sup>gu <sup>L</sup>tɔ <shel  
sgo lta>
- seed, seedling; <sup>L</sup>s<sup>hə</sup>ē <son>
- self, oneself; <sup>L</sup>ŋɔ <sup>H</sup>ta-<sup>H</sup>ra <nga ?>
- sell; <sup>H</sup>tsṣ <btsong>
- separate, divide up; <sup>H</sup>p<sup>hə</sup>-<sup>L</sup>ei <phar dbye>
- set (as of the sun); <sup>L</sup>p<sup>hə</sup>-<sup>H</sup>t<sup>hi</sup> <phar ?>
- set one's mind at rest, rest assured, feel  
relieved; <sup>H</sup>s<sup>hə</sup>ē <sup>L</sup>di <sems bde>
- seven; <sup>L</sup>dē-<sup>H</sup>dē <bdun>
- seven hundred; <sup>H</sup>dē-<sup>H</sup>dʒɔ <bdun brgya>
- seventeen; <sup>H</sup>teə-<sup>H</sup>dē <bcu bdun>
- seventh; seventh lunar month; <sup>L</sup>de-<sup>H</sup>Nbɔ  
<bdun pa>
- seventh day of the month; <sup>H</sup>ts<sup>hə</sup>-<sup>L</sup>dē <tshes  
bdun>
- seventy; <sup>H</sup>de-<sup>H</sup>Ndzə <bdun bcu>
- sew (up), mend (clothes); <sup>L</sup>kei-<sup>H</sup>tsē <gos  
btsems>
- shadow; <sup>L</sup>na-<sup>H</sup>Ngō <nag ?>
- shake (one's head); <sup>H</sup>Ngū <sup>L</sup>ʒu <mgo g.yug>
- shallow; <sup>H</sup>sɾ <sɾab>
- sharp (as of a knife); <sup>H</sup>me-<sup>H</sup>rā

- sharp, pointed; <sup>H</sup>na-<sup>H</sup>mu <rno mo>  
 shave (hairs); <sup>L</sup>ye <bzhar>, (shave the head)  
<sup>H</sup>tsɔ <sup>L</sup>ye <skra bzhar>, <sup>H</sup>ngu <sup>L</sup>ye <mgo  
 bzhar>; (shave the beard) <sup>L</sup>a-<sup>H</sup>tsʰɔ <sup>L</sup>ye  
 <ag tshom bzhar>  
 shed (tears); <sup>L</sup>sa <zag>; <sup>L</sup>Nbə <'bab>  
 sheep; <sup>L</sup>ju <lug>  
 sheep (ewe); <sup>L</sup>mə-<sup>H</sup>ju <mo lug>  
 sheep (ram); <sup>L</sup>pʰu-<sup>H</sup>ju <pho lug>  
 sheep (lamb, young sheep); <sup>L</sup>ju-<sup>H</sup>ka <lug ?>  
 sheepfold, pen; downstairs; <sup>L</sup>ra-<sup>H</sup>ya <ra  
 skor?>  
 shell, peel (v); <sup>H</sup>ji <lhud?>, cf. Bātáng /tyʔ<sup>53</sup>/;  
<sup>L</sup>pa-<sup>H</sup>ku <sup>L</sup>ji <lpags ko lhud?>  
 shiver, tremble; <sup>H</sup>Nde <'dar>  
 shoes, boots; <sup>H</sup>hja <lham>; <sup>L</sup>za-<sup>H</sup>ku <? ko?>  
 shoes (Tibetan-style shoes); <sup>L</sup>pe-<sup>H</sup>hja <bod  
 lham>  
 shoes (straw sandals); <sup>H</sup>tsʰa-<sup>H</sup>hja <rtswa  
 lhan>  
 shoot an arrow; <sup>H</sup>Ndo <sup>L</sup>dʒɹ <mda' rgyab>  
 shop; <sup>H</sup>tsʰɔ-<sup>H</sup>khɔ <tshong khang>  
 short; <sup>L</sup>hũ <thung> (with an irregular tone),  
<sup>L</sup>hũ-<sup>H</sup>nə <thung ?>  
 shoulder; <sup>L</sup>tsʰa-<sup>H</sup>wɔ <phrag pa>  
 shout, yell; <sup>H</sup>zɛ  
 Shuǐluò Township 水洛鄉; <sup>L</sup>eo-<sup>H</sup>lo <sho  
 log>; some Kami villages in Shuǐluò:  
 Qilā 其拉 <sup>L</sup>teʰi-<sup>H</sup>ra; Dōnglā 東拉 <sup>H</sup>dɔ-<sup>H</sup>la;  
 Dūlǔ 都魯 <sup>H</sup>tu-<sup>H</sup>ru  
 shut, close (mouth); <sup>H</sup>khɔ <sup>L</sup>ma-<sup>L</sup>tsɔ <kha mar  
 btsums>  
 shuttle (device used in weaving); <sup>L</sup>ɹ  
 shy, bashful; <sup>H</sup>tsʰi-<sup>L</sup>tsa <\*khrel drag?>  
 sick, invalid; <sup>L</sup>na-<sup>H</sup>pɔ <nad pa>  
 sickle; <sup>L</sup>sa-<sup>H</sup>rɔ <zor pa>  
 side, near, in the vicinity; <sup>H</sup>ka-<sup>H</sup>tsɔ <? rtsa>  
 sieve (v), sift; <sup>H</sup>tsa <btsag>  
 sifter, sieve (N); <sup>L</sup>tsʰɔ <khrol ma>  
 silk; <sup>L</sup>kei-<sup>H</sup>teɛ <gos chen>  
 silver; <sup>H</sup>ye <ngul>  
 sing; <sup>H</sup>zei-<sup>L</sup>tɔ <gzhas btang>; <sup>H</sup>lə <sup>L</sup>lɛ <glu  
 len>  
 sink; <sup>L</sup>ma-<sup>H</sup>ni <mar snyigs>  
 sip, suck (milk); <sup>L</sup>a-<sup>H</sup>mi <sup>L</sup>nā  
 sister; (older sister) <sup>H</sup>a-<sup>H</sup>mɔ <a ma>; <sup>L</sup>a-<sup>H</sup>zi,  
 cf. Shǐxīng /ʰa-zi/; (sisters) <sup>L</sup>pu <sup>H</sup>pɛ  
 <bu spun?>; (younger sister) <sup>L</sup>nũ <nu  
 mo>; <sup>H</sup>sə-<sup>H</sup>juũ <sring mo>  
 sit down; <sup>H</sup>ma-<sup>L</sup>Ndə <mar 'dug>  
 six; <sup>L</sup>tsu <drug>  
 six hundred; <sup>L</sup>tsu-<sup>H</sup>dʒɔ <drug brgya>  
 sixteen; <sup>H</sup>teə-<sup>H</sup>tsu <bcu drug>  
 sixth; sixth lunar month; <sup>L</sup>tsu-<sup>H</sup>pɔ <drug pa>  
 sixth day of the month; <sup>H</sup>tsʰe-<sup>H</sup>tsu <tshes  
 drug>  
 sixty; <sup>L</sup>tsu-<sup>H</sup>teə <drug cu>  
 skin (as of an animal); <sup>L</sup>ku-<sup>H</sup>pa <ko lpags>  
 skin color, complexion (human); <sup>L</sup>xa-<sup>H</sup>Ndo  
 <sha mdog>  
 skin, peel (N) (as of fruit or vegetables); <sup>L</sup>pa-  
<sup>H</sup>ku <lpags ko?>  
 sky, heaven; <sup>H</sup>nā <gnam>  
 sleep; <sup>L</sup>ni <nyal>  
 sleepy, tired, fatigued; <sup>L</sup>ni-<sup>H</sup>gi <sup>H</sup>sā <gnyid ?>  
 sleeve; <sup>L</sup>pʰə-<sup>H</sup>Ndũ <phu thung> or <phu  
 dung>  
 sliding weight of a steelyard; <sup>L</sup>tei-<sup>H</sup>du <'jal?  
 rdo>  
 slip, glide, trip, stumble; <sup>L</sup>Ndzɛ <'gred>; (fall  
 down) <sup>H</sup>ma-<sup>L</sup>Ndzɛ <mar 'gred>; (fall on  
 a flat surface) <sup>H</sup>pʰa-<sup>L</sup>Ndzɛ <phar 'gred>  
 slow, late; <sup>H</sup>lɹ <lhod>, <sup>L</sup>lɹ-<sup>H</sup>lɹ <lhod lhod>  
 small bag (for carrying rtsam pa); <sup>H</sup>tsā-<sup>H</sup>gə  
 <\*rtsam bkal?>  
 small, little; <sup>H</sup>teʰũ <chung>, <sup>H</sup>teʰũ-<sup>H</sup>juũ  
 <chung chung>  
 smallpox, measles; <sup>L</sup>Nbu-<sup>H</sup>ru <sup>L</sup>no <\*me tog  
 nad>  
 smell (N); <sup>H</sup>lũ-<sup>H</sup>pɔ <rlung pa?>

smell (v); <sup>H</sup>ŋũ <snom>  
 smelt, temper metal; <sup>H</sup>tea <sup>L</sup>duũ <lcags rdung>  
 smoke; <sup>L</sup>ti-<sup>H</sup>pɔ <du ba>  
 smoke (a cigarette); <sup>L</sup>ti-<sup>H</sup>pɔ <sup>H</sup>tʰũ <du ba  
 'thung>  
 smoke, fumigate; <sup>H</sup>ka  
 snake; <sup>H</sup>dzu-<sup>H</sup>lẽ <sbrul>  
 snap (a thread); <sup>L</sup>pʰa-<sup>H</sup>tee <phar gcod>  
 snap, break (a stick); <sup>L</sup>pʰa-<sup>H</sup>tʂo <phar  
 dkrog?>  
 sneeze; <sup>L</sup>dzi-<sup>H</sup>pɔ <sup>L</sup>je <sbrid po byed>  
 snivel, snot; <sup>H</sup>ŋã <snabs>  
 snore; <sup>H</sup>ŋũ-<sup>H</sup>wɔ <sup>L</sup>tʂi <snur pa ?>  
 snot rag, handkerchief; <sup>H</sup>ŋa-<sup>H</sup>tei <snabs ?>  
 snow (N); <sup>L</sup>kʰa-<sup>H</sup>wɔ <kha ba>  
 snow (V); <sup>L</sup>kʰa-<sup>H</sup>wɔ <sup>L</sup>Nbə <kha ba 'bab>  
 soda; <sup>L</sup>pu-<sup>H</sup>tu <bul tog>  
 soft; <sup>L</sup>ŋa-<sup>H</sup>ũ <snyan mo?>  
 soil, earth; <sup>H</sup>sʰɔ <sa>  
 solar eclipse; <sup>L</sup>ni-<sup>H</sup>Ndzẽ <nyi 'dzin>  
 soldier; <sup>H</sup>ma-<sup>H</sup>ŋə <dmag mi>  
 solution, means, method; <sup>L</sup>lu-<sup>H</sup>tʰɻ <\*blo  
 thabs?>  
 solve, resolve, settle; <sup>L</sup>ka-<sup>H</sup>so <sup>L</sup>zu <gzhag ?  
 bzo>  
 son; <sup>H</sup>pə <bu>  
 son-in-law; <sup>L</sup>pu-<sup>H</sup>sə <bu ?>  
 soul, spirit; <sup>H</sup>la-<sup>H</sup>ʂ <bla ma?>  
 sound, voice; <sup>H</sup>ke <skad>  
 soup; <sup>L</sup>kʰu-<sup>H</sup>wɔ <khu ba>  
 soup, meat broth; <sup>H</sup>χa-<sup>H</sup>xə <sha khu>  
 sour; <sup>H</sup>fu-<sup>H</sup>kua <skyr ?>, with the suffix  
 /kua/  
 south; <sup>H</sup>fu <lho>  
 sparrow; <sup>L</sup>ei <byi'u> or <bye>  
 spatula, ladle; <sup>H</sup>tea-<sup>H</sup>ze <lcags gzar>  
 speak, pike; <sup>H</sup>Nduũ <mdung>  
 speak, talk; <sup>H</sup>ce <bshad>; (tell a story) <sup>H</sup>tã-  
<sup>L</sup>ce <gtam bshad>  
 spider; <sup>H</sup>dza-<sup>H</sup>gẽ-<sup>H</sup>dza-<sup>H</sup>gẽ <rgya mkhan>

spin (into yarn); <sup>H</sup>ki <bkal>; <sup>L</sup>pi <sup>H</sup>ki <bal  
 bkal>  
 spine, vertebra, backbone; <sup>H</sup>pi-<sup>H</sup>li  
 spit; <sup>L</sup>pe <bor?>  
 spittle; <sup>L</sup>te<sup>hu</sup>-<sup>H</sup>wẽ <mchil ma>  
 spleen; <sup>L</sup>tsʰa-<sup>H</sup>jɔ <mtsher pa>  
 split open; <sup>H</sup>pʰa-<sup>L</sup>ŋgei <phar 'gas>  
 split up; become worn through, torn (as of  
 clothing); <sup>L</sup>pʰa-<sup>H</sup>tee<sup>a</sup> <phar chag>  
 spoil (as of food), go off, go bad; <sup>H</sup>pʰa-<sup>H</sup>fui  
 <phar skyur>  
 spoon (wooden); <sup>L</sup>kʰa-<sup>H</sup>di <kha thur>, cf.  
 Bātáng /kʰau<sup>55</sup>du<sup>53</sup>/  
 spring; <sup>L</sup>ʃə-<sup>H</sup>kʰɔ <dpyid ka>  
 spurt, spray; <sup>H</sup>tu <gtor?>  
 squat; <sup>L</sup>ma-<sup>H</sup>tsu <mar tsog?>  
 squeeze (for milk); <sup>L</sup>ʂ-<sup>H</sup>ku <'o bzhə>  
 stand; <sup>L</sup>jɔ <lang>  
 star; <sup>H</sup>ka-<sup>H</sup>ʂ-<sup>H</sup>ka-<sup>H</sup>mɔ <skar ma>  
 startled, shy (as of animals); <sup>H</sup>tʂo <'dros>  
 steal; <sup>H</sup>ki <sup>L</sup>je <brkus byed>  
 steam; <sup>H</sup>po, cf. Shīxīng /<sup>H</sup>pʰu/, Pǔmǐ /bu<sup>35</sup>/  
 steamed bread; <sup>L</sup>mo-<sup>H</sup>mɔ, Chinese 饅饅,  
 <mog mog>  
 steelyard hook; <sup>L</sup>tei-<sup>H</sup>ŋgr <'jal? khab>  
 steep; <sup>L</sup>ma-<sup>H</sup>di, possibly related to <rdib>  
 'fall down, collapse'  
 steep cliff, abyss, precipice; <sup>L</sup>tsa-<sup>H</sup>ŋei <brag  
 ngos?>  
 step (v), take a step; <sup>L</sup>ma-<sup>H</sup>dzə <mar rdzi>  
 step over, pass over, cross; <sup>H</sup>Ngɔ <'gom>  
 step, staircase; <sup>L</sup>du-<sup>H</sup>kie <rdo skas>  
 stepfather, foster father; <sup>L</sup>a-<sup>H</sup>xə <a khu>  
 stepmother, foster mother; <sup>L</sup>a-<sup>H</sup>suũ <sru mo?>  
 stick into, stab; <sup>H</sup>tsu <btsug>  
 stir; <sup>H</sup>tʂu <dkrug pa>  
 stirrup, steps; <sup>L</sup>zu <yob>  
 stomach; <sup>L</sup>ja-<sup>H</sup>ŋgo <'? khog>  
 stone; <sup>L</sup>du <rdo>, <sup>L</sup>du-<sup>H</sup>lu <rdo ?>, <sup>L</sup>du-<sup>H</sup>bo  
 <rdo ba>

stone (as of fruit); <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>Ndza; (fruit seed)  
<sup>L</sup>s<sup>h</sup>uē <son>  
 storehouse, granary; <sup>L</sup>pṣ̄ <bang>  
 story; <sup>H</sup>tā-<sup>H</sup>pi <gtam dpe>  
 straight; <sup>L</sup>tṣ̄-<sup>H</sup>Nbu <drang po> or <drong  
 po>  
 straw, rice straw; <sup>L</sup>Ndzei-<sup>H</sup>s<sup>h</sup>o <'bras sog>  
 street; <sup>H</sup>dza-<sup>H</sup>jā <rgya lam>  
 strength; <sup>L</sup>nā <nyams>  
 stretch out (the arm); <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>tṣ̄ <phar  
 rkyong>  
 strike; <sup>H</sup>ju <'jog?>; <sup>H</sup>ṣ̄  
 stroke, touch; get, obtain; <sup>L</sup>ra <rag>  
 strong; <sup>L</sup>ja-<sup>H</sup>pu <yar spobs?>  
 strong tasting (tea); <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tu <kha tig>  
 stupid, foolish; <sup>L</sup>ma-<sup>H</sup>tṣ̄<sup>h</sup> <mi khram?>  
 subside (as of a swelling); <sup>L</sup>ma-<sup>H</sup>dzi <mar  
 grol>  
 sugar; <sup>H</sup>dz̄ <sbrang>  
 sugar cane; <sup>L</sup>pa-<sup>H</sup>rā<sup>h</sup> <bur ram sog>  
 summer; <sup>L</sup>ze-<sup>H</sup>k<sup>h</sup> <dbyar kha>  
 sun; <sup>L</sup>nṣ̄ <nyi ma>, <sup>L</sup>nṣ̄-<sup>H</sup>mṣ̄ <nyi ma>  
 sunny slope of mountain; <sup>L</sup>ni-<sup>H</sup>Nbu <nyin  
 po?>  
 sunrise; <sup>L</sup>nṣ̄<sup>H</sup>χε <nyi ma shar>  
 sunshine, sunray, light; <sup>L</sup>ue <'od>  
 surrender, capitulate; <sup>H</sup>ngu<sup>L</sup>ta <mgo btags>  
 surround, encircle; <sup>H</sup>ja-<sup>L</sup>gue <yar skor>  
 swallow; <sup>L</sup>ma-<sup>H</sup>ni <mar mid>  
 swastika, supreme everlasting way; <sup>H</sup>jū-  
<sup>H</sup>dziū <g.yung drung>  
 swear, vow, oath; <sup>H</sup>nṣ̄<sup>L</sup>k<sup>h</sup>ui <\*mna 'khur?>  
 sweat, perspiration; <sup>L</sup>ne-<sup>H</sup>tṣ̄<sup>h</sup> <rngul ?>  
 sweep; <sup>H</sup>ṣ̄a <phyags>; <sup>H</sup>ṣ̄a-<sup>H</sup>di<sup>L</sup>dʒr  
 <\*phyags rdul rgyab>  
 sweet; <sup>H</sup>dz̄ <sbrang>  
 swell, bulge (as of a tissue); <sup>H</sup>tṣ̄ <skrang>;  
<sup>H</sup>ja-<sup>H</sup>tṣ̄ <yar skrang>  
 swim; <sup>H</sup>te<sup>h</sup> <chu rkyal>  
 table, stool, bench; <sup>L</sup>teṣ̄-<sup>H</sup>tsi <cog tse>

tael, ounce; (one ounce) <sup>H</sup>jṣ̄<sup>L</sup>kṣ̄ or <sup>H</sup>jṣ̄<sup>L</sup>tei  
 <? gang> or <? gcig>; (two ounces)  
<sup>H</sup>jṣ̄<sup>L</sup>tu <? do>  
 tail; <sup>L</sup>Ndzu-<sup>H</sup>wā <mjug ma>  
 take apart, dismantle; <sup>H</sup>ṣ̄a <brlag> > <\*slag>  
 take off, undress; <sup>H</sup>ṣ̄i <lhud?>, cf. Bātáng  
 /ʎʔ<sup>53</sup>/; (take off clothes) <sup>L</sup>kei-<sup>H</sup>ṣ̄i <gos  
 lhud?>  
 take out (from in between, apart from a  
 whole); <sup>L</sup>xu <shor?>, (as from a sheath)  
<sup>L</sup>ts<sup>h</sup>a-<sup>H</sup>xu <tshur shor?>; (as from a  
 drawer) <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>thē <tshur then>  
 take, hold, get; <sup>H</sup>jṣ̄ <lang> (with an irregular  
 tone); <sup>H</sup>εa-<sup>H</sup>pṣ̄<sup>L</sup>jṣ̄ <bya ba? lang>  
 tall, high; <sup>L</sup>te<sup>h</sup>ṣ̄-<sup>H</sup>wu <che bo>; <sup>H</sup>gṣ̄-<sup>H</sup>gṣ̄  
 <\*sgang sgang> from <sgang>  
 'mountain peak'  
 tasteless (not tasty); <sup>L</sup>ma=<sup>H</sup>εē <mi zhim>  
 tasty, delicious; <sup>L</sup>εē <zhim>, <sup>L</sup>εe-<sup>H</sup>mu <zhim  
 po>  
 tea; <sup>L</sup>teṣ̄ <ja>  
 tea leaves; (scented tea) <sup>L</sup>Nbu-<sup>H</sup>ru<sup>L</sup>teṣ̄ <me  
 tog ja>; (brick tea) <sup>H</sup>zṣ̄-<sup>H</sup>dzṣ̄ <? ja>  
 teach; learn, study; <sup>H</sup>ṣ̄r <bslab>  
 teacher; <sup>L</sup>gi-<sup>H</sup>gē <dge rgan>  
 tear up, rip; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>ri <phar hral> or <phar  
 ral>  
 tears; <sup>H</sup>ni-<sup>H</sup>te<sup>h</sup>ṣ̄-<sup>H</sup>ni-<sup>H</sup>hṣ̄ <myig chu>  
 tell (a story); <sup>H</sup>tā-<sup>H</sup>pi<sup>L</sup>ce <gtam dpe bshad>  
 tell fortune; <sup>H</sup>tsi<sup>L</sup>dʒr <\*rtse rgyab>  
 tell; notify, inform; <sup>H</sup>εe <bshad>, <sup>H</sup>p<sup>h</sup>a-<sup>H</sup>εe  
 <phar bshad>  
 ten; <sup>H</sup>teṣ̄ <bcu>  
 ten cents, dime; <sup>H</sup>tṣ̄<sup>L</sup>tei <sdong (rtse) gcig>  
 ten million; <sup>L</sup>tṣ̄<sup>h</sup>ṣ̄-<sup>H</sup>ts<sup>h</sup>u<sup>L</sup>tṣ̄-<sup>H</sup>tṣ̄a <khri tsho  
 stong phrag>  
 ten thousand; <sup>L</sup>tṣ̄<sup>h</sup>ṣ̄-<sup>H</sup>ts<sup>h</sup>u<sup>H</sup>tei <khri tsho gcig>  
 tent of hay, straw or grass; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>wu  
 tent, tilt; (cloth tent) <sup>L</sup>ṣ̄r-<sup>H</sup>ke <yab sgar>;  
 (tent made of yak-hair felt) <sup>H</sup>tṣ̄ <sbra>

tenth; tenth lunar month; <sup>H</sup>teə-<sup>H</sup>pɔ <bcu pa>  
 tenth day of the month; <sup>H</sup>ts<sup>he</sup> <sup>H</sup>teə <tshes bcu>  
 that; there (over there); <sup>L</sup>tei <de>  
 these (all of these); <sup>L</sup>Nde-<sup>H</sup>kuē (<sup>H</sup>ts<sup>hə</sup>-<sup>H</sup>mo)  
 <'di kun (tshang mo)>  
 they (third person plural pronoun); <sup>L</sup>k<sup>hə</sup>-<sup>H</sup>rā  
 <kho rang>  
 thick; <sup>L</sup>t<sup>h</sup>a-<sup>H</sup>wu <tha bo>  
 thick, dense, concentrated (as of drinks);  
<sup>L</sup>kā-<sup>H</sup>tu <? stug>  
 thick, rough, coarse; <sup>H</sup>bɔ <sbom>, <sup>L</sup>ba-<sup>H</sup>bɔ  
 <sbom po>  
 thief; <sup>H</sup>ki-<sup>H</sup>mɔ <rkun ma>  
 thigh; <sup>H</sup>jə <dpyi>  
 thin (as of hair); <sup>H</sup>sɾ <srab>  
 thin (not fat); <sup>H</sup>sɾ <srab>  
 thin, emaciated, skinny (person); <sup>H</sup>k<sup>h</sup>a-<sup>H</sup>di  
 <kha rdib?>; <sup>H</sup>t<sup>h</sup>ɔ  
 thing, object, goods; <sup>H</sup>ca-<sup>H</sup>pə <bya ba?>  
 think; <sup>L</sup>sā-<sup>H</sup>Nbɔ <sup>L</sup>tɔ <bsam pa btang>  
 third; third lunar month; <sup>H</sup>sā-<sup>H</sup>Nbɔ <gsum  
 pa>  
 third day of the month; <sup>H</sup>ts<sup>he</sup>-<sup>H</sup>sū <tshes  
 gsum>  
 thirsty; <sup>H</sup>kɔ <sup>L</sup>t<sup>h</sup>sa <skom drag?>  
 thirteen; <sup>L</sup>teə-<sup>H</sup>sū <bcu gsum>  
 thirty; <sup>H</sup>s<sup>h</sup>ū-<sup>H</sup>teə <sum cu>  
 this; <sup>H</sup>ne-<sup>H</sup>Nde <di>  
 this month; <sup>L</sup>a-<sup>H</sup>tɔ <sup>L</sup>Nda-<sup>H</sup>wɔ <sup>H</sup>tei <da lta?  
 zla ba gcig>  
 this year; <sup>L</sup>ta-<sup>H</sup>ju <da lo>  
 thorn; <sup>L</sup>ts<sup>hə</sup>-<sup>H</sup>wā <tsher ma>  
 those; <sup>L</sup>te-<sup>H</sup>kuē <de kun>  
 thou (second person singular pronoun);  
<sup>H</sup>t<sup>h</sup>ue <khyod>  
 thine, your, yours (GEN); <sup>L</sup>t<sup>h</sup>ə=<sup>H</sup>i <khyod  
 kyi>  
 thousand; <sup>L</sup>tɔ-<sup>H</sup>t<sup>h</sup>sa <sup>L</sup>tei <stong phrag gcig>  
 thread (a needle); <sup>H</sup>Ndzɛ <'dren>; <sup>H</sup>k<sup>h</sup>r <sup>L</sup>Ndzɛ  
 <khab 'dren>

thread, string; <sup>H</sup>ki-<sup>H</sup>pɔ <skud pa>  
 three; <sup>H</sup>sū <gsum>  
 three hundred; <sup>H</sup>sū <sup>H</sup>dɔɔ <gsum brgya>  
 throat; <sup>L</sup>ba-<sup>H</sup>ʒə <? yu>  
 throw up, vomit; <sup>H</sup>ju <skyug>  
 throw, toss, discard; <sup>L</sup>pe <bor>  
 thunder; <sup>H</sup>Ndzū <sup>L</sup>t<sup>h</sup>sa <'brug sgra>  
 Tibet, Tibetan; <sup>L</sup>pe <bod>  
 Tibetan woolen cloth; <sup>H</sup>t<sup>h</sup>ue <phrug>  
 tie up, bind up, fasten a belt; <sup>H</sup>dā <sdom>  
 tie, attach, fasten; <sup>H</sup>ta <btags>  
 tiger; <sup>H</sup>ta <stag>, <sup>H</sup>a-<sup>L</sup>jə-<sup>H</sup>ta <a myes stag>  
 tight, firm; <sup>L</sup>tā <dam po>  
 timber; <sup>H</sup>dɔ <gdung>; <sup>H</sup>ci-<sup>H</sup>teɔ <shing cha>  
 time, leisure; <sup>L</sup>nā-<sup>H</sup>ʒɔ <na(m) ?>  
 tinder; <sup>H</sup>t<sup>h</sup>ɔ <spra>  
 tip of the nose; <sup>L</sup>ŋā-<sup>H</sup>gə <sna ?>, with the  
 suffix /gu/?  
 tired, fatigued; <sup>H</sup>te<sup>h</sup>ue <sup>L</sup>t<sup>h</sup>sa <\*skyo drag?>  
 tobacco pouch; <sup>L</sup>ti-<sup>H</sup>xu <dud khug>  
 today; <sup>L</sup>ta-<sup>H</sup>ji <de ring>; then, today; <sup>L</sup>ta-<sup>H</sup>rē  
 <dus deng?>, <de ring> or <da ran>  
 toe; <sup>L</sup>Ndzui <mdzub>, <sup>H</sup>kɔ-<sup>H</sup>Ndzui <rkang  
 mdzub>  
 toenail; <sup>L</sup>ku-<sup>H</sup>Nbɔ <sup>L</sup>s<sup>h</sup>a-<sup>L</sup>mu <rkang pa sen  
 mo>  
 tomorrow; <sup>L</sup>nə-<sup>H</sup>Nbe  
 tomorrow evening; <sup>L</sup>nə-<sup>H</sup>Nbe <sup>H</sup>jə-<sup>H</sup>gə <nang ?  
**phyi rgas?**>  
 tongue; <sup>H</sup>tei-<sup>H</sup>li <lce legs>  
 tonight; <sup>L</sup>ta-<sup>H</sup>rē <sup>H</sup>jə-<sup>H</sup>gə <dus deng? ?>  
 tool, instrument, implements; <sup>L</sup>ja-<sup>H</sup>hɔ <lag  
 cha>  
 tooth; <sup>H</sup>su <so>  
 torch; <sup>L</sup>dzuē <sgron>  
 trachea, windpipe; <sup>H</sup>lu-<sup>H</sup>ʒə <glo yu>  
 treasured object, treasure; <sup>L</sup>rə-<sup>H</sup>Nbu-<sup>L</sup>te<sup>h</sup>e  
 <rin po che>  
 treat (illness), cure; <sup>H</sup>mē <sup>H</sup>tɔ <sman btang>  
 tree; <sup>L</sup>ci-<sup>H</sup>mɔ <shing mo>

tripod (for cooking); <sup>H</sup>tea-<sup>H</sup>dze <lcags sgyid>  
troublesome, inconvenient; <sup>H</sup>ka-<sup>H</sup>lei <sup>L</sup>te<sup>h</sup>ə-<sup>H</sup>wu <dka' las che bo>  
trousers, pants; <sup>L</sup>ja-<sup>H</sup>Nbo <snam pa>  
true, real; <sup>L</sup>de-<sup>H</sup>Nbo <bden pa>  
tsampa, roasted (barley) flour; <sup>H</sup>tsā-<sup>H</sup>Nbo <rtsam pa>  
turn into, become; <sup>H</sup>zi <brje>, <sup>H</sup>ka-<sup>H</sup>lo <sup>L</sup>zi <? brje>  
turn one's head to the back; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>gue <phar 'khor>; <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>gue <tshur 'khor >  
turn over (on bed), roll back and forth; <sup>H</sup>ka-<sup>H</sup>lo <sup>L</sup>zi <? brje>, <sup>H</sup>ts<sup>h</sup>a-<sup>L</sup>ka-<sup>L</sup>lo <sup>L</sup>zi <tshur ? ? brje>, <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>ka-<sup>L</sup>lo <sup>L</sup>zi <phar ? ? brje>  
turquoise; <sup>H</sup>zə <g.yu>  
twelfth lunar month; <sup>H</sup>teũ-<sup>H</sup>jue-<sup>L</sup>pə <bcu gnyis po>  
twelve; <sup>H</sup>teũ-<sup>H</sup>jue <bcu gnyis>  
twenty; <sup>L</sup>ja-<sup>H</sup>xə <nyi shu>; twenty-one; <sup>L</sup>ja-<sup>H</sup>tei <nyi (shu rtsa) gcig>; twenty-two; <sup>L</sup>ja-<sup>H</sup>jue <nyi (shu rtsa) gnyis>  
twist, wring, pinch; <sup>L</sup>p<sup>h</sup>a-<sup>H</sup>teə <phar skyogs?>  
two; <sup>L</sup>jue-<sup>H</sup>jue <gnyis>  
two hundred; <sup>L</sup>ja-<sup>H</sup>dʒə <gnyis brgya>  
ugly; <sup>L</sup>ma=<sup>H</sup>Nbe <mi ?>  
umbilical cord; <sup>H</sup>ti-<sup>H</sup>wə <lte ba>  
umbrella; <sup>L</sup>te<sup>h</sup>ə-<sup>H</sup>də <char gdugs>  
uncle (father's brother regardless of age); <sup>L</sup>a-<sup>H</sup>xə <a khu>  
uncle (mother's brother regardless of age); <sup>L</sup>a-<sup>H</sup>Nbu <**zhang bu**?>, cf. Bātáng /xã<sup>13</sup> mbũ<sup>53</sup>/  
uncle (husband of father's sister); <sup>L</sup>a-<sup>H</sup>Nbu <**zhung bo**?>, cf. Bātáng /xã<sup>13</sup> mbũ<sup>53</sup>/  
uncle (husband of mother's sister); <sup>L</sup>a-<sup>H</sup>Nbu <**zhung bo**?>  
unclear, fuzzy; <sup>L</sup>ma=<sup>H</sup>ku <mi go>

understand (literally, 'have heard'); <sup>H</sup>ts<sup>h</sup>ue <sup>L</sup>fiũ <tshor byung>  
understand (know); <sup>L</sup>ku <go>, <sup>H</sup>ku-<sup>L</sup>fiũ <go byung>  
undo a knot, untie, loosen; <sup>H</sup>p<sup>h</sup>a-<sup>L</sup>tʂei <phar 'grol>  
upper garment; <sup>H</sup>tue-<sup>H</sup>li <stod len>  
Chinese-style upper garment; <sup>H</sup>dʒə <sup>H</sup>tue-<sup>H</sup>li <rgya stod len>  
Tibetan-style upper garment; <sup>L</sup>pe <sup>H</sup>tue-<sup>H</sup>li <bod stod le>  
upstairs; <sup>H</sup>k<sup>h</sup>ə-<sup>H</sup>tī <khang steng>  
urine; <sup>H</sup>teĩ <gcin>  
use, employ; <sup>H</sup>fue <spyod>  
useless; <sup>L</sup>zu <sup>L</sup>me <yod med>; <sup>L</sup>mu=<sup>H</sup>Ndə <mi 'dug?>  
uvula; <sup>L</sup>ja-<sup>H</sup>kr  
vase; <sup>L</sup>pa-<sup>H</sup>Nbo <bum pa>  
vegetable oil; <sup>L</sup>je-<sup>H</sup>ka <? zhag>  
vegetable, greens; <sup>L</sup>k<sup>h</sup>a-<sup>H</sup>tse <kha tshal?>  
vehicle, cart; <sup>L</sup>ga-<sup>H</sup>tʂi <kha khre?>  
vein; <sup>L</sup>tʂ<sup>h</sup>a-<sup>H</sup>tsə <khrag rtsa>  
vertical; <sup>L</sup>t<sup>h</sup>a-<sup>H</sup>ko, possibly related to <thad kar>  
very; <sup>H</sup>ka-<sup>H</sup>pə, cf. Shǐxīng /<sup>H</sup>kəpə/  
vibrissa; <sup>L</sup>ŋā-<sup>H</sup>pə <sna spu>  
village; <sup>L</sup>dʒə <grong>  
waist; <sup>L</sup>ke-<sup>H</sup>ts<sup>h</sup>i <sked tshigs>  
wait; <sup>L</sup>gu <sgug>  
wake sb up (TR); <sup>H</sup>ja-<sup>L</sup>Nbe <yar 'bod>  
wake up; <sup>H</sup>s<sup>h</sup>e <sad>  
walk; <sup>L</sup>Ndzu <'gro>  
walking stick; <sup>L</sup>pa-<sup>H</sup>gə <? mkha(r)>, cf. Shǐxīng /<sup>H</sup>pəgə/  
wall; <sup>L</sup>tʂ <gyang>  
walnut oil; <sup>L</sup>ku-<sup>L</sup>du <sup>L</sup>je-<sup>H</sup>ka <? ? zhag>  
walnut tree; <sup>L</sup>ku-<sup>H</sup>du, <sup>L</sup>ku-<sup>L</sup>du-<sup>H</sup>ci <? shing>  
want, need; <sup>H</sup>gei <dgos>; (not need) <sup>L</sup>mu=<sup>H</sup>gei <mi dgos>  
wart; <sup>L</sup>Ndza-<sup>H</sup>jə <mdzer pa>

wash (clothes); <sup>L</sup>kei-<sup>H</sup>tʂə <gos 'khru>  
wash (hands); <sup>L</sup>jɔ <sup>H</sup>tʂə <lag 'khru>  
wash (oneself), bathe; <sup>L</sup>li-<sup>H</sup>pu <sup>H</sup>tʂə <lus po  
'khru>  
water; <sup>H</sup>tʂə <chu>  
water bird; crane; swan; goose; <sup>H</sup>tʂə-<sup>H</sup>ʒɔ  
<chu bya>  
water trough, tank; <sup>L</sup>pʰa-<sup>H</sup>wɔ  
water, sprinkle, irrigate; <sup>H</sup>ju <'jug>, <sup>H</sup>tʂə <sup>L</sup>ju  
<chu 'jug?>  
watery, thin, weak (liquid); <sup>L</sup>fǎ  
wave; <sup>H</sup>pa-<sup>H</sup>ʃr <rba rlabs>, <sup>H</sup>tʂə <sup>L</sup>pa-<sup>L</sup>ʃr  
<chu rba rlabs>  
we, first person plural pronoun; (inclusive)  
<sup>L</sup>a-<sup>L</sup>kʰə-<sup>H</sup>rǎ <? rang>; (exclusive) <sup>L</sup>ŋə-  
<sup>H</sup>rǎ <nga rang>  
weak, feeble; <sup>L</sup>ɛǎ <zhan>, <sup>L</sup>ɛa-<sup>H</sup>Nbɔ <zhan  
po>  
wear (a hat, gloves, a bracelet); <sup>H</sup>kuǎ <gon>  
(with an irregular tone)  
wear, put on (clothes, shoes); <sup>L</sup>tʃuǎ <gyon>  
weasel; <sup>H</sup>ke-<sup>H</sup>dǎ  
weave (basket), plait one's hair; <sup>H</sup>hǐɔ <sle  
ba> or <lhe ba>, <sup>H</sup>tʂɔ <sup>L</sup>hǐɔ <skra sle> or  
<skra lhe>  
weave, knit, loom (v); <sup>H</sup>tʰa-<sup>L</sup>ta <thags  
btags>  
weigh (on a scale); <sup>H</sup>tʃa <bkyags>  
weigh with a small steelyard (for medicine  
or jewelry); <sup>L</sup>xu <zho?>  
well; <sup>L</sup>tʂə-<sup>H</sup>gǎ <chu sgam?>  
west; <sup>L</sup>nǔ-<sup>L</sup>nu <nub>  
wet; <sup>H</sup>lja-<sup>H</sup>Nbɔ <rɔn pa>  
what; why; <sup>L</sup>ka-<sup>H</sup>Ndǎ <ga 'di?>  
wheat; <sup>L</sup>tʂu <gro>  
wheel; <sup>H</sup>kʰu-<sup>H</sup>lu <'khor lo>  
when; <sup>L</sup>nǎ <nam>  
where; <sup>L</sup>ka-<sup>L</sup>ke <gar>  
whet (a knife), sharpen; <sup>H</sup>de <rdar>, <sup>H</sup>tʂə <sup>L</sup>dɛ  
<gri rdar>

which; <sup>L</sup>ka-<sup>H</sup>tǎ <ga ?>  
whip, horse whip; <sup>L</sup>tʂa-<sup>H</sup>tʂǎ <lcags tshan>  
white; <sup>L</sup>ka-<sup>H</sup>ke <\*dka(r) dkar>  
who; <sup>H</sup>sʰə <su>  
wide, broad; <sup>L</sup>kʰua-<sup>H</sup>lǎ  
widow; <sup>L</sup>ʒu-<sup>H</sup>sɔ <yugs sa>; <sup>L</sup>mǎ-<sup>H</sup>ʒu <mo  
yugs>  
widower; <sup>L</sup>pʰə-<sup>H</sup>ʒu <pho yugs>  
wife; (spouse) <sup>L</sup>ʒɔ <bza'?'>; (wife, literally,  
woman) <sup>L</sup>mǎ-<sup>H</sup>jǎ <mo ?>  
willow; <sup>H</sup>dʒa-<sup>H</sup>lǎ <rgya lchang?>  
win, gain; <sup>H</sup>kʰi <khe>  
win, obtain victory; <sup>L</sup>te <dar?>  
wind; <sup>H</sup>lǔ <rlung>  
window; <sup>L</sup>gu-<sup>H</sup>juǎ <sgo khung>  
wine jug; <sup>H</sup>ti-<sup>H</sup>dʒi  
wing; <sup>L</sup>Nda-<sup>H</sup>tʂʰr <'dab gshog>  
wink, close, shut (eyes); <sup>H</sup>ni-<sup>H</sup>tʂǔ <myig  
btsum>  
winter; <sup>L</sup>nga-<sup>H</sup>Ngɔ <dgun ka>  
wipe (a table); <sup>L</sup>tʂi  
wither (literally, 'turn yellow'); <sup>L</sup>pʰa-<sup>H</sup>sʰe  
<phar ser>  
wolf; <sup>H</sup>jǎ <spyang>  
woman; <sup>L</sup>mǎ-<sup>H</sup>jǎ <mo ?>  
wooden bowl; <sup>L</sup>pʰa-<sup>H</sup>rǎ <phor>; <sup>H</sup>pɔ  
wooden house; <sup>L</sup>pʰǎ-<sup>H</sup>guǎ <bang ?>  
woodpecker; <sup>L</sup>ɛǎ-<sup>H</sup>tɔ <sup>L</sup>kʰu-<sup>H</sup>lu <shing rta ?>  
woollen cloth, felt; <sup>L</sup>gu-<sup>H</sup>ŋǎ <'go snam>  
work, labour; <sup>L</sup>jei-<sup>H</sup>ŋgi <las 'gul>  
world, the external world; <sup>L</sup>Ndǎ-<sup>H</sup>lǎ <'dzam  
gling>, <sup>L</sup>Ndǎ-<sup>L</sup>Nbɔ-<sup>H</sup>lǎ <'dzam ba  
gling>  
worry, feel anxious; <sup>H</sup>sʰǎ-<sup>H</sup>tʂʰu <\*sems  
'tshab>  
worship a god, offerings to divine spirits; <sup>H</sup>lɔ  
<sup>H</sup>su <lha gsol>  
wound, injury, sore, scar; <sup>H</sup>mǎ <rma>  
wrap; <sup>H</sup>tǎ <bstum>  
wrap around; <sup>H</sup>tʂi <sgril> or <dkri ba>

wrist; <sup>L</sup>ja-<sup>H</sup>ki <\*lag ske>  
 write; <sup>H</sup>tʂə <'bri>  
 Xùmǐ; <sup>H</sup>fə-<sup>H</sup>ɲə <skyi mi>  
 yak; <sup>L</sup>gua-<sup>H</sup>fju; <sup>L</sup>ʒa <g.yag>; (female yak)  
<sup>H</sup>Ndʒə <'bri>  
 yawn, gape; <sup>L</sup>lũ-<sup>H</sup>se <sup>L</sup>fə <glal ba byed>  
 year (calendar year; year of age); <sup>L</sup>ju <lo>  
 year after the next; <sup>L</sup>sa-<sup>H</sup>Nbɛ <sang ?>  
 year before last; <sup>H</sup>ze-<sup>H</sup>ju <gzhes lo>; three  
 years ago; <sup>H</sup>pʰe-<sup>H</sup>lu <? lo>  
 yeast, fermenting agent; <sup>H</sup>pʰɿ <phabs>  
 yell, shout; <sup>L</sup>Nbe <'bod>  
 yellow; <sup>L</sup>sʰa-<sup>H</sup>sʰe <\*ser ser>  
 yesterday; <sup>L</sup>kʰa-<sup>H</sup>tsɔ̃ <kha rtsang>  
 yoghurt; <sup>L</sup>xu <zho>  
 yoke, oxbow; <sup>H</sup>ja-<sup>H</sup>ɛĩ <gnya' shing>  
 you, second person plural pronoun; <sup>L</sup>tʃə-<sup>H</sup>rã  
 <khyod rang>  
 young (as of people); <sup>L</sup>ju <sup>H</sup>tɕʰũ <lo chung>  
 young man, lad, chap; <sup>L</sup>pʰu-<sup>H</sup>sɛ <pho gsar>  
 yuan (Chinese dollar); <sup>H</sup>tʂə <sup>L</sup>tɕi <khri gcig>