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## Phonetic Analysis of dGudzung Tibetan The Vernacular of Khams Tibetan spoken in the rGyalrong Area

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ギャロン地域のカムチベット語・丹巴県格宗[dGudzung]方言の音声分析

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dGudzung Tibetan is spoken in Danba County, Ganzi Tibetan Autonomous Prefecture in West Sichuan, China. It belongs to “twenty-four-villages’ patois,” an independent dialect group of Khams Tibetan spoken in the rGyalrong area. Apart from my several linguistic reports, there are no detailed descriptions of this variety of Khams Tibetan. In this paper, the phonetic analysis of the dGudzung dialect is treated with special attention paid to the synchronic phonological framework of the dGudzung dialect as well as to several remarkable diachronic features through a comparison with Written Tibetan forms. The phonetic analysis is divided into three parts: consonants, vowels and suprasegmentals; the diachronic analysis also mentions typological characteristics among the Khams Tibetan dialects. At the end of the article, a list of the basic vocabulary (ca. 1000 words) is added.

中国四川省西部に位置する丹巴県は、チベット文化圏のギャロンと呼ばれる地域に属する多言語地域である。本稿では、丹巴県に分布するカムチベット語の1つであるdGudzung方言について、音韻論的枠組みを考慮しつつ音声分析を行い、加えてチベット語文語形式との比較を通して音対応を考察する。音声分析は子音・母音・超分節音（声調）に分けて行い、また文語形式との対応関係については特にカムチベット語諸方言の中での類型的特徴にも触れる。末尾に基本語彙（約1000語）を付す。

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キーワード : チベット語, カムチベット語, 二十四村方言, ギャロン, 音声学

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## 1 Introduction

### 1.1 Background

Danba 丹巴 County, which is the central spiritual place of the rGyalrong region as well as being an ethnic boundary of Tibetan, Qiang and Han Chinese in Ganzi 甘孜 Tibetan Autonomous Prefecture, western Sichuan, is a multilingual area. Tibetans living in Danba speak several languages: Situ-rGyalrong, Geshitsa, the Sichuan variation of Mandarin Chinese, Amdo nomadic Tibetan as well as Khams Tibetan. The Tibetans in Danba identify themselves as rGyalrong, and their culture, traditions and heritage are also similar to those of other rGyalrong people who speak rGyalrong languages. The architectural heritage treated in Darragon (2005) clearly indicates the common characteristics among the rGyalrong and eastern Khams areas, including Danba.

The Khams Tibetan spoken in Danba is recognised by local Tibetans as a kind of standard variant of the Tibetan language which is comparable to the Derge dialect. It is called *ershisi cun hua* 二十四村話 “twenty-four-villages’ patois.” This variety is spoken in several villages such as Sogpho 梭坡 [Sog-pho], dGudzong 格宗 [dGu-rdzong], sProsnang 中路 [sPro-s nang], Yozha 岳扎, Rongbrag 章谷 [Rong-mi Brag-’go / Rong-brag] and Rwatso 水子 [Rwa-tso] as well as Panan 潘安 in Xiaojin 小金 County, which are located at the uppermost region of Daduhe 大渡河 River.

This vernacular is one of the isolated Khams Tibetan dialects (Suzuki 2006; 2009: 17, named *Rongbrag* dialect), surrounded by Situ-rGyalrong to the north (the Chuchen variety) and the east (the bTsanlha variety), Geshitsa to the west and Guiqiong to the south. According to local Tibetans, this dialect consists of several idioms, which can be identified by the names of rivers and mountains, namely, Sogpho, dGudzong, sProsnang and Rwatso. The differences among these idioms are comparatively minor with respect to their grammatical features, but are great with respect to their phonetic features. The speakers of this dialect group use their native dialect only in their own villages, in other villages in Danba they generally use Chi-

nese (the Sichuan variety of Mandarin) because of the linguistically intricate situation mentioned above.

In previous studies on Tibetan linguistics, there have been several monographs published in China such as Qu (1991), Jiang (2002) and Zhang (2009), but they provide neither information nor data of the varieties spoken in Danba, although many brief introductions to the “twenty-four villages’ patois” have been provided, for instance, in *Danba Xianzhi* (Sichuansheng Danba Xianzhi Bianzuan Weiyuanhui 1996: 174) and Lin (2006), both presented short descriptions of the “twenty-four-villages’ patois.” However, both were written from the viewpoint of the introduction to the languages spoken in Danba, thus, they mention these vernaculars as standard Tibetan dialects, which is the way the local people consider their dialects. Consequently, only a few linguistic studies have so far been produced. The present author’s works Suzuki (2005a; 2005b; 2007a; 2007b; 2008a; 2008b) provide us with the first preliminary descriptions of the phonetic characteristics, the phonological system and the dialectal characteristics of the four vernaculars: Sogpho, sProsang, Rongbrag and dGudzung.

## 1.2 Framework of the description

This paper explores the synchronic phonetic analysis with a basic phonological treatment and diachronic sound changes of dGudzung Tibetan with a remark on its characteristics from both typological and contrastive viewpoints with reference to the Tibetan dialectology.<sup>1)</sup>

The description in this paper occupies a portion of the Tibetan dialectology, meaning that the description is not simply an object of descriptive linguistics proper, but is done with the object of providing a unified descriptive framework throughout all of my works on the Tibetan dialects. The framework of the description is primarily phonetic, and it is consistent with the author’s description of all the Tibetan dialects (circa 150 dialects at present; cf. Suzuki 2007a: 42–56), in order to avoid any confusions that may occur when one checks only the described forms for comparative study (cf. Zhu 2008: 303; Zhang 2009: 358). The phonetic symbols include the IPA set with some additional phonetic symbols that have been adopted for Sino-Tibetan languages, such as those given in Zhu (2010). These symbols are used for the description of phonemes, and no orthographic conventions are used, as has been done in Tournadre (2005: 24).

In this paper, I have not attempted to apply any particular theory of phonology nor do I discuss the advantages of one specific theory over another. Any theoretical analyses are left for monographs.<sup>2)</sup> Phonetic variants are also described unless they are simply free-variants of a certain phoneme, and the phonetic characteristics to represent dGudzung Tibetan may be displayed in the description. Phonemes should be primarily identified through the presence of minimal or near minimal pairs, however, there are some phonemes for which minimal pairs have not yet been found.

## 2 Synchronic Description

### 2.1 Syllable structure

The most complicated syllable structure can be illustrated as in the following:

$${}^c C_i G V C C$$

preinitial  ${}^c$  : preaspiration, prenasal, glottal stop and labial obstruent only.

main initial  $C_i$  : all the consonants.

glide  $G$  : /w/ or /j/ only.

syllable core  $V$  : all the vowels.

final  $C$  : /p/, /ʔ/, /ɣ/, /ɾ/, /w/, and /j/;  $CC$  : /wʔ/ and /jʔ/ only.<sup>3)</sup>

### 2.2 Consonants

The consonant inventory is displayed below:

Table 1: consonant inventory

plosive	aspirated	p <sup>h</sup>	t <sup>h</sup>	t̚ <sup>h</sup>		k <sup>h</sup>	
	non-aspirated	p	t	t̚	c	k	ʔ
	voiced	b	d	d̚	ɟ	g	
affricate	aspirated		ts <sup>h</sup>		tɕ <sup>h</sup>		
	non-aspirated		ts		tɕ		
	voiced		dz		dʒ		
fricative	aspirated		s <sup>h</sup>	ʂ <sup>h</sup>	ç <sup>h</sup>	x <sup>h</sup>	
	non-aspirated	ɸ	s	ʂ	ç	x	h
	voiced	β	z	ʐ	ʝ	ɣ	fi
nasal	voiced	m	n		ɳ	ŋ	
	voiceless	m̥	n̥		ɳ̥	ŋ̥	
liquid	voiced		l	r			
	voiceless		l̥				
semi-vowel	voiced	w			j		

#### 2.2.1 Simplex initials

##### 2.2.1.1 Plosives and affricates

All the plosives and affricates except /c, ɟ, ʔ/ have a three-way distinction aspirated/non-aspirated/voiced.

The palatal plosives /c, ɟ/ are included in the consonant inventory, but they do not appear as a simplex (cf. 2.2.2.1 and 2.2.2.6). These sound values may include a

phonetic variant of palatalised velar plosives, but the velar plosive series generally do not include a phonetic variant of palatal plosives. These two series, therefore, are still distinctive, but it is supposed that they may merge into velar ones in the near future.

/p <sup>h</sup> /	/ṽp <sup>h</sup> a <sup>ḡ</sup> ga/ ‘father’
/p/	/paʔ paʔ/ ‘level’
/b/	/bũ/ ‘wide’
/t <sup>h</sup> /	/ṽt <sup>h</sup> a zuʔ/ ‘cockscorn’
/t/	/ta ro/ ‘yoghurt’
/d/	/de: mo/ ‘log’
/t <sup>h</sup> /	/ṽt <sup>h</sup> eʔ/ ‘blood’
/t̪/	/ṽt̪o/ ‘hair’
/d̪/	/ṽd̪a/ ‘wheat’
/k <sup>h</sup> /	/ṽk <sup>h</sup> a fo/ ‘snow’
/k/	/ka zi/ ‘barley’
/g/	/ṽgi <sup>ḡ</sup> ga/ ‘teacher’
/ŋ/	/ṽŋa mi/ ‘grandfather’
/ts <sup>h</sup> /	/ṽts <sup>h</sup> ã bu liʔ/ ‘dragonfly’
/ts/	/ṽtsõ <sup>m</sup> bu/ ‘wrinkle’
/dz/	/ṽdzar/ ‘paste’
/tɕ <sup>h</sup> /	/ṽtɕ <sup>h</sup> u/ ‘water’
/tɕ/	/ṽtɕa bu/ ‘thing’
/dʒ/	/ṽdʒa mo/ ‘steelyard’

### 2.2.1.2 Fricatives

The alveolar, retroflex, prepalatal and velar fricative series have a three-way distinction aspirated/non-aspirated/voiced, while the bilabial and glottal fricative series have a two-way distinction aspirated/voiced. The prepalatal series are always pronounced with a prepalatal (or alveopalatal) articulation.

/ʃ/	/ṽʃoʔ ka/ ‘cover’
/β/	/ṽβu loʔ/ ‘rise’
/s <sup>h</sup> /	/ṽs <sup>h</sup> i gu/ ‘charcoal’
/s/	/ṽsõ sõ/ ‘light’
/z/	/ṽzi tɕ <sup>h</sup> ə/ ‘dog year’
/ʃ <sup>h</sup> /	/ṽʃ <sup>h</sup> uʔ po ʃe/ ‘cypress’
/ʃ̪/	/ṽṽi ʃu/ ‘twenty’
/z̪/	/ṽz̪i: nã/ ‘three days after tomorrow’
/ɕ <sup>h</sup> /	/ṽɕ <sup>h</sup> i ʃe/ ‘tree’
/ɕ/	/ṽɕi ʃej/ ‘forest’
/ʒ/	/ṽts <sup>h</sup> e ziʔ/ ‘the first day’
/x <sup>h</sup> /	/ṽx <sup>h</sup> oʔ/ ‘fold’

- /x/ /'xo<sup>h</sup>po/ 'torch'
- /ɣ/ /'ɣə dɔ/ 'rain (v)'
- /h/ /'hɛ zu/ 'pepper'
- /fi/ /'fiɑ pu/ 'stretch'

The bilabial fricatives /ɸ, β/ rarely appear, and can be distinguished from /p<sup>(h)</sup>, <sup>6</sup>b/ respectively, e.g.:

- /ɸ/-/p/-/p<sup>h</sup>/ /'ɸoʔ kə/ 'cover'; /'poʔ/ 'Tibetan'; /'s<sup>h</sup>õ p<sup>h</sup>o/ 'next year'
- /β/-/b/ /'βu loʔ/ 'rise'; /'b<sup>h</sup>buʔ/ 'shed'

The velar fricative /ɣ/ often appears in word-medial position, and it does not alternate with a plosive [g] even in careful speech. /ɣ/ and /g/ are therefore distinctive.

### 2.2.1.3 Resonants (nasals, liquids and semi-vowels)

The resonants except /r, w, j/ have a two-way distinction voiced/voiceless. The nasal /ŋ/ is always pronounced as a prepalatal, and the variant of the palatal articulation is not included.

- /m/ /'mõ/ 'cow'
- /m̃/ /'m̃ɑ/ 'medicine'
- /n/ /'naʔ tɕ<sup>h</sup>we/ 'ear'
- /ñ/ /'ño/ 'nose'
- /ŋ/ /'ŋo/ 'fish'
- /ŋ̃/ /'ŋ̃õ/ 'heart'
- /ŋ/ /'ŋo/ 'five'
- /ŋ̃/ /'ŋ̃go ŋi:/ 'pillow'
- /l/ /'la mo/ 'leaf'
- /l̃/ /'l̃ɛʔ bo/ 'frost'
- /r/ /'rə be/ 'rabbit'
- /w/ /'wo/ 'fox'
- /j/ /'je s<sup>h</sup>o/ 'last night'

### 2.2.2 Complex initials

Complex initials can be classified according to the preinitial type. There are six preinitial types: (1) preaspirations, (2) prenasals, (3) labial plosive preinitials, (4) labial fricative/approximant preinitials, (5) glottal stop preinitials and (6) glides. These features, except the glide, are summarised as follows:

	(1)	(2)	(3)	(4)	(5)
nasality	-	+	-	-	-
labiality	-	-(+)	+	+	-
continuity	+	+	-	+	-

## 2.2.2.1 Preaspiration type

Most non-aspirated and voiced consonants can occur preaspirated:

<sup>h</sup> p	<sup>h</sup> t	<sup>h</sup> t̚	<sup>h</sup> c	<sup>h</sup> k	<sup>h</sup> ts	<sup>h</sup> tɕ
<sup>h</sup> s <sup>h</sup>	<sup>h</sup> s	<sup>h</sup> ɕ <sup>h</sup>	<sup>h</sup> ɕ	<sup>h</sup> x	<sup>h</sup> l̥	
<sup>ɦ</sup> b	<sup>ɦ</sup> d	<sup>ɦ</sup> d̚	<sup>ɦ</sup> ʝ	<sup>ɦ</sup> g	<sup>ɦ</sup> dz	<sup>ɦ</sup> dʑ
<sup>ɦ</sup> z	<sup>ɦ</sup> z̥	<sup>ɦ</sup> ʑ̥				
<sup>ɦ</sup> m	<sup>ɦ</sup> n	<sup>ɦ</sup> n̥	<sup>ɦ</sup> ŋ	<sup>ɦ</sup> l	<sup>ɦ</sup> r	<sup>ɦ</sup> j

The voicedness of the preaspiration depends on that of the main initial. The preaspiration feature is always phonetically weaker than the main consonant of the initial.

Examples:

/ <sup>h</sup> p/	/- <sup>h</sup> pej bo/	‘shoulder’
/ <sup>h</sup> t/	/- <sup>h</sup> to/	‘horse’
/ <sup>h</sup> t̚/	/ <sup>h</sup> leʔ <sup>h</sup> t̚əʔ/	‘bracelet’
/ <sup>h</sup> c/	/ <sup>h</sup> ma <sup>h</sup> ci/	‘jaw’
/ <sup>h</sup> k/	/- <sup>h</sup> ku mo/	‘thief’
/ <sup>h</sup> ts/	/ <sup>h</sup> tsə wo/	‘grass’
/ <sup>h</sup> tɕ/	/- <sup>h</sup> tɕi/	‘tongue’
/ <sup>h</sup> s <sup>h</sup> /	/- <sup>h</sup> s <sup>h</sup> ə/	‘gold’
/ <sup>h</sup> s/	/- <sup>h</sup> sã/	‘three’
/ <sup>h</sup> ɕ <sup>h</sup> /	/- <sup>h</sup> ɕ <sup>h</sup> a/	‘be born’
/ <sup>h</sup> ɕ/	/ <sup>h</sup> wa <sup>h</sup> ɕo/	‘thigh’
/ <sup>h</sup> x/	/ <sup>h</sup> s <sup>h</sup> a <sup>h</sup> xã rã:/	‘seed’
/ <sup>h</sup> l̥/	/- <sup>h</sup> leʔ/	‘eagle’
/ <sup>ɦ</sup> b/	/ <sup>ɦ</sup> buʔ ɕe/	‘leather bellows’
/ <sup>ɦ</sup> d/	/- <sup>ɦ</sup> da wo/	‘moon’
/ <sup>ɦ</sup> d̚/	/ <sup>ɦ</sup> d̚a mo/	‘sap of pine’
/ <sup>ɦ</sup> ʝ/	/ <sup>ɦ</sup> jiʔ <sup>ɦ</sup> dʑu/	‘back’
/ <sup>ɦ</sup> g/	/ <sup>ɦ</sup> gu/	‘nine’
/ <sup>ɦ</sup> dz/	/ <sup>ɦ</sup> dzã ji mə/	‘false’
/ <sup>ɦ</sup> dʑ/	/ <sup>ɦ</sup> dʑu mo/	‘intestine’
/ <sup>ɦ</sup> z/	/ <sup>ɦ</sup> zo <sup>ɦ</sup> zo/	‘leaning’
/ <sup>ɦ</sup> z̥/	/ <sup>ɦ</sup> z̥ə/	‘four’
/ <sup>ɦ</sup> ʑ̥/	/ <sup>ɦ</sup> zi/	‘exchange’
/ <sup>ɦ</sup> m/	/ <sup>ɦ</sup> mej/	‘low’
/ <sup>ɦ</sup> n/	/- <sup>ɦ</sup> na fio/	‘Mongolian gazelle’
/ <sup>ɦ</sup> n̥/	/- <sup>ɦ</sup> n̥ə/	‘two’
/ <sup>ɦ</sup> ŋ/	/ <sup>ɦ</sup> ŋa mə/	‘sweet’
/ <sup>ɦ</sup> l/	/- <sup>ɦ</sup> laʔ po/	‘brain’



/<sup>h</sup>r/ /<sup>h</sup>ra: wo/ ‘cowshed’  
 /<sup>h</sup>j/ /<sup>h</sup>jeʔ/ ‘yak’

### 2.2.2.2 Prenasal type

All the aspirated and voiced plosives and affricates as well as several continuants can occur prenasalised:

<sup>m</sup>b    <sup>n</sup>d    <sup>n</sup>ɖ    <sup>ŋ</sup>g    <sup>n</sup>dz    <sup>n</sup>dʒ    <sup>ɳ</sup>ɣ  
<sup>m</sup>p<sup>h</sup>    <sup>n</sup>t<sup>h</sup>    <sup>h</sup>ɬ<sup>h</sup>    <sup>h</sup>k<sup>h</sup>    <sup>n</sup>ts<sup>h</sup>    <sup>h</sup>tɕ<sup>h</sup>    <sup>h</sup>x<sup>h</sup>    <sup>n</sup>s<sup>h</sup>    <sup>h</sup>ʃ<sup>h</sup>    <sup>n</sup>l

The voicedness of the prenasal depends on that of the main initial. Almost all prenasals are homorganic, but there are also a few heterorganic, labialised prenasals, e.g.:

<sup>m</sup>g  
<sup>m</sup>ts<sup>h</sup>

The prenasal feature is always phonetically weaker than the main consonant of the initial.

Examples:

/<sup>m</sup>b/ /<sup>m</sup>bu leʔ/ ‘worm’  
 /<sup>n</sup>d/ /<sup>n</sup>da/ ‘read’  
 /<sup>n</sup>ɖ/ /<sup>n</sup>ɖi:/ ‘rice’  
 /<sup>ŋ</sup>g/ /<sup>ŋ</sup>go/ ‘go’  
 /<sup>n</sup>dz/ /<sup>n</sup>dzu/ ‘mdzo’  
 /<sup>n</sup>dʒ/ /<sup>n</sup>dʒaʔ xɔ̃/ ‘shoe’  
 /<sup>ɳ</sup>ɣ/ /<sup>ɳ</sup>ɣə t<sup>h</sup>ə/ ‘bite’  
 /<sup>m</sup>p<sup>h</sup>/ /<sup>m</sup>p<sup>h</sup>a/ ‘fly’  
 /<sup>n</sup>t<sup>h</sup>/ /<sup>n</sup>t<sup>h</sup>u/ ‘high’  
 /<sup>h</sup>ɬ<sup>h</sup>/ /<sup>h</sup>ɬ<sup>h</sup>e<sup>h</sup>po/ ‘gall bladder’  
 /<sup>h</sup>k<sup>h</sup>/ /<sup>h</sup>k<sup>h</sup>o li/ ‘roof’  
 /<sup>n</sup>ts<sup>h</sup>/ /<sup>n</sup>ts<sup>h</sup>u/ ‘lake’  
 /<sup>h</sup>tɕ<sup>h</sup>/ /<sup>h</sup>tɕ<sup>h</sup>u<sup>h</sup>ku/ ‘mouth’  
 /<sup>h</sup>x<sup>h</sup>/ /ji: <sup>h</sup>x<sup>h</sup>ɔ̃/ ‘village’  
 /<sup>n</sup>s<sup>h</sup>/ /<sup>h</sup>na mo <sup>n</sup>s<sup>h</sup>u/ ‘marry’  
 /<sup>h</sup>ʃ<sup>h</sup>/ /<sup>h</sup>qu: <sup>h</sup>ʃ<sup>h</sup>ã/ ‘dance’  
 /<sup>n</sup>l/ /<sup>n</sup>lɑʔ/ ‘shoot’  
 /<sup>m</sup>g/ /<sup>m</sup>gu, <sup>n</sup>gu<sup>(4)</sup>/ ‘head’  
 /<sup>m</sup>ts<sup>h</sup>/ /<sup>m</sup>ts<sup>h</sup>a mə/ ‘sweep’

### 2.2.2.3 Labial plosive type

A limited set of the voiceless plosives and affricates can occur prelabialised:<sup>5)</sup>

p<sup>t</sup>    p<sup>t</sup><sup>h</sup>    p<sup>ɕ</sup>    p<sup>k</sup>    p<sup>ts</sup><sup>h</sup>    p<sup>ts</sup>    p<sup>tɕ</sup>

Voiced counterparts are not found. The prelabial plosive is always articulated lightly, and its audibility is very weak. It cannot, however, vary with a prelabial continuant such as a fricative or an approximant in the normal speech, but it is sometimes omitted. Not all of the prelabialised plosives have minimal pairs with non-prelabialised plosives.

Examples:

/ <sup>p</sup> t/	/ <sup>p</sup> ta: juʔ/	‘riddle’	
/ <sup>p</sup> t <sup>h</sup> /	/ <sup>p</sup> t <sup>h</sup> a ɣa: p <sup>h</sup> e/	‘poplar’	
/ <sup>p</sup> t̚/	/ <sup>p</sup> t̚o: <sup>h</sup> jiʔ/	‘breast’	
/ <sup>p</sup> k/	/ <sup>p</sup> ki:/	‘carry on the back’	
/ <sup>p</sup> ts <sup>h</sup> /	/ <sup>p</sup> ts <sup>h</sup> e: mo/	‘broom’	
/ <sup>p</sup> ts/	/ <sup>p</sup> tso/	‘cock’	cf. / <sup>t</sup> sə ru/ ‘coral’
/ <sup>p</sup> tɕ/	/ <sup>p</sup> tɕu/	‘ten’	cf. / <sup>t</sup> ɕə/ ‘house’

#### 2.2.2.4 Labial fricative/approximant type

A labial fricative/approximant can stand before a limited set of consonants<sup>6)</sup>:

<sup>ϕ</sup> t	<sup>ϕ</sup> t̚	<sup>ϕ</sup> tɕ	<sup>ϕ</sup> s		<sup>ϕ</sup> l̥
<sup>w</sup> d	<sup>w</sup> g	<sup>w</sup> dʒ	<sup>w</sup> z	<sup>w</sup> n	<sup>w</sup> l

The voicedness of the pre-labial continuant depends on that of the main initial. The pre-labial continuant feature is always weaker than the main initial on the phonetic aspect. It does not alternate with pre-labial plosives. It can be distinguished from a preaspiration type without a labial feature.

Examples:

/ <sup>ϕ</sup> t/	/ <sup>ϕ</sup> tu:/	‘swelling’	cf. / <sup>h</sup> t/	/ <sup>h</sup> sa <sup>h</sup> tuʔ/	‘dinner’
/ <sup>ϕ</sup> t̚/	/ <sup>ϕ</sup> t̚u/	‘wash’			
/ <sup>ϕ</sup> tɕ/	/ <sup>ϕ</sup> tɕə̃ nɛ bo/	‘December’			
/ <sup>ϕ</sup> s/	/ <sup>ϕ</sup> sə̃/	‘feed’	cf. / <sup>h</sup> s/	/ <sup>h</sup> sə̃/	‘three’
/ <sup>ϕ</sup> l̥/	/ <sup>ϕ</sup> l̥ə̃/	‘clap’	cf. / <sup>h</sup> l̥/	/ <sup>h</sup> l̥eʔ/	‘eagle’
/ <sup>w</sup> d̥/	/ <sup>w</sup> p̥u <sup>w</sup> d̥ə̃/	‘animal’s hair’			
/ <sup>w</sup> g/	/ <sup>w</sup> gu/	‘share’	cf. / <sup>h</sup> g/	/ <sup>h</sup> gu/	‘door’
/ <sup>w</sup> dʒ/	/ <sup>w</sup> dʒə̃/	‘eight’			
/ <sup>w</sup> z/	/ <sup>w</sup> zə̃/	‘shave’	cf. / <sup>h</sup> z/	/ <sup>h</sup> zə̃/	‘four’
/ <sup>w</sup> n/	/ <sup>w</sup> nə̃ <sup>h</sup> tɕə̃/	‘swear’			
/ <sup>w</sup> l/	/ <sup>w</sup> la <sup>h</sup> ɕə̃/	‘thigh’	cf. / <sup>h</sup> l/	/ <sup>h</sup> la wo/	‘musk’

### 2.2.2.5 Glottal stop type

Nasals and approximants can be with a pre-glottal stop:

<sup>ʔ</sup>m    <sup>ʔ</sup>n    <sup>ʔ</sup>j

Glottal stop is really clear phonetically, and it does not vary with glottal continuants. It can be distinguished from simplex and preaspiration types.

Examples:

<sup>ʔ</sup> m/	ʔ <sup>ʔ</sup> ma <sup>h</sup> ʔaʔ/ ‘fall down’	cf. /m/-/ʰm/	/ <sup>h</sup> ma <sup>h</sup> ci/ ‘moustache’
			/ʰmaʔ dzo/ ‘peacock’
<sup>ʔ</sup> n/	ʔ <sup>ʔ</sup> ne <sup>ʔ</sup> ne/ ‘sharp’	cf. /n/-/ʰn/	/ <sup>h</sup> na ni/ ‘last year’
			/ʰna mo/ ‘bride’
<sup>ʔ</sup> j/	ʔ <sup>ʔ</sup> ja: <sup>ʔ</sup> tu/ ‘expand’	cf. /j/-/ʰj/	/ <sup>h</sup> jaʔ, ʔja:/ ‘do’
			/ʰjeʔ/ ‘yak’

No minimal pairs are found only with/without the pre-glottal stop. But the existence of this glottal feature is extremely evident, thus it is described.

### 2.2.2.6 Glide type

There are many combination patterns including a glide /w/ or /j/:

bw	t <sup>h</sup> w	tw	kw	gw	ts <sup>h</sup> w	tɕ <sup>h</sup> w	tɕw	s <sup>h</sup> w
sw	ʂ <sup>h</sup> w	ʂw	ɕ <sup>h</sup> w	ɕw	ʒw	xw	ɣw	mw
ŋw	lw	rw						
p <sup>h</sup> j	pj	bj	tj	zj	xj	nj	lj	rj

In addition, there are several complex types with both of a preinitial and a glide, consider the following examples:

<sup>ʰ</sup> mw	<sup>m</sup> bw	<sup>h</sup> cw	<sup>n</sup> jw	<sup>ʰ</sup> kw	<sup>h</sup> kw	<sup>p</sup> ts <sup>h</sup> w	<sup>h</sup> tsw	<sup>ʰ</sup> gw
<sup>h</sup> sw	<sup>ʰ</sup> lw	<sup>ʰ</sup> k <sup>h</sup> w	<sup>ʰ</sup> dʒw	<sup>n</sup> dʒw	<sup>ʰ</sup> z <sup>h</sup> w			
<sup>p</sup> tɕj	<sup>ʰ</sup> mj							

The pronunciation of the glide is clear, and its omission is not accepted. Minimal pairs with/without a glide are not numerous. Examples illustrating the distinction are:

/b/-/ᵐbw/-/bj/    /ʔrə be/ ‘rabbit’    /ᵐbweʔ/ ‘be mad’ /<sup>h</sup>pa: bje/ ‘leather’

## 2.3 Vowels

The vowel inventory is displayed below:

i	ɨ	ɯ u
e	ɵ ə	o
ɛ		ɔ
	a	ɑ

Each vowel can be articulated oral or nasalised. Short and long vowels are distinctive. Only monophthongs can become an element of the syllable.

### 2.3.1 Normal vowels

With articulatory contrast

/i/-/e/	/ˈs <sup>h</sup> i/ wo/ ‘hail’; /ˈs <sup>h</sup> e/ mo/ ‘nail’
/e/-/ɛ/	/ˈmɛj/ ‘eye’; / <sup>h</sup> mɛj/ ‘low’
/a/-/ɑ/	/ <sup>h</sup> tɕa/ pa/ ‘excrement’; / <sup>h</sup> tɕa/ ‘cut’
/ɑ/-/ɔ/	/ <sup>h</sup> tɕa/ ‘pull up’; / <sup>h</sup> tɕɔ/ ‘patch’
/ɔ/-/o/	/k <sup>h</sup> ɔw/ ‘needle’; / <sup>m</sup> bow/ ‘awl’
/u/-/o/	/s <sup>h</sup> u/ ‘tooth’; /s <sup>h</sup> o/ ‘earth’
/ʉ/-/ə/	/s <sup>h</sup> ʉ/ ‘who’; /s <sup>h</sup> ə <sup>h</sup> pu/ ‘yellow’
/u/-/ʉ/	/ <sup>h</sup> ɕu/ ‘split up’; / <sup>h</sup> ɕʉ/ ‘wheat’

With length contrast

/i/	/ˈmi/ ‘fire’; /ˈni/ ‘highland barley’
/e/	/ <sup>h</sup> te/ ‘tiger’; /s <sup>h</sup> e/ mɔ/ ‘nail’
/ɛ/	/ˈlɛ lɛ/ ‘breast’; / <sup>h</sup> tɕɛ/ ma/ ‘cliff’
/a/	/ <sup>h</sup> ɕ <sup>h</sup> a/ fio/ ‘deer’; / <sup>h</sup> ɕa/ na/ ‘front’
/ɑ/	/naw/ ‘sky’; /ro/ kə <sup>h</sup> ra/ wo/ ‘cowshed’
/ɔ/	/ <sup>h</sup> ɕɔ/ ‘nose’; not found
/o/	/ <sup>h</sup> ɕzo/ ‘rainbow’; / <sup>h</sup> to/ ‘belly’
/u/	/s <sup>h</sup> u/ ‘tooth’; /pa <sup>h</sup> ɕu/ ‘knee’
/ʉ/	/tɕ <sup>h</sup> ʉ/ ‘water’; / <sup>h</sup> ku/ ru/ ‘hip’
/ʉ/	/ <sup>h</sup> ɕʉ/ ‘wheat’; not found
/ə/	/ <sup>h</sup> tɕə/ ‘cloud’; / <sup>h</sup> tɕə/ tsə/ ‘seed’
/ə/	/pə te/ ‘noodle’; not found

### 2.3.2 Nasalised vowels

Except /ʉ/ and /ə/, each vowel can be nasalised as in:

/i/	/jĩ/ ‘be’
/e/	/ <sup>h</sup> t <sup>h</sup> ɛj/ ‘drink’
/ɛ/	/ <sup>h</sup> k <sup>h</sup> ɛ <sup>h</sup> di/ ‘kidney’
/a/	/ <sup>h</sup> gã <sup>h</sup> bu/ ‘box’
/ɑ/	/rɔ <sup>h</sup> mə/ ‘other person’
/ɔ/	/tɕɔ/ ‘drag’
/o/	/ <sup>h</sup> pɔ/ ‘government official’
/u/	/ts <sup>h</sup> ə jũ/ ‘merchant’
/ʉ/	/buĩ/ ‘wide’
/ə/	/ <sup>h</sup> ɕã/ ‘heart’

## 2.4 Tonemes

Tone is distinctive in dGudzong Tibetan. It is realised not by an relative pitch height but by a pitch pattern. Four distinctive tones exist.

A tonal sign is given before each word as follows:

ˉ: high level [<sup>55/44</sup>] ˊ: rising [<sup>24/35</sup>] ˆ: rising-falling [<sup>132</sup>] ˋ: falling [<sup>53/42</sup>]

The tonal pitch value is not uniquely determined, thus /ˉ/ can be phonetically realised as [<sup>55</sup>] or [<sup>44</sup>], /ˊ/ as [<sup>53/42</sup>] or [<sup>52/51</sup>], etc. Therefore, the most important feature for the distinction is the pitch pattern (level or contour).

Examples of monosyllabic words:

/ˉS/ ˉmu/ ‘to rake’

/ˊS/ ˊmi/ ‘fire’

/ˆS/ ˆmɛj/ ‘low’

/ˋS/ ˋmejʔ/ ‘eye’

At present, there are no minimal pairs which are distinctive only with the difference respect to tone. In this paper, the tonal description reflects the actual pronunciation of native speakers, lest they judge a word as a non-dGudzong vernacular form.<sup>7)</sup>

In the case of bisyllabic words, the tonal value of the beginning of the second syllable is restricted to two high tone types [<sup>55</sup>] and [<sup>53</sup>], except for an atonal syllable. This means that dGudzong Tibetan has word tone,<sup>8)</sup> and polysyllabic words also show the same tonal pattern. Bisyllabic words can become as follows:

/ˉS<sub>1</sub>S<sub>2</sub>/ : main tonal value described as S<sub>1</sub>[<sup>55</sup>]S<sub>2</sub>[<sup>55</sup>]

/ˊS<sub>1</sub>S<sub>2</sub>/ : main tonal value described as S<sub>1</sub>[<sup>24</sup>]S<sub>2</sub>[<sup>55</sup>]

/ˆS<sub>1</sub>S<sub>2</sub>/ : main tonal value described as S<sub>1</sub>[<sup>24</sup>]S<sub>2</sub>[<sup>53</sup>]

/ˋS<sub>1</sub>S<sub>2</sub>/ : main tonal value described as S<sub>1</sub>[<sup>55</sup>]S<sub>2</sub>[<sup>53</sup>]

Words with more than two syllables also show the same pattern as bisyllabic ones and after the third element no proper tonal value is given (atonal).

Except for pitch tone, suprasegmental features such as a stress and a phonation type are not phonetically evident. Theoretical treatments are not applied any more in this paper.

## 3 Diachronic Analysis

This section presents a diachronic analysis of the dGudzong dialect through a correspondence with Written Tibetan (WrT) forms. I add in the footnotes some explanations for remarkable sound changes from the viewpoint of Tibetan dialectology.<sup>9)</sup>

However, there are some difficulties describing the precise sound change of the dGudzong dialect because of the lack of WrT correspondences in multiple examples,

some of which may originate from obscure non-Tibetan languages, which are not considered here. The analysis is divided into three parts: initial, rhyme, and tone.

### 3.1 Initial

#### 3.1.1 Development of simple initials

##### 3.1.1.1 WrT obstruents

The general tendency of the diachronic development of obstruents in initial position can be characterised as follows:

- Reflexes of WrT simplex voiceless initials have remained voiceless in dGudzung.
- Reflexes of WrT simplex voiceless fricative initials have become aspirated in dGudzung.
- Reflexes of WrT simplex voiced initials are devoiced in dGudzung.
- Reflexes of devoiced WrT simplex initials are associated with low-tone syllables in dGudzung.

Examples:

/ʔka wo/ ‘pillar’ *ka ba*  
 /ʔs<sup>h</sup>o/ ‘earth’ *sa*  
 /ʔpoʔ/ ‘Tibetan’ *bod*  
 /ʔsu/ ‘melt’ *zhu*

A significant articulatory innovation which sets the dGudzung dialect apart from most other Tibetan dialects is the split of the WrT alveopalatal spirants into retroflex series as well as alveopalatals, e.g.:

/ʔtɕe zi/ ‘field’ ? *zhing*  
 /ʔɕ<sup>h</sup>i ʔe/ ‘tree’ *shing phung*  
 /ʔɕ<sup>h</sup>o/ ‘meat’ *sha*  
 /ʔɕ<sup>h</sup>a ʔio/ ‘deer’ *shwa ba*  
 /ʔ<sup>h</sup>zə/ ‘four’ *bzhi*

As far as the actual data of dGudzung is concerned, the condition of the split is the vocalic quality, alveopalatals are kept in the position preceding the narrow vowels /i/ and /e/.<sup>10)</sup>

##### 3.1.1.2 WrT sonorants

The WrT sonorants included four nasals (*m*, *n*, *ny*, *ng*), two liquids (*l*, *r*), and two glides (*w*, *y*). In the dGudzung dialect, the WrT simplex sonorants are generally kept and realised with a low tone, e.g.:

/ˈmə/ ‘man’ *mi*  
 /ˈno/ ‘be sick’ *na*  
 /ˈnɔ/ ‘fish’ *nya*  
 /ˈŋo/ ‘I’ *nga*  
 /ˈlãw/ ‘road’ *lam*  
 /ˈro/ ‘goat’ *ra*  
 /ˈwo/ ‘fox’ *wa*  
 /ˈjõ mə/ ‘light’ *yang*

### 3.1.2 Development of complex initials with prefixes

WrT has nasal (*m-*, *ʼ-*) as well as oral (*g-*, *d-*, *b-*, *r-*, *l-*, *s-*) prefixal consonants.

#### 3.1.2.1 With nasal prefix

Almost all the WrT nasal prefixes merged before obstruent root initials (in this case stop/affricates), resulting in homorganic prenasalised consonants in the dGudzung dialect,<sup>11)</sup> as in:

/ˈmbu leʔ/ ‘worm’ *ʼbu* ?  
 /ˈndzə ʔi/ ‘finger’ *mdzu gu*  
 /-ˈtɕʰəʔ/ ‘cold’ *ʼkhyags*  
 /-ˈtsʰu/ ‘lake’ *mtsho*

I have found only a few words with non-homorganic prenasal elements, some of them are:

/ˈmgu, ˈŋgu/ ‘head’ *mgo*  
 /-ˈtsʰa mə/ ‘sweep’ *ʼphyag*

These examples can be explained with the WrT form, the preinitial *m* or *ʼ* preceding a labial consonant. The example ‘head’ has a variant of the homorganic prenasalised initial, which means that it is in a transitory stage from the heterorganic prenasal to the homorganic one. The heterorganic prenasal will merge into the homorganic one in the near future.

#### 3.1.2.2 With oral prefix

WrT oral prefixes such as *g-*, *d-*, *b-*, *r-*, *l-* and *s-* were lost or developed as preaspiration. The prefix *b-* is associated with a labial preinitial. As far as voicing is concerned, the preinitial elements remained voiced if the root initial was voiced except for the initial nasal with the prefix *s-* changing into a voiceless nasal as follows:<sup>12)</sup>

/ˈmwo:/ ‘wound’ *rma*  
 /ˈm̥a/ ‘medicine’ *sman*

/ˈnaŋ tɕʰwe/ ‘ear’ *rna chogs*  
 /ˈŋə/ ‘nose’ *sna*

Examples of WrT prefix *b-* are as follows:

/ᵖtɕ/      /ˈᵖtɕu/ ‘ten’ *bcu*  
 /ᶱt/      /ˈᶱtʷ/ ‘wash’ *bkru*  
 /ᵂg/      /ˈᵂgu/ ‘share’ *bgo*  
 /ᵂdz/      /ˈᵂdzaŋ/ ‘eight’ *brgyad*

### 3.1.3 Development of complex initials with a glide

There are four WrT glides, *-y-*, *-r-*, *-l-* and *-w-*. Dialectologically the development of the complex with a glide is very important.

WrT glide *-w-* (*wa zur*) has been dropped without compensation:

/ˈʂʰa fio/ ‘deer’ *shwa ba*  
 /ˈʰtsə wo/ ‘grass’ *rtswa*

The palatal glide *-y-* could combine with labial and velar plosives, as well as with the labial nasal *m-*. WrT labial plosives co-occurring with the *-y-* glide were transformed into alveolar affricates with a slight labial plosive preinitial:<sup>13)</sup>

/ᵖtso/ ‘cock’ *bya*  
 /ᵖtsʰe/ ‘open’ *phye*  
 /ˈtsə ru/ ‘coral’ *byu ru*  
 /ˈdzar/ ‘paste’ *sbyar*

The prelabial plosive has been lost in several examples, but the voiced prelabial plosive is not attested, so that its lack as in ‘paste’ can be because of the phonological restriction.

WrT velar plosives taking the *-y-* glide were transformed into alveopalatal affricates or palatal plosives:<sup>14)</sup>

/ˈdzə/ ‘Han Chinese’ *rgya*  
 /ˈʰtɕə ʰmə/ ‘sour’ *skyur*  
 /ˈʰco/ ‘ride (a horse)’ *rkya*  
 /ᵂjwe? mə/ ‘quick’ *mgyogs*  
 /ˈʰji? ʰdzu/ ‘back’ *rgyab*

The WrT medial *-r-* could be added to labial, alveolar, and velar plosives, as well as to the spirants *s* and *h*. Considering first the stop-based clusters, we observe all sequences merging as retroflexed plosives:

/ˈtʰeŋ/ ‘blood’ *khrag*  
 /ˈdʰ/ ‘wheat’ *gro*



/<sup>h</sup>ɬw/ ‘wash’ *bkru*

/ɬuwʔ/ ‘six’ *drug*

/ɬə mə/ ‘ask’ *dri*

/<sup>h</sup>tɛ: ma/ ‘cliff’ *brag ma*

/<sup>h</sup>tə/ ‘write’ *bri*

/<sup>h</sup>tʃi/ ‘tear up’ *dbral*

As can be seen, almost all WrT labial plosives with glide *r* developed as retroflexes with labial plosive preinitials.

*r* dropped from the cluster *sr-*, *r* leaving the remaining *s* aspirated or unaspirated:<sup>15)</sup>

/<sup>h</sup>s<sup>h</sup>weʔ/ ‘life’ *srog*

/<sup>h</sup>s<sup>h</sup>wo mə/ ‘hard’ *sra mo*

/<sup>h</sup>sa: mo/ ‘soy’ *sran ma*

The WrT glide *-l-* could be added to labial and velar plosives, as well as to the spirants *s* and *z*. We observe all sequences merging to become a voiced preaspirated alveolar laterals on the stop-based clusters, while *sl* became a voiceless preaspirated alveolar lateral and *zl* became a voiced preaspirated alveolar plosive:

/<sup>h</sup>lō/ ‘cattle’ *glang*

/<sup>h</sup>laʔ po/ ‘brain’ *klad pa*

/<sup>w</sup>lō/ ‘take’ *blangs*

/<sup>h</sup>da: wo/ ‘moon’ *zla ba*

/<sup>h</sup>lowʔ/ ‘learn’ *slob*

### 3.1.4 Special remarks on the initials

Almost all of characteristic phonemes in the dGudzung dialect such as /<sup>h</sup>ɬ, β, <sup>h</sup>ɬ, <sup>h</sup>x<sup>h</sup>/ probably have a non-Tibetan origin,<sup>16)</sup> the source of which is still unobvious. Among them, /<sup>h</sup>ɬ/ is associated with the WrT *ph* initial, but it cannot freely change into [p<sup>h</sup>], as:

/<sup>h</sup>tsa ɬu/ ‘cock’ *bya pho*

/<sup>h</sup>ɬweʔ/ ‘have shot’ *phog*

Etymologically, the word-medial /<sup>h</sup>ɬ/ is surely associated with WrT *ph* initial and it is possible to analyse it as a lenition of the aspirated labial plosive, but not all the cases observed in the WrT word-medial *ph* are realised as a labial fricative, thus we cannot treat [ɬ] as a conditioned variant of /p<sup>h</sup>/.

Preaspirations preceded by an aspirated initial can be regarded as a special combination, but some of them have a WrT origin: /<sup>h</sup>s<sup>h</sup>ə/ ‘gold’ *gser*. This type of

sound change is not conditioned.

Resonants preceded by a glottal stop are also noticeable (see 2.2.2.5). This combination is rare and its form is near to WrT, but no correspondence with a glottal stop exists in WrT. For example, the morphemes /<sup>ʔ</sup>ja:/ and /<sup>ʔ</sup>ma/<sup>17)</sup> are related to WrT *yar* ‘upward’ and *mar* ‘downward,’ respectively.<sup>18)</sup>

## 3.2 Rhyme

### 3.2.1 WrT open syllables

The quality of WrT vowels in open syllables (including WrT ‘final’) was generally not retained in the dGudzung dialect. They developed as in follows:<sup>19)</sup>

WrT	dGudzung	
<i>a</i>	/o/	/ʔs <sup>h</sup> o/ ‘earth’ <i>sa</i>
<i>i</i>	/ə/	/ʔrə/ ‘mountain’ <i>ri</i>
<i>u</i>	/u/	/ʔs <sup>h</sup> u/ ‘who’ <i>su</i>
<i>e</i>	/i/	/ʔmi/ ‘fire’ <i>me</i>
<i>o</i>	/u/	/ʔs <sup>h</sup> u/ ‘tooth’ <i>so</i>

The correspondences above are particularly observed in word-final position, while in word-internal position WrT *a* and *o* retained their vocalic quality as in:<sup>20)</sup>

/ʔs <sup>h</sup> a	ʧ <sup>h</sup> o/ ‘land’ <i>sa cha</i>
/ʔs <sup>h</sup> o	ʰkō/ ‘gum’ <i>so ?</i>

There are, naturally, other correspondences in the dGudzung dialect, some of them include a reflex of the glide /w/ and /j/, as in:

/ʔ <sup>h</sup> mwo/	‘wound’ <i>rma</i>
/ʔ <sup>h</sup> gwə	ʒã/ ‘entrance’ <i>sgo ?</i>

### 3.2.2 WrT closed syllables with nasals

Almost all WrT nasal finals caused the nasalisation of the preceding vowel without losing their segmental phonemic status, but in a case WrT nasal final has been lost as in:

/ʔtɕe	zi/ ‘field’ ? <i>zhing</i>
/ʔmɕa/	‘medicine’ <i>sman</i>

The condition of the omission of the final nasal is not explained based on the WrT form.

Vowel quality has developed depending on the final nasal. The main correspondences are displayed as follows:

V\F	<i>ng</i>	<i>n</i>	<i>m</i>
<i>a</i>	/õ/	/ã/	/ã/
<i>i</i>	/ĩ/	/ĩ/	/ẽ/
<i>u</i>	/ũ/	/ã/	/ũ/
<i>e</i>	/ẽ/	/ã/	?
<i>o</i>	/õ/	/õ, ã/	/ũ/

### 3.2.3 WrT closed syllables with non-nasals

Almost all WrT plusive finals (*b*, *d*, *g*) have developed into glottal stops. The vowel quality does not change when followed by the final WrT *d*, but changes drastically when followed by the final *g*.<sup>21)</sup> Vowel quality has developed depending on the final consonant. The main correspondences are displayed as follows:

V\F	<i>g</i>	<i>d</i>	<i>b</i>
<i>a</i>	/(j)eʔ/	/aʔ/	/ɔ(w)ʔ/
<i>i</i>	/ejʔ/	?	?
<i>u</i>	/u(w)ʔ/	/uʔ/	/u(w)/
<i>e</i>	?	/əʔ/	?
<i>o</i>	/weʔ/	/oʔ/	/aʔ/

Examples:

/<sup>h</sup>kaʔ/ ‘voice’ *skad*  
 /<sup>m</sup>buʔ/ ‘call’ ‘*bud*  
 /<sup>ʔ</sup>poʔ/ ‘Tibetan people’ *bod*  
  
 /<sup>h</sup>p<sup>h</sup>jeʔ/ ‘pig’ *phag*  
 /<sup>h</sup>mejʔ/ ‘eye’ *mig*<sup>22)</sup>  
 /<sup>h</sup>t<sup>h</sup>uwʔ/ ‘six’ *drug*<sup>23)</sup>  
 /<sup>h</sup>s<sup>h</sup>weʔ/ ‘life’ *srog*

A final *b* can change to /w/ as in:

/<sup>h</sup>k<sup>h</sup>ɔwʔ/ ‘needle’ *khab*  
 /<sup>ʔ</sup>saw sɔʔ/ ‘deep’ *zab zab*

WrT continuants (*s*, *r*, *l*) lost their segmental phonemic status resulting in occasional compensatory lengthening. The vowel quality has developed depending on the final consonant. The main correspondences are displayed as follows:

V\F	<i>r</i>	<i>l</i>	<i>s</i>
<i>a</i>	/a:/	?	/i:/
<i>i</i>	?	?	?
<i>u</i>	/u:/	/i/	?
<i>e</i>	/i:/	/i:/	/i:/
<i>o</i>	/o:/	/u:/	/u, o/

Examples:

/ˈtʃi:/ ‘mule’ *drel*  
/ˈnɕi:/ ‘rice’ *bras*

Several examples show no compensatory lengthening, as in:

/ˈma/ ‘butter’ *mar*  
/ˈhʰsʰə/ ‘gold’ *gser*  
/ˈkʰu/ ‘boil’ *khöl*

### 3.2.4 Special remarks on the rhymes

There are two vowels /ɰ, ə/ which have not explained above. They are seldom related to WrT forms. For example, /ˈpə lɰʔ/ ‘Tibetan dumpling’ has both of the two vowels, but this word is not of a WrT origin.

### 3.2.5 Summary of the rhyme development

The rhyme development in dGudzung Tibetan presented above can be summarised from the viewpoint of the oral forms as follows:<sup>24)</sup>

open rhyme

short		long	
dGudzung	WrT	dGudzung	WrT
i	-e, -ul, -os	i:	-er, -el, -as, -es
a	-a (word-medially)	a:	-ar
o	-a (word-initially)	o:	-or
u	-o, -ol, -os	u:	-ur, -ol
ɰ	-u		
ə	-i		

nasalised rhyme

dGudzung	WrT
ĩ	-ing, -in
ẽ	-eng
ã	-an, -un
ũ	-en, -on, -am
õ	-ang, -ong, -on
ũ̃	-ung, -um, -om
õ̃	-im

checked rhyme

dGudzung	WrT
(j)eʔ	-ag
ejʔ	-ig

weʔ	-og
aʔ	-ad, -ob
ɔ(w)ʔ	-ab (word-finally)
aw	-ab (word-medially)
oʔ	-od
uʔ	-ud
ɯ(w)ʔ	-ug, -ub
ɯʔ	-ud
əʔ	-ed

The rhyme forms with no obvious source are omitted.

### 3.3 Tones

An analysis of tonogenesis is inevitable for understanding the diachronic phonology of Khams Tibetan. As mentioned in the synchronic analysis (2.4), the tone system in dGudzung Tibetan is analysed as a tonal type and a word tone system because of the variety of tonal values and of the restriction of the tonal pattern in the second syllable. This method of analysis is different from that taken by most of the previous works dealing with the description of Tibetan dialects such as Huang (1994) and Jiang (2002: 260–283). The result of the analysis of dGudzung Tibetan, therefore, can be only partially shared with such works. For the sake of an effective analysis of the tonogenesis, the analysis below is separated into two cases: monosyllabic words and polysyllabic ones. Nevertheless, only a tendency of the relation between the tonal type and WrT can be indicated.

#### 3.3.1 Monosyllabic words

The genesis of tone from WrT forms is clearly evident on monosyllabic words. The tonal distribution of high and low is associated with the kind of WrT initial as follows:

high (ˊ and ˋ): voiceless obstruents (with/without preinitials/glides) and resonants with preinitials

low (ˊ and ˋ): voiced resonants, voiced obstruents without preinitials

The split between high and low at the beginning of a word is common to most Khams Tibetan dialects, as indicated by Huang (1994) and Jiang (2002: 268–276).

high tone type	low tone type
/ˊhʰeʔ/ ‘tiger’ <i>stag</i>	/ˊti:/ ‘3 <sup>rd</sup> person singular’ <i>de</i>
/ˊsʰo/ ‘earth’ <i>sa</i>	/ˊpoʔ/ ‘Tibetan’ <i>bod</i>
/ˊhʰt̥o/ ‘release’ <i>gtong</i>	/ˊso/ ‘eat’ <i>za</i>
/ˊtsʰo/ ‘salt’ <i>tshwa</i>	/ˊləwʔ/ ‘sheep’ <i>lug</i>
/ˊn̥o/ ‘nose’ <i>sna</i>	/ˊkweʔ/ ‘tan’ <i>gog</i>
/ˊh̥l̥o/ ‘ox’ <i>glang</i>	/ˊrə/ ‘mountain’ <i>ri</i>

However, WrT voiced obstruents with preinitials have developed as either high or low tone under conditions which are not clear, as in:<sup>25)</sup>

- /<sup>h</sup>dā/ ‘seven’ *bdun*  
 /<sup>h</sup>dzo/ ‘Han Chinese’ *rgya*  
 /<sup>w</sup>dzaʔ/ ‘eight’ *brgyad*

While the presence of falling or non-falling tones cannot be associated with the WrT form, they can be associated with vowel length in other dialects. For example, in the Derge (cf. sKal-bzang ’Gyur-med and sKal-bzang dByangs-can 2002: 108) and the mBathang dialects, falling tone appears when the vowel is short, and the non-falling one appears when the vowel is long. Clearly dGudzung Tibetan does not belong to this type.

### 3.3.2 Polysyllabic words

The tonal pattern of polysyllabic words in the dGudzung dialect can be represented by that described for bisyllabic word (see 2.4). But the relation between the tonal pattern and WrT is less obvious than it is for monosyllabic words. There are several compounds which include two words which /<sup>h</sup>tɕ<sup>h</sup>u/ *chu* ‘water’ (high-level tone) and /<sup>p</sup>tso/ *bya* ‘cock’ (rising tone) show multiple tonal patterns, for example:

- /<sup>h</sup>tɕ<sup>h</sup>u k<sup>h</sup>u/ ‘boiled water’ *chu khol*  
 /<sup>h</sup>tɕ<sup>h</sup>u ts<sup>h</sup>ā/ ‘hot spring’ *chu tshan*  
 /<sup>h</sup>tɕ<sup>h</sup>u <sup>h</sup>ləw/ ‘wave’ *chu rlabs*  
 /<sup>h</sup>tɕ<sup>h</sup>u meʔ/ ‘pond, well’ *chu mig*
- /<sup>p</sup>tsa <sup>h</sup>tɕeʔ/ ‘cock’s excrement’ *bya skyag*  
 /<sup>p</sup>tsa ɸu/ ‘cock’ *bya pho*  
 /<sup>p</sup>tsa mu/ ‘hen’ *bya mo*

As shown above, the tonogenesis of the polysyllabic word is not the same as that for WrT forms, and needs further study.<sup>26)</sup>

## 4 Summary and Conclusion

The sketch of the synchronic phonetic status and its evolution in the dGudzung dialect demonstrates that little known dialects possess a typologically distinctive phonetic characteristics and sound changes in the Tibetan dialects, which are summarised as follows:

1. WrT *sh/zh* partially became retroflexes.
2. WrT *Py* became alveolar affricates.
3. WrT *a* became /o/.
4. WrT vowels with the final *g* changed their vocalic quality.

From a typological viewpoint, the characteristics mentioned above are quite rare, especially the fourth feature, that is not shared with any other dialects belonging to “twenty-four villages’ patois.”<sup>27)</sup> This subgroup of Khams Tibetan is characterised not only by its distinctive phonological aspects, but also by its unique lexical traits and grammatical features. Further linguistic investigation is to be done in this area.

## Notes

- 1) The content of the section two is based on Suzuki (2007a: 128–133).  
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- 2) The phonological description is changeable depending on the position of each scholar. We should note that there are multiple interpretations of phonology. Even in Central Tibetan represented by Lhasa Tibetan, which has been described the most in detail, many systems of its phonology are produced. See Tournadre (1996: 53–54) and Kitamura (1977: 1–2).
- 3) Among the final consonants, /p/, /ɣ/, and /r/ rarely appear.
- 4) As in this example, the consonant cluster /<sup>m</sup>g/ will merge into a homorganic prenasalised type in the near future.
- 5) This type, as explained in the section 3 (diachronic analysis), can be associated with WrT labial initials plus glide *y* or prefix *b-*. The limited distribution of the prelabialisation in the synchronic status can originate from this that of WrT.
- 6) Same as the footnote above.
- 7) This is to avoid the possibility that a form might be considered to have come from some other varieties in “twenty-four-villages’ patois.”
- 8) Cf. the analysis of Lhasa Tibetan in Kitamura (1977: 1).
- 9) The data on other Tibetan dialects is also based on my description in order to guarantee an identical phonetic description. Data from previous works will only be used when I have no data from the dialects concerned.  
See Qu (1991), Jiang (2002) and Zhang (2009) for detailed informations of the historical study of Tibetan dialects.
- 10) This type is also found in Sogpho 梭坡 (Suzuki 2005b), Zhongu 熱務溝 (Sun 2003), and some of the dialects spoken in Xiangcheng 鄉城 and Deqin 德欽 counties (Suzuki 2007a). The condition of the split is similar to Zhongu. Other dialects in which almost all WrT alveopalatal spirants transformed into retroflexes are: sProsnang 中路, gTorwarong 東旺, rGyalthang 建塘 (香格里拉), Byagzhol 霞若, mThachu 塔城, Zhollam 嘎嘎塘, etc.
- 11) In almost all Khams Tibetan dialects, the same process took place. There are several descriptions that claim that prenasals did not exist before aspirated obstruents, but according to my fieldwork, a slight prenasal element before the aspirated obstruents still exist in many Khams Tibetan dialects (Suzuki 2007a).
- 12) In almost all Khams Tibetan dialects, the same process took place.
- 13) This is one of the most characteristic sound changes in “twenty-four-villages’ patois,” and this phenomenon is also found in the Tibetan loanwords in nDrapa, a Qiangic language spoken in Daofu 道孚 and Yajiang 雅江 counties as well as in Zhongu (Sun 2003). In addition, the case of the Khyungpo 瓊波 (sBrachen-Khromtshang 巴青沖倉) dialect, spoken in the eastern area of Baqing 巴青 County, Naqu 那曲 District, Tibet Autonomous Region, is the same as in the “twenty-four-villages’ patois.” Data from the sBrachen dialect is also cited in Zhang (2009: 316).

- Concerning the transformation into alveolar sounds, a correspondence of alveolar fricatives to WrT Py is found in the gTsangtsa 漳扎 and Phyuqtsi 樹正 (Jiuzhaigou 九寨沟) dialects as well as the dialects spoken in Xiangcheng, Daocheng 稻城 and Muli 木里 counties plus the gTorwarong dialect.
- 14) The WrT velar with the glide -y- changed into a palatal plosive generally in nomadic varieties of Amdo Tibetan, and it also occurred in some of the Khams Tibetan dialects such as Lhagang 塔公 as well.
  - 15) Many Khams Tibetan dialects underwent the same development of WrT *sr-* as dGudzung Tibetan, for instance, mBathang 巴塘 and Rangakha 新都橋 dialects as well as the dialects spoken in Xiangcheng County etc.
  - 16) Neighbouring languages such as Geshitsa or Situ-rGyalrong do permit a combination such as /<sup>h</sup>l, <sup>h</sup>x<sup>h</sup>/ in their phonotactics.
  - 17) These are not used alone, the tonal sign is thus not added.
  - 18) The oral form of these two WrT words *yar* and *mar* takes a high-tone type in several neighbouring Khams Tibetan dialects such as Sogpho, Lhagang and Rangakha.
  - 19) Almost the same transformation of the vowels in open syllable is also found in the nDappa 稻城金珠 dialect. Similar sound changes are also observed in dialects spoken in Xiangcheng and Muli, as well as in gTorwarong.
  - 20) A similar phenomenon is observed in the gSerpa 色爾壩 dialect (Sun 2005).
  - 21) This type of sound change is not reported in Qu (1991). But almost the same type as in dGudzung dialect is also found in several vernaculars spoken in Batang 巴塘 such as Sowanang 蘇哇龍 and Dangba 黨巴 (personal communication with sKal-bzang 'Gyur-med 格桑居冕 in Batang 2006), and spoken in Khyungpo (sBrachen).
  - 22) This word must originate from Old Tibetan *dmig*.
  - 23) This word may not be directly associated with WrT *drug* because of its oral form with high tone.
  - 24) A multiple sound correspondence between the oral forms and WrT is not rare in dGudzung Tibetan. Only the main correspondences are mentioned.
  - 25) This is also true in the Derge 德格 and the mBathang dialects (cf. sKal-bzang 'Gyur-med 1985). Probably it is a quite common phenomenon among Khams Tibetan dialects, but its effect is still uncertain (cf. Jiang 2002: 264–268).
  - 26) I have observed a similar tonal phenomenon in some rGyalrongic languages such as Geshitsa, Lavrung and Situ-rGyalrong. In addition, Wang (2008) reports a similar tonal phenomenon in the bisyllabic word in Guiqiong. These languages are spoken in the neighbouring areas of Danba, thus a mutual linguistic influence can be supposed on the suprasegmental aspect of Tibetan dialects spoken in the rGyalrong area.
  - 27) Among the characteristics listed above, the second and the fourth are shared with the Khyungpo dialect spoken in Baqing, Naqu, T.A.R., i.e. a place far from Danba.

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**Appendix: Vocabulary of English-dGudzung**

The following English-dGudzung vocabulary lists circa 1000 basic lexical items. The verbal conjugation is not attested except for the verbs with a suppletive paradigm.

afternoon	ʼza ro <sup>h</sup> juʔ	be called	ˀ <sup>m</sup> buʔ
again	ʼjo: roʔ	be cooked	ˀ <sup>p</sup> tsu
age	ʼlu	be done; accomplish	ˀ <sup>t</sup> ʰa: ɲō
agree; consent	ʼtō <sup>u</sup> qo ʼjī	be drunk	ˀ <sup>h</sup> dze
air; breath	ʼpuʔ	be dry	ˀ <sup>h</sup> kā
alcoholic drink	ˀ <sup>t</sup> ɕ <sup>h</sup> ō	be full; fill up	ʼkō
all	ʼjiʔ tɕ <sup>h</sup> i ɣu	be hungry	ˀ <sup>h</sup> tʃe:
alone	ʼmə zɛjʔ	be ill	ʼno
animal; beast	ʼrə ge	be like	ˀ <sup>h</sup> tʃa
ankle	ˀ <sup>h</sup> kō <sup>h</sup> tiʔ	be old	ˀ <sup>h</sup> ga:
answer; reply	ʼle: ɕaʔ	be ripe	ˀ <sup>h</sup> ts <sup>h</sup> u
ant	ʼtwe: ʼmo: mo	be one's turn	ˀ <sup>h</sup> dzi
anus	ʼrō ho ma	be shy	ˀ <sup>t</sup> ʰi
arm	ʼle: bo	be sleepy	ʼnō: ziʔ
armpit	ˀ <sup>h</sup> tɕ <sup>h</sup> ō	be startled	ˀ <sup>h</sup> tʃe:
arrive	ʼpa roʔ	be thirsty	ˀ <sup>h</sup> k <sup>h</sup> o kə
ask	ʼtə mə	be tired	ˀ <sup>h</sup> ko
at present; now	ʼʔa to	bean flour	ʼsa: mo <sup>p</sup> ts <sup>h</sup> e
aunt (father's sister)	ˀ <sup>h</sup> ʔa <sup>h</sup> tsə	bear	ʼtaŋ <sup>h</sup> ga
autumn and winter	ʼga: nə	bear [fruit]	ˀ <sup>h</sup> t <sup>h</sup> eʔ
awl	ˀ <sup>m</sup> bowʔ	beautiful	ˀ <sup>n</sup> dze: mə
baby	ʼt <sup>h</sup> ə ɣi t <sup>h</sup> u t <sup>h</sup> u	become crazy	ˀ <sup>m</sup> bweʔ
back	ˀ <sup>h</sup> jiʔ <sup>h</sup> dzu	become curved; bent	ʼkwi kwi
backside	ˀ <sup>h</sup> ku <sup>h</sup> dzoʔ	bed	ˀ <sup>t</sup> ʰə
bad	ˀ <sup>h</sup> mə ɲi: mə	bee	ˀ <sup>h</sup> dō mo
bald; bare	ˀ <sup>h</sup> go <sup>h</sup> du	beg [for food]	ˀ <sup>h</sup> tsi: mə
bamboo	ʼcu: mo	beggar	ˀ <sup>h</sup> tə ma
barley	ˀ <sup>h</sup> kə zi	believe in	ʼjī <sup>h</sup> sā
basket carried on the back	ʼse βu	belly	ˀ <sup>h</sup> to:
be	ʼjī	belt	ˀ <sup>h</sup> ka reʔ
be afraid	ˀ <sup>h</sup> tʃeʔ	big; large	ˀ <sup>h</sup> tɕa
be angry	ˀ <sup>h</sup> tʃu ʼlō	bind; tie up	ˀ <sup>h</sup> ge: mə
be boiling	ˀ <sup>h</sup> k <sup>h</sup> u	birch	ʼtɕe ɲe: p <sup>h</sup> e
be born	ˀ <sup>h</sup> ɕ <sup>h</sup> a	bird	ʼpi <sup>h</sup> ka
be broken	ʼlā	birthday	ʼnāw ˀ <sup>h</sup> ɕa zə mō
		bite	ˀ <sup>h</sup> ɣə t <sup>h</sup> ə / ˀ <sup>h</sup> dəʔ

bitter	<sup>h</sup> k <sup>h</sup> o: mə	butterfly	ʼts <sup>h</sup> ã ʼbuu li? ʼmə tɕ <sup>h</sup> e: mə
black	ʼnje? ɣə	button	ʼdwe
black-eared kite	<sup>h</sup> je?	buttocks	<sup>h</sup> kuu: ru
blind person	ʼmej? mi <sup>h</sup> di bu	buy	ʼni
blink; wink	<sup>h</sup> mej? ʼtsã zi ʼtsã zi	cadre	<sup>h</sup> pō
blissful; happy	<sup>h</sup> tɕə? <sup>h</sup> gə	calculate	<sup>h</sup> tsə ru: <sup>h</sup> dɕə
block up	<sup>h</sup> tsu:	can	ʼt <sup>h</sup> o: zə ʼt <sup>h</sup> o:
block; obstruct	ʼ <sup>h</sup> k <sup>h</sup> we?	carry on the back	<sup>h</sup> ki:
blood	ʼt <sup>h</sup> e?	carry [a child]	
blow [the trumpet]	<sup>h</sup> mbu?	on the back	<sup>h</sup> dʒaw? ʼk <sup>h</sup> u: mə
blue	ʼŋã <sup>h</sup> bu	carry [sthg] with a	
blunt; dull	<sup>h</sup> tsu: mə	pole on the shoulder	ʼxor ʼlo?
boar	ʼpə li?	carve; engrave	<sup>h</sup> ki:
boat	ʼtu	cat	ʼtsə lo / <sup>h</sup> tsə lo
body	ʼlu <sup>h</sup> pu	catch; hold	<sup>h</sup> dʒə?
boiled water	<sup>h</sup> tɕ <sup>h</sup> u k <sup>h</sup> u	cattle	ʼts <sup>h</sup> a pje
bone	ʼru <sup>h</sup> po	cause to mix	<sup>h</sup> sa ma <sup>h</sup> sa <sup>h</sup> se?
boot	ʼx <sup>h</sup> ã	cave in; sink	ʼ <sup>h</sup> ma: tɕ <sup>h</sup> e? ʼ <sup>h</sup> kwe mə
borrow	<sup>h</sup> ja	cave; hole	ʼtō
bottle	ʼʂ <sup>h</sup> aj dō	chaff; bran	ʼdɔ
bottom; base	<sup>h</sup> tsa wo	change	ʼma: ni lo?
bowl	ʼp <sup>h</sup> ə ro	charcoal	ʼʂ <sup>h</sup> i gu
bracelet	ʼle? <sup>h</sup> tə?	chase after	ʼʂ <sup>h</sup> u?
braces; suspenders	ʼʂ <sup>h</sup> i: xe?	cheese cake	<sup>h</sup> tɕ <sup>h</sup> ō ɣo
braid; plait	ʼri: bo	chest	<sup>h</sup> tɔ: <sup>h</sup> ji?
brain	<sup>h</sup> la? po	chest; trunk	<sup>h</sup> gã <sup>h</sup> mbu
break to pieces	<sup>h</sup> ts <sup>h</sup> e ts <sup>h</sup> e ʼ <sup>h</sup> we?	chicken	<sup>h</sup> tsə
break; snap	<sup>h</sup> tɕa: du: dɔ?	child	ʼt <sup>h</sup> ə ɣi
break; smash [a bowl]	<sup>h</sup> dze:?	chin	ʼma <sup>h</sup> ci
breakfast	ʼtɕ <sup>h</sup> o ɣu	Chinese chives	<sup>h</sup> gwe ɣo
bridge	<sup>h</sup> tsō <sup>h</sup> bo	Chinese priskly ash	<sup>h</sup> ji <sup>h</sup> mo
broad bean	ʼtə <sup>h</sup> ga: du du	choose; select	ʼrə no? <sup>h</sup> dã
broom	<sup>h</sup> ts <sup>h</sup> e: mo	chop down	<sup>h</sup> tɕa?
brother	<sup>h</sup> pū ri?	chop; cut [meat]	ʼlã dzə
brown bear	ʼtan <sup>h</sup> ga ʼtə mō	chop [wood]	<sup>h</sup> tɕi:
bucket	ʼtɕ <sup>h</sup> u lō zo	chopsticks	ʼt <sup>h</sup> ə <sup>h</sup> mo
bud; sprout	ʼla mo ʼt <sup>h</sup> ə ɣi	circle; circular	<sup>h</sup> ko <sup>h</sup> de <sup>h</sup> de
bull	ʼp <sup>h</sup> u	clap	ʼ <sup>h</sup> ɔã
bury	<sup>h</sup> gej?	claw	<sup>h</sup> se: mō
busy	ʼ <sup>h</sup> ts <sup>h</sup> aw zi	clean	<sup>h</sup> tsō mo
butter	ʼma	clear	<sup>h</sup> da:

clever	<sup>ŋ</sup> go mə	cut [paper, cloth]	<sup>h</sup> tɕa: mə
cliff	<sup>ʰ</sup> tɕ: ma	cut down	ʼtɕ <sup>h</sup> a? ro?
climb up [tree]	ʼfiɔ <sup>n</sup> dze?	cut off	<sup>h</sup> tɕɔ?
close [the mouth]	ʼpə tsuī	cut up [vegetable]	<sup>h</sup> ti?
close [the door]	<sup>n</sup> ɔɔ?	dare	ṽpu?
cloth	ʼre:	date	ʼnā xo?
cloth robe	ʼko zi	daughter	ʼpu mo
cloud	ṽtɕə	daughter-in-law	<sup>h</sup> na mo
cock	<sup>n</sup> tsa ɕu	day after tomorrow	ʼnō nī
cockscorn	<sup>h</sup> a zu?	day before yesterday	ʼk <sup>h</sup> a nā: <sup>h</sup> ke
cold [weather; water]	<sup>n</sup> tɕ <sup>h</sup> ə?	daytime	ʼna: <sup>h</sup> ke
collar	ʼna <sup>h</sup> ko?	deaf person	ṽna ɲə
collect; gather		deceive; cheat	ʼzā <sup>h</sup> je?
[firewood]	<sup>h</sup> tɕə?	decoct; cook in [tea]	<sup>h</sup> ku γə
comb	<sup>ŋ</sup> gu ɕ <sup>h</sup> a? so?	deep	ʼsaw so? rə ma
come	ʼs <sup>h</sup> we?	deer	ṽ <sup>h</sup> a fio
commend; praise	<sup>h</sup> to ro: ʼjə?	die	ṽ <sup>h</sup> ə
compare	ʼpu <sup>n</sup> dzu: mə	die out	<sup>h</sup> tu
connect; join; link	<sup>n</sup> dji <sup>n</sup> dji ṽru:	difficult	<sup>h</sup> ko
consult; discuss	ʼtu bo: ʼje?	dig out with finger	<sup>n</sup> dwe?
cook; boil	ṽtsu	dig; excavate	<sup>h</sup> lwe?
cooking stove;		dig; scoop [out]	ʼlɛ?
kitchen range	<sup>h</sup> dza ʼow?	dirty	<sup>h</sup> dō ɲa:
cool	ʼto: ʼmi ts <sup>h</sup> ej?	disappear; vanish	ʼme?
coral	ʼtsə ru	divide; share	<sup>w</sup> gu
corner; angle	ʼsu <sup>h</sup> ko	do not have	ʼme: ɲo?
corpse	ʼna ru	do business	ṽts <sup>h</sup> ej ʼjə?
count [numbers]	<sup>h</sup> tsə ru: <sup>h</sup> dzə?	do; make	ʼjə?
cover [the mouth]	<sup>n</sup> dzə mə	dog	ʼbe tɕ <sup>h</sup> ə
cover up	<sup>ŋ</sup> gu ɕka?	donkey	ṽkə rə
cow	ʼmō	door	<sup>h</sup> gu
crawl	<sup>n</sup> dze:	dove	ṽ <sup>h</sup> i? ka
crops	ʼmə t <sup>h</sup> e?	down; hair	<sup>h</sup> pu
cross [a bridge]	<sup>x</sup> ē <sup>ŋ</sup> go	doze off; nod	ṽtwe ji ʼjor
crow	<sup>n</sup> tsa rwe?	dragon	<sup>n</sup> dju?
cry; weep	ʼɲu	dragonfly	ʼts <sup>h</sup> ā ʼbu li?
cuckoo	ʼs <sup>h</sup> i: γwe?	draw [a picture]	<sup>n</sup> tɕə
cuddle	ʼkwe?	drink	<sup>h</sup> t <sup>h</sup> ej
cupboard; cabinet	<sup>h</sup> gā <sup>m</sup> bu	dry	<sup>h</sup> kā <sup>m</sup> bu
curtain	<sup>h</sup> ga k <sup>h</sup> e ke so?	dry by fire	<sup>h</sup> kā tɕu
curved; bent	ʼgwi gwe	dry land	ʼla zi

dry; drought	`naw <sup>h</sup> kã	father-in-law	`ta <sup>h</sup> gã
dry [clothes] is the sun	<sup>-h</sup> di?	feather	´dza <sup>h</sup> puw
dumpling	ʔa xu tɕ <sup>hi</sup> mu	feed; suckle	`ɕsã
dusk; twilight	´maj? du ru zi	fetch; draw [water]	`hɕə?
dust	<sup>-h</sup> di wo	few; little	´nɛ: mə
dye	ˉts <sup>h</sup> e ma <sup>-h</sup> dʒã	field	ˉɕɛ zi
each; every	ˉkwe? ´di zə?	fierce; sharp	ˉk <sup>h</sup> aj mə
ear	´na? tɕ <sup>h</sup> we	fifteen	ˉp <sup>t</sup> ɕõ <sup>h</sup> ŋo
early	ˉ <sup>n</sup> ɰwe? mə	fifty	ˉŋa <sup>p</sup> ɕu
earrings	ʔa lu	finger	ˉ <sup>n</sup> dza <sup>h</sup> ɣi
earth; ground	ˉs <sup>h</sup> o	finish	ˉt <sup>h</sup> a:
earthen jar	´za mo	fire	´mi
earthquake	ˉs <sup>h</sup> o <sup>h</sup> ŋi ro	fire [a shot]	ˉɰã
easy	´le: ɰo: mə	firewood	ˉɕ <sup>h</sup> i:
eat	´so	first	´nõ ŋã ˉbi: zə?
egg	<sup>-h</sup> go fiã	fish	´no
eight	<sup>-w</sup> dza?	fist	k <sup>h</sup> u zu
eighteen	ˉɕu? <sup>w</sup> dza?	five	ˉŋo
eighty	<sup>-h</sup> dza: zu	flat	´pa? pa?
elder brother	ˉku ɣu	flea	´dzo wo
elder sister	ˉtse tse	float	<sup>-h</sup> di: wo
eleven	ˉɕu <sup>h</sup> ɕi?	flood	`tɕ <sup>h</sup> u fiu <sup>h</sup> ɕ <sup>h</sup> ə?
embrace; hug	´fia ɣwe <sup>h</sup> rə <sup>h</sup> õ	flour	ˉts <sup>h</sup> e: ru
embroider	ˉ <sup>h</sup> tse?	flow; run	ˉrõ
empty	ˉpej bo	flower	<sup>m</sup> bu de?
ewe	´ləw? mo	fly	<sup>-h</sup> dõ <sup>h</sup> ŋe?
exchange	ˉtsə <sup>h</sup> zi <sup>h</sup> ˉpa <sup>h</sup> zi <sup>h</sup> jĩ	fog	´ra bo
excrement	ˉ <sup>h</sup> tɕa? pa	follow	kə <sup>h</sup> dzu: ˉpə ro?
expand; swell	ˉ <sup>?</sup> ja: <sup>h</sup> u	food steamer;	
extract [oil]	ˉzə	steam box	´se: s <sup>h</sup> o
eye	`mej?	fookstuff; grain	<sup>n</sup> də <sup>h</sup> <sup>n</sup> də
eyebrow	´mej <sup>h</sup> puw	foot	kə bo
face	´de: p <sup>h</sup> o	force; compel	ˉp <sup>t</sup> sã <sup>m</sup> bu la?
fall	ˉ <sup>?</sup> ma <sup>h</sup> ɰa?	forehead	ˉs <sup>h</sup> a <sup>h</sup> ŋa:
fall asleep	´me <sup>h</sup> ɕ <sup>h</sup> u? ro	forest	´ci <sup>h</sup> ɕej
false	<sup>-h</sup> dzã: ji mə	forget	ˉɰə: xwi ˉɕə
family members	ˉtɕ <sup>h</sup> ã: nõ kə <sup>h</sup> ´mə	forty	´rə <sup>h</sup> ɕu
far	ˉt <sup>h</sup> e: ´ri mə	foundation	´tɕã s <sup>h</sup> o
fart	ˉ <sup>h</sup> tsa?	four	<sup>-h</sup> zə
fat	ˉts <sup>h</sup> u: mə	fourteen	ˉɕu: <sup>w</sup> zə
father	ˉp <sup>h</sup> a <sup>h</sup> ga	fox	´wo

freeze; ice up	<sup>-</sup> h <sup>h</sup> k <sup>h</sup> iʔ	gum	ʼs <sup>h</sup> o <sup>h</sup> k <sup>h</sup> õ
fresh	<sup>-</sup> s <sup>h</sup> a <sup>h</sup> p <sup>o</sup> ʰtse seʔ	hail	<sup>-</sup> s <sup>h</sup> i: wo
friend	ʼrweʔ	hair	ʼlɔ
frighten; scare	<sup>-</sup> h <sup>h</sup> tɛ: lə <sup>h</sup> fiəʔ	half	<sup>-</sup> ʰts <sup>h</sup> ə ke: zəʔ
frog	<sup>h</sup> bi <sup>h</sup> ʰgā	Han Chinese	ʼdzo
front	ʰŋa: na	hand	ʼlɛ: bo
frost	ʼlɛʔ bo	happy	<sup>-</sup> ʰgo
frying pan	<sup>-</sup> ʰts <sup>h</sup> aj ji ʼso: kə ʼsõ	hard	<sup>-</sup> h <sup>h</sup> kə
full	kõ mə	hard; solid	<sup>-</sup> s <sup>h</sup> wo mə
fur-lined jacket	<sup>h</sup> tsaʔ pe	hat	ʼmow məw
future	ʼna ka: zi	hate	ʰtu ŋu
gall bladder	<sup>-</sup> h <sup>h</sup> t <sup>h</sup> e <sup>h</sup> p <sup>o</sup>	have a fever	ʰts <sup>h</sup> ej ro ʰu
garden	<sup>h</sup> gu <sup>h</sup> tso	have a headache	<sup>h</sup> gu ʼno
garlic	<sup>h</sup> go re	have found	ʰtɕ <sup>h</sup> a zə
gather [water]	<sup>h</sup> swi	have hit [the target]	ʰʰweʔ rə
gentle; amiable	ʼzõ: ʰdɛ: mə	have [money]	ʰt <sup>h</sup> e ts <sup>h</sup> a ʼfiəʔ
get angry; flare up	ʰtuʔ lõ	he; she; it	ʼti:
get dark	ʼme: ʼruw	head	<sup>h</sup> gu
get; acquire	ʰtɕ <sup>h</sup> aʔ roʔ / ʰt <sup>h</sup> aʔ roʔ	hear	<sup>-</sup> ʰt <sup>h</sup> u
get; fetch	<sup>-</sup> wlõ	heart	ʰñõ
girl	ʼpu mo ʰt <sup>h</sup> ə ʁi	heat up [cold rice]	ʰts <sup>h</sup> o
glass	ʰʂ <sup>h</sup> aj <sup>h</sup> ʰda	heavy	<sup>h</sup> dzəʔ mə
gnaw; nibble	ʼfiã ʰdɔʔ	help	ʼra: wu mə /
go upstairs	<sup>h</sup> go		ʼli <sup>h</sup> k <sup>o</sup> : ʰruw mə
go; leave	<sup>-</sup> s <sup>h</sup> owʔ / ʰs <sup>h</sup> ũ	hen	<sup>h</sup> tsa mu
goat	ʼro	herdsman	<sup>-</sup> h <sup>h</sup> tsə pe: zə mə /
god	ʼlɔ		<sup>-</sup> h <sup>h</sup> tsə pe: ʰgjo mə
gold	<sup>-</sup> h <sup>h</sup> s <sup>h</sup> ə	here	ʰra ra
good	ʼni: mə	hide	<sup>-</sup> ʰgo: mə
goods	<sup>-</sup> tɕa bu	high; tall	<sup>-</sup> ʰt <sup>h</sup> u
government official	<sup>-</sup> h <sup>h</sup> põ	highland barley	ʼni:
grandfather	<sup>-</sup> ʰa mi	hill; mountain	ʼrə
grandmother	ʰʰa ts <sup>h</sup> ə	hillside;	
grass	<sup>h</sup> tsə wo	mountain slope	ʼrə ʰgu
grassland	<sup>-</sup> h <sup>h</sup> tse <sup>h</sup> p <sup>o</sup>	hold; grasp	<sup>h</sup> tɕ <sup>h</sup> u <sup>h</sup> ʰku kə
green	ʰŋã ʰbu rũ	honest	ʼmə ʼni: mə
grey	<sup>h</sup> di wo	hoof	ʼsuʔ pu
grind [flour]	ʰʰts <sup>h</sup> i <sup>h</sup> ʰko:	horizontal	ʰxwã ʰtɕ <sup>h</sup> i
grow up	ʰtɕaʔ lo: ʼtsə	horse	<sup>-</sup> h <sup>h</sup> to
gruel; porridge	<sup>h</sup> dj s <sup>h</sup> oʔ	hot	<sup>-</sup> ʰts <sup>h</sup> ejʔ
guest	<sup>h</sup> dũ ʰbu	hot pepper	ʰhe zu

hot spring	˦tɕ <sup>h</sup> u ts <sup>h</sup> ã	last night	ʒe s <sup>h</sup> o
hot; spicy	˦ <sup>h</sup> zaw mə	last year	˦na ni
house	˦tɕɔ̃	laugh; smile	˦ <sup>h</sup> gwoʔ
how	˦ <sup>h</sup> tɕe ˦dɕə rə	lax; loose	˦ <sup>h</sup> lo: mə
how many	˦ka ˦tɕo: rə	lazy	˦tɕi tɕi ˦mi: mə
Huizu; Muslim	˦lwe ljo	lead [the way]	˦lãw ˦t <sup>h</sup> ɔ̃ʔ
human being	˦mə	leaf	˦la mo
hundred	˦dzo	leaf mustard	˦ <sup>h</sup> ku: bo
husband	˦ <sup>h</sup> ga bu	learn; study	˦ <sup>h</sup> lowʔ
I	˦ŋo	left	˦ <sup>h</sup> jəʔ le
ice	˦ <sup>h</sup> tɕ <sup>h</sup> aʔ roʔ	leopard; panther	˦zejʔ
in the evening	˦nə mo: rɕʔ	level; flat	˦ <sup>h</sup> t <sup>h</sup> õ ˦t <sup>h</sup> õ
in the past	˦ŋã ri	Lhasa	˦la s <sup>h</sup> o
incense	˦ <sup>h</sup> pu:	lie	˦ <sup>h</sup> tɕeʔ
inn; hotel	˦mə ˦ <sup>h</sup> da: s <sup>h</sup> o	life	˦ <sup>h</sup> weʔ
insect; worm	˦mbu leʔ	lift up; carry	˦ <sup>h</sup> tɕjeʔ
install; fix	˦ <sup>h</sup> ŋa: mə	lift [the lid]	˦ <sup>h</sup> kweʔ
intestine	˦ <sup>h</sup> dzu mo	light	˦s <sup>h</sup> õ s <sup>h</sup> õ
iron	˦ <sup>h</sup> tɕeʔ	light; bright	˦za wu s <sup>h</sup> o: mə
iron pot; iron pan	˦sõ	light <weight>	˦jõ mə
jackal	˦k <sup>h</sup> ã zeʔ	like; love	˦ <sup>h</sup> go:
joint	˦ru ˦ <sup>h</sup> po ˦ <sup>h</sup> da ri: s <sup>h</sup> o	lion	˦s <sup>h</sup> ə
jump	˦ <sup>h</sup> ɕ: ˦ <sup>h</sup> tɕ <sup>h</sup> i	lip	˦ <sup>h</sup> tɕ <sup>h</sup> u ˦pi:
just now	˦to zi	listen	˦ <sup>h</sup> i:
kerchief	˦to: ri	live	˦ <sup>h</sup> kãj ˦ <sup>h</sup> duʔ
key	˦ <sup>h</sup> dɕə ˦ <sup>h</sup> tɕeʔ ˦ <sup>h</sup> ts <sup>h</sup> e: s <sup>h</sup> o	live charcoal	˦s <sup>h</sup> e ɣweʔ
kick	˦le ˦ <sup>h</sup> do ˦ <sup>h</sup> lã	liver	˦ <sup>h</sup> tɕ <sup>h</sup> õ ˦ <sup>h</sup> bo
kidney	˦ <sup>h</sup> k <sup>h</sup> ẽ ˦ <sup>h</sup> di	livestock;	
kill	˦ <sup>h</sup> oʔ	domestic animals	˦ts <sup>h</sup> uʔ suʔ
king	˦ <sup>h</sup> ge: mo	lock	˦ <sup>h</sup> dɕə ˦ <sup>h</sup> tɕeʔ
kiss	˦wu: ʒeʔ	lock [the door]	˦ <sup>h</sup> dɕə tɕe ˦ <sup>h</sup> dɕə
kitchen	˦se: s <sup>h</sup> o	long	˦sã
knee	˦pa ɕu:	lose; defeated	˦tɕo: mə
kneel	˦pa ɕu: ˦ts <sup>h</sup> uʔ	lose [sthg]	˦ <sup>h</sup> ma ʒaʔ
knife	˦tɕə zi	loud; sound	˦tɕe:
knock; strike	˦ <sup>h</sup> dzə	louse	˦ <sup>h</sup> dɕə ˦ <sup>h</sup> ɕeʔ
know	˦ <sup>h</sup> ŋeʔ ˦ <sup>h</sup> iʔ	low; short	˦ <sup>h</sup> mej
know [to write]	˦ <sup>h</sup> ɕ <sup>h</sup> i roʔ	lukewarm	˦tsã ˦ <sup>h</sup> bu
ladle	˦ <sup>h</sup> cweʔ	lunatic	˦ <sup>h</sup> bwe mə
lake	˦ <sup>h</sup> ts <sup>h</sup> u	lunch	˦dza ro
lamp	˦sõ sõ	lung	˦ <sup>h</sup> lo wə

magpie	<sup>h</sup> tɕə ɣo	move [a stool]	ˀx <sup>h</sup> oʔ mə
maize; corn	ˀju mi	mow; cut [grass]	ˀ <sup>h</sup> tɕaʔ
make a row	ˀmeʔ	mule	ˀji:
make turn	ˀ <sup>h</sup> k <sup>h</sup> o	mushroom	ˀsa mu
make; cause	ˀ <sup>h</sup> miʔ	musk	ˀ <sup>h</sup> la <sup>h</sup> tsə
make [tea]	ˀ <sup>h</sup> bō	nail	ˀs <sup>h</sup> e: mo
man	ˀpu ʒi	nail; tack	ˀ <sup>n</sup> dzɯ ɣe
many; much	ˀmō mə	narrow	ˀpje de rə mə
mare	ˀ <sup>h</sup> ta mu	navel	ˀ <sup>h</sup> tə ɣi
marrow	ˀru ʒoʔ	near	ˀtsə <sup>h</sup> kwɛ
marry	ˀ <sup>h</sup> na mo ˀ <sup>n</sup> s <sup>h</sup> ɯ	neck	ˀnə <sup>h</sup> ka
maternal aunt	ˀma ʒo	needle	ˀ <sup>h</sup> kwɔʔ
maternal uncle	ˀta ʒo	nephew	ˀts <sup>h</sup> a wu
meal; food	ˀse	new	ˀs <sup>h</sup> a <sup>h</sup> po
meat	ˀs <sup>h</sup> o	New Year	ˀlu s <sup>h</sup> a <sup>h</sup> po
medicine	ˀmɔ	next year	ˀs <sup>h</sup> ō p <sup>h</sup> o
meet	ˀ <sup>n</sup> dzɯ	nine	ˀ <sup>h</sup> gu
merchant	ˀts <sup>h</sup> ə jū	nineteen	ˀtɕɯ <sup>h</sup> ˀ <sup>h</sup> gu
middle	ˀ <sup>h</sup> tɕi xuʔ	ninety	ˀ <sup>h</sup> gu ʒɯ
midnight	ˀ <sup>p</sup> ts <sup>h</sup> a <sup>h</sup> ˀts <sup>h</sup> ə	nit	ˀsə mo
milk	ˀle le	nod	ˀ <sup>n</sup> gu <sup>h</sup> ˀ <sup>h</sup> gu
milch cow	ˀru: ʒo: mə	noodles	ˀpə te
milk skin	ˀsa ʒwo	noon	ˀza ro: ʒi
mirror	ˀs <sup>h</sup> aj <sup>h</sup> ˀ <sup>h</sup> go	nose	ˀnə
money	ˀt <sup>h</sup> e tsa	nostril	ˀnə kə ˀpo: pu
Mongolian gazelle	ˀ <sup>h</sup> na fio	notify; inform	ˀtɕi ʒiʔ ˀs <sup>h</sup> aʔ
monkey	ˀʔa <sup>h</sup> ˀtʃi	oat	ˀjowʔ pu
monk's cloth	ˀ <sup>w</sup> la ɣu	of course; certainly	ˀʔa <sup>n</sup> ˀdɔ ˀjɿ
month	ˀ <sup>h</sup> da ʒiʔ	offer as an excuses	ˀ <sup>m</sup> p <sup>h</sup> i tɕo:
moon	ˀ <sup>h</sup> da: wo	offer; dedicate	ˀ <sup>h</sup> ta
morning	ˀswo <sup>h</sup> tɕi	offspring of a bull and a female yak	ˀ <sup>n</sup> dzu
morning (before the noon)	ˀza ro raw	oil	ˀjowʔ
mosquito	ˀ <sup>m</sup> bu <sup>h</sup> ˀtsiʔ	old lady	ˀ <sup>h</sup> ge mo gwe
mother	ˀma <sup>h</sup> ˀga	old man	ˀ <sup>h</sup> ga bu: gwe
mother-in-law	ˀma <sup>h</sup> ˀga	old; elderly	ˀlu tɕa: mə
mountain cave	ˀpu pu	on the target	ˀla: tɕ <sup>h</sup> o: mə
mouse	ˀ <sup>p</sup> tsə wo	on [the table]	ˀte
moustache	ˀ <sup>h</sup> ka <sup>h</sup> pu	on [the wall]	ˀx <sup>h</sup> eʔ
mouth	ˀ <sup>h</sup> tɕ <sup>h</sup> u <sup>h</sup> ˀku	one	ˀ <sup>h</sup> tɕejʔ
move	ˀ <sup>n</sup> gɿ <sup>n</sup> ˀgi roʔ	oneself	ˀrō riʔ



onion; scallion	<sup>n</sup> go dɛ	pillow	<sup>n</sup> go ŋi:
open [a door]	<sup>p</sup> ts <sup>h</sup> e	pit	ˈka fiu
open [the mouth]	<sup>h</sup> dɔ	pitiful	ˈpej ɕe?
oppose	ˈmi go	place	<sup>s</sup> h <sup>a</sup> ɕ <sup>h</sup> o
orphan	ˈp <sup>h</sup> a mo ˈme? mə	placenta	ˈt <sup>h</sup> u ɣi kə ˈru we
other people	ˈrō mə	plank; board	<sup>ɕ</sup> h <sup>i</sup> : ze
others; else	ˈtə rō	plant [trees]	ˈtsu?
outside	<sup>p</sup> ts <sup>h</sup> ə na	plant ash	ˈtʃi? k <sup>h</sup> a
owl	ˈwu? <sup>h</sup> ga: me: sə	plant; raise [wheat]	ˈtə: tsə
ox; cattle	<sup>h</sup> lō	plate; dish	<sup>h</sup> də <sup>h</sup> mo
pack-horse	<sup>h</sup> to ˈki: zə	play; amuse oneself	ˈtɕ <sup>h</sup> ə
pad; cushion	<sup>h</sup> ta: ti ɕ <sup>h</sup> ə	plough	<sup>m</sup> ū
paddle [a boat]	<sup>h</sup> tā	pluck [flowers]	<sup>h</sup> tɕa?
paddy; rice	<sup>n</sup> dʒi:	point at; point out	<sup>h</sup> tā:
palm	ˈle: ɕu:	point; tip	<sup>n</sup> něj s <sup>h</sup> o?
pare; pell with a knife	<sup>h</sup> zwe?	pointed; tip	<sup>n</sup> ne ˈne
parent	ˈp <sup>h</sup> a mo	polite; courteous	<sup>n</sup> dzi ˈdzi
parrot	ˈji ɡə?	pond	ˈtɕ <sup>h</sup> u me?
paste	ˈdzar	poor	<sup>h</sup> tō mə
patch [clothivg]	ˈtɕə?	poplar	<sup>p</sup> h <sup>a</sup> ɣa: p <sup>h</sup> e
paternal aunt	<sup>ʔ</sup> a s <sup>h</sup> ə	prepare	ˈʔa ˈnɔ ˈje ˈje bje
paternal uncle	ˈʔa ro	press; push down	<sup>h</sup> ni:
pea	ˈsa: <sup>h</sup> ka	press	
pea; bean	<sup>ʔ</sup> a ˈlo?	[with palm or finger]	<sup>h</sup> ne zje
peach	<sup>k</sup> h <sup>ā</sup> ˈmbu	promise; consent	<sup>h</sup> k <sup>h</sup> o: te
peacock	<sup>h</sup> ma? dzo	pull up	ˈtɕa?
pear	ˈlə	pull; tug	<sup>h</sup> t <sup>h</sup> ā
peasant	ˈli? ˈko: mə	pulse; beat	<sup>h</sup> dzu ˈpo ɣə ˈtɕ <sup>h</sup> ɪ
peck at [rice]	<sup>h</sup> t <sup>h</sup> u	punch [a hole]	<sup>m</sup> p <sup>h</sup> u?
people	ˈmə <sup>h</sup> sə	puncture	<sup>h</sup> t <sup>h</sup> o?
peppery; hot	ˈzaw	push; shove	<sup>m</sup> p <sup>h</sup> i
permit; allow	ˈpe fiɛ ˈɕ <sup>h</sup> wɛ?	put in [salt]	<sup>h</sup> ta?
pheasant	<sup>p</sup> tso ɣo	put on [the shoe]	<sup>n</sup> dzwo
pick up; collect	<sup>h</sup> t <sup>h</sup> a?	put [soil] on	ˈɕo? kə
pick up [food with chopsticks]	ˈlō	puttee	<sup>h</sup> kō ˈtɕə?
pig	<sup>p</sup> h <sup>j</sup> e?	quarrel	<sup>t</sup> h <sup>a</sup> ˈmə ɣə ˈja?
pig food	<sup>p</sup> h <sup>j</sup> e? zi	quick; fast	<sup>n</sup> ʒwe? mə
piglet	ˈp <sup>h</sup> jɛ? ɣi	quickly	ˈʔa do ˈʔa do
pile up; stack up	<sup>h</sup> dzwe? <sup>h</sup> dzwe?	rabbit	ˈrə be
pillar; column	<sup>k</sup> a wo	rafter	<sup>h</sup> gwə ˈtso
		rain	<sup>t</sup> ɕ <sup>h</sup> a bo

rain falls	ʼtɕ <sup>h</sup> a bo: ʼγə dɔ?	run	ʰdzu?
rainbow	ʰdzɔ	sad	ʰduw zi
raise [chickens]	ʰsu?	safe	ʼs <sup>h</sup> ə? <sup>h</sup> tsi: me:
raise [the tail]	ʰje? <sup>p</sup> tɕi:	saffron	ʰpũ <sup>m</sup> bu dɛ?
read	ʰda	salive	ʼtɕ <sup>h</sup> u mo
remember	ʰsã ʼto:	salt	ʰts <sup>h</sup> o
receive	ʰt <sup>h</sup> ɕa:	sand	ʰtsə mo
recognise	ʰŋe? ɕ <sup>h</sup> i	sandalwood	ʰdza ʰdzõ
red	ʰma <sup>h</sup> pu	savory	ʰgã mã
reduce	ʼle: bwe ʼlu?	scald; burn [the hand]	ʰtse?
relative	ʼno fio	scar	ʰmwo
release; set free	ʰlwe? tõ ʼʼto	scatter [seeds]	ʼrã:
rely; lean	ʼdzur? <sup>h</sup> ta	scissors	ʼtɕa <sup>h</sup> to?
remember	ʼtõ tɕ <sup>h</sup> o	scoop up [water]	ʰtɕu
repay	ʼlwe: <sup>h</sup> ta	sea	ʰts <sup>h</sup> u dza
rescue; save	ʰsu: <sup>h</sup> tɕu?	see [a doctor]	ʼnõ <sup>n</sup> dzur?
reserve [seeds]	ʰts <sup>h</sup> urw? ʰdzə?	see; catch sight of	ʰts <sup>h</sup> o? zə
rest	ʼmi: su?	seed	ʼs <sup>h</sup> ã xã
return	ʼlwe: pə	seek; look for	ʼni fiu ʰro
reverse side	ʼkwi? ʰdzɔ? ts <sup>h</sup> we?	sell	ʰtsi?
rice	ʰdji:	send; dispatch	
rice straw	ʰdji: s <sup>h</sup> we?	[a person]	ʰtõ
rich	ʰts <sup>h</sup> urw mã	send [a letter]	ʰkɔr
riddle	ʰta: ju?	set	ʰma ʼɕa?
ride	ʰco	set on fire	ʰmi ʰmbu
right [hand]	ʼtõ le s <sup>h</sup> we?	seven	ʰdã
right; correct	ʼni: mã	seventeen	ʰtɕur? ʰdã
right; front	ʰŋa nə ʰts <sup>h</sup> we?	seventy	ʰdã zu
ring	ʼpə? ʼto:	sever; sharp	ʼzaw? ʼʼto: mã
rise; come out	ʼbu lo?	sever [a rope]	ʰtɕa?
rise; stand up	ʼji lã	shake [head]	ʰgu <sup>h</sup> turw?
river	ʰtɕ <sup>h</sup> u	shallow	ʼmi saw mã
river deer	ʰla wo	shave [the head]	ʰwzɔ
road	ʼlõw	sheep	ʼlõw?
rob; loot	ʰt <sup>h</sup> we?	shell [peanuts]	ʰkwe?
robber	ʰku mo	shirt	ʼnõ <sup>h</sup> tɕə?
rock	ʰtɕ: kə?	shoe	ʰdzɔ? xã
roll up [cloth]	ʰdɕe	shoot [an arrow]	ʰɕa?
roof	ʰk <sup>h</sup> o li	short	ʰt <sup>h</sup> uj
root	ʰkõ	shoulder	ʰpej bo
rough	ʰtso? <sup>h</sup> tso?	show	ʰdzɔ? ʰtɕu?

shy; shame	ʰtɕʰi:	spider	ʼtwe leʔ
side	ʼdaw na	splash; sprinkle	ʰdɕu
sing	ʼtu	split up	ʰtu: / ʼtɕʰɛ:
sink	ʰma: ʰti	spring	ʰtɕʰu
sister	ʼmi: sʰi:	spring and summer	ʰje ʰko
sit; stay	ʰdɔwʔ	sprinkle; spray	ʰdzuʔ
six	ʰtuwʔ	spurt; sprint	
sixteen	ʼtɕu ruʔ	[in the front]	ʰdzu
sixty	ʼtuw zu	sputum	ʰka luʔ
skin	ʰpa: bje	squeeze [for milk]	ʰzu
skirt	ʼma: ɕō	squirrel	ʰtsə lə
sky	ʰnaw	stairs	ʰki:
slanting; leaning	ʰzo ʰzo	stallion	ʰta pʰu
sleep	ʼmɛ ʰtuʔ	stand	ʼlō
sleeve	ʰta dejʔ	star	ʰka: mo
slippery [road]	ʰdɛ: mə	steal	ʰku
slow	ʼdə ʰdə ʰrā ʰgo mə	steam	ʰla bo
small	ʰtɕʰejʔ	steamed stuffed bun	ʼʔa xu
smell	ʼnō ʰbo ʼno	steamed bun	ʼpə ləʔ
smoke	ʼta ʰpo	steelyard; scales	ʼdza mo
smooth	ʰdzā ʰdzā:	step on; trample	ʰdajʔ
snail	ʰmbu wo wo	stepfather	ʰpa jo
snake	ʰdji: tɕɔʔ	stepmother	ʼma jo
snap [a thread]	ʼβu ʰtɕeʔ	stick down	
sneeze	ʰdɔʔ ʰpo: rə	[an envelope]	ʰka tɕ
snow	ʰka fio	sticky; glutinous	ʰka ʰma
soft	ʰlo mə	stomach	ʰha fio
soil; earth	ʰsʰo	stone	ʰdɔ ʰgɛʔ
soldier	ʰmjeʔ mə	stool; bench	ʼmə ʰdo: sʰo
solid	ʼtā da:	stop; cease	ʼta mō ʰgo
some	ʰtsʰə ke: zəʔ	storehouse	ʰtɕa bu ʰze: sʰo
sometimes	ʼjow pə ʼjow	straight	ʼtō tō
son	ʼpu zi	stroke; touch	ʰmī ɲweʔ
son-in-law	ʼpu le	suddenly	ʰlu ʰdzo: xʰoʔ
sound	ʰkaʔ	sugar	ʰdō
soup	ʼtsʰaj tɕʰu	suitable	ʼrāʔ / ʼraʔ
sour	ʰtɕə ʰmə	sun	ʼni mə
sow	ʼpʰjeʔ mu	sunbathe; to sun	ʼnə mo: ʰdiʔ
soybean	ʼsa: mo	sunflower	ʼnə mə: ʼmu deʔ
sparrow	ʼtɕʰu ʰgwe tɕʰo: ʔo	supper	ʼsa ʰtuʔ
speak	ʰsɔwʔ	support; raise	ʰsu: tɕo:

swallow	<sup>ʰ</sup> tsa gə ʔri: ti	this	ʔa ra / ʔnə
swear; vow	ˋ <sup>w</sup> nō <sup>h</sup> təə	this side; here	ʔnə <sup>ʰ</sup> ts <sup>h</sup> weʔ
sweat	ˋ <sup>h</sup> tsa ɕ <sup>h</sup> u	this way; like this	ʔa <sup>n</sup> də ra
sweep	ˋ <sup>m</sup> ts <sup>h</sup> eʔ	this year	ʔtə zə
sweet	<sup>ʰ</sup> ŋa: mə	those	ʔtə rā
swim	ˋ <sup>t</sup> ɕ <sup>h</sup> u <sup>h</sup> tɕi <sup>ʰ</sup> dzoʔ	thousand	<sup>ʰ</sup> tɕej tɕ <sup>h</sup> o
table	ʔse ʔso s <sup>h</sup> o	thread	ˋ <sup>k</sup> u bo
tadpole	ˋ <sup>t</sup> ɕə no: kə ˋ <sup>t</sup> ɕa pa	three	ˋ <sup>h</sup> sā
tail	<sup>ʰ</sup> dzuʔ mo	three days ago	ˋ <sup>x</sup> <sup>h</sup> a nā: <sup>h</sup> ke
tailor	<sup>ʰ</sup> kuʔ zi ʔto: mə	threshold	<sup>ʰ</sup> gwə tā
take out	ʔəʔ p <sup>h</sup> əʔ	throat	ˋ <sup>k</sup> o <sup>ʰ</sup> loʔ
take; hold; get	ˋ <sup>x</sup> <sup>h</sup> oʔ	throw; toss	<sup>n</sup> dō
tea	ʔtə	throw oneself	
tea with milk	ʔsa tə	on the earth	ˋ <sup>ʰ</sup> ts <sup>h</sup> eʔ <sup>ʰ</sup> ts <sup>h</sup> e
teach	ˋ <sup>l</sup> aʔ	throw up; vomit	ˋ <sup>h</sup> tɕuʔ ˋ <sup>t</sup> <sup>h</sup> a: ja
teacher	ʔgi <sup>ʰ</sup> ga	thumb	<sup>n</sup> dzə ʔi <sup>ʰ</sup> dza ma
tear up; rip	ˋ <sup>p</sup> ʔi	thunder	<sup>n</sup> dʉʔ
tears	ʔmej tɕ <sup>h</sup> u	Tibetan robe	ʔpoʔ ʔu
tell	ʔli tɕa: ˋ <sup>h</sup> ɕaʔ	Tibetan	ʔpoʔ
ten	ˋ <sup>ʰ</sup> tɕu	tiger	ˋ <sup>h</sup> teʔ
ten thousand	ˋ <sup>t</sup> <sup>h</sup> ə s <sup>h</sup> wi ˋ <sup>z</sup> əʔ	time	ʔnā x <sup>h</sup> oʔ
tendon	<sup>ʰ</sup> dzu <sup>h</sup> po	to blossom	ˋ <sup>ʰ</sup> gi:
tense	ʔtā da:	to buckle; button up	<sup>ʰ</sup> dʉweʔ <sup>ʰ</sup> dzə
that	ˋ <sup>p</sup> <sup>h</sup> a: ʔu <sup>m</sup> be	to change	<sup>ʰ</sup> zi
that [over there]	ʔti:	to comb	ˋ <sup>ɕ</sup> <sup>h</sup> aʔ
that [way] / [like] that	ʔtə <sup>n</sup> də ra	to cough	ˋ <sup>s</sup> <sup>h</sup> awʔ
there	ʔtə ra	to dance	ʔdu: <sup>ʰ</sup> ɕ <sup>h</sup> ā
there is; exist	ʔjoʔ	to dream	ˋ <sup>m</sup> ə la: ˋ <sup>m</sup> əjʔ
thereupon; then	ʔa <sup>n</sup> də / ʔtu <sup>ʰ</sup> də	to fish	ˋ <sup>ʰ</sup> zə
these	ʔa na ʔrō ʔmə <sup>ʰ</sup> gə	to fly	ˋ <sup>m</sup> p <sup>h</sup> a
they	ʔtə rā	to guard; defend	ˋ <sup>s</sup> e: bo
thick	ʔtuʔ tuʔ rə ma	to hang; suspend	ˋ <sup>h</sup> tsō
thief	ˋ <sup>h</sup> ku mo	to harvest	ˋ <sup>n</sup> dəʔ
thigh	<sup>w</sup> la <sup>h</sup> ɕo	to hook	ˋ <sup>t</sup> s <sup>h</sup> əʔ t <sup>h</sup> a
thin	ʔsəʔ səʔ rə ma / ʔgwe mə	to itch; tickle	<sup>n</sup> də
thin <in diameter>;		to leak	ʔse:ʔ
fine	ˋ <sup>ʰ</sup> o	to light [a fire]	ˋ <sup>m</sup> buʔ
thing	ˋ <sup>t</sup> ɕa bu	to light [a light]	ˋ <sup>m</sup> baʔ
think	ˋ <sup>ʰ</sup> sā	to lightning	ˋ <sup>ʰ</sup> lowʔ ʔma
thirteen	ˋ <sup>t</sup> ɕu <sup>h</sup> sā	to marry	ˋ <sup>t</sup> ɕ <sup>h</sup> ō nɛ
thirty	ˋ <sup>s</sup> <sup>h</sup> ō <sup>ʰ</sup> tɕu	to measure	ʔje <sup>n</sup> dzi:

to open	<sup>ˈ</sup> pʰtsʰi	ugly	ˈmi ˈdze: mə
to pad	<sup>ˈ</sup> fi:di:	uncle (maternal)	ˈʔa rō
to plait; weave	ˈʔo mə	uncle	ˈʔa ni
to rake	ˈmu mə	under [the table]	ˈɕaw
to reverse	<sup>ˈ</sup> pʰtsʰə ʰfiu ˈhʰtswe mə	understand; know	ˈɕʰi / ˈɕʰiʔ
to saw	ˈka ra	unseam [clothing]	ˈhʰtɕaʔ mə
to scold	ˈtʰawʔ	upstairs	ˈhʰkʰo ti
to shave [hairs]	ˈtɕʰō	urine	ˈhʰtɕō
to shoulder	ˈpejʔ po: ˈtʰe:	used; old	ˈni: bo
to skin [cattle]	ˈzɛ: mə	uvula	ˈhʰtɕi: ˈtɕʰə ʔi
to smoke [a cigarette]	<sup>ˈ</sup> piʰ ɕj	valley	ˈlej kuw
to swallow	ˈmejʔ	vat; jar	ˈda wo
to thunder	ˈtʰweʔ ʔoʔ	vegetable oil	ˈma: nuw
to work	ˈli ʰko: ˈjoʔ	vertical	ˈjeʔ tsə: mə
to wrap	<sup>ˈ</sup> ge: mə	very; quite	ˈzejʔ
to yawn	ˈhaʔ hi: gə	village	ˈji: ʰxʰō
tobacco	<sup>ˈ</sup> tsʰa ja	vinegar	ˈhʰtɕu: tsʰu
today	ˈtə ri	vulture	ˈpʰtsa ˈgoʔ
toilet	<sup>ˈ</sup> dzeʔ kʰō	waist	ˈhʰkəʔ po
tomorrow	ˈnə ka	wait	ˈsʰe jō
tomorrow night	ˈnə ka: ˈnə mo	wake up	ˈni: sʰa
tongue	ˈhʰtɕi	walk	ˈŋgo
tonight	ˈtə mo	wall	ˈhʰtɕejʔ po
tooth	ˈsʰu	walnut	ˈhʰta ˈgo
tortoise	<sup>ˈ</sup> dzi: bo	want; need	ˈŋgu:
treasure	ˈnō ˈwgo	want [to go]	ˈɕsū
tree	ˈɕʰi ɕe	warm	ˈtu: ro
trousers	ˈtə mo	wash [clothes]	ˈɕtuw
true	ˈtō miʔ	watch	ˈnʰdzoʔ
trunk	ˈɕʰi ʰka	water	ˈtɕʰu
try; attempt	ˈtsʰa sa ˈfi:dzeʔ	wave	ˈtɕʰu ˈliəw
turn inside out	ˈpʰtsʰə ˈfi:dzeʔ	we	ˈme zə
twelve	ˈtɕu: ˈniə	we <inclusive>	ˈme zū tɕu ʰfi
twenty	ˈni ɕu	weak	ˈzə za mə ʰni mə
twenty-one	ˈni ɕu ˈhʰtsa ziʔ	wear [a garment]	ˈtɕwū
twins	ˈtʰə ʔi ˈni wō	wear [a hat]	ˈtɕū
two	ˈniə	wear [a turban]	ˈhʰpor
two days after		weather is fine	ˈnāw ʰka
tomorrow	ˈzi: ˈni	weave [a basket]	ˈtʰe mə
two of them	ˈtə ni: ˈniə	web	ˈtwe leʔ ˈtsʰō so
two of us	ˈme ni: ˈniə	weigh [food]	ˈnʰdə ˈnʰdə ˈhʰtɕeʔ

welcome; greet	˘ʰsuː ʰkʰor	woman	ˈmə re: jō
well	ˈtɕʰu meʔ	wood; log	ˈde: mo
wet	ˀba ra:	wooden bowl	ˀɕʰi kə ʰpʰə ro
what	˘tɕe	woodpecker	ˈʈa: ˈmu: kwa
wheat	ˈdʰɕ	wool	ˈləwʔ ʰpu
wheat straw	ˈʈa sʰweʔ	worry; be anxious	ˀdiːduw ro
when	˘nā	wound	ˀmwo: te: tɕʰoʔ
where	ˈkaj	wrinkle	ˀtsə ˀbu
whet [a knife]	ˀdaʔ	write	ʰtɕ
whip; thrash	ˀɕaʔ	wrong	ˈmə ni: mə
white	ˀka ʰpu	yak	ˀjeʔ
who	˘sʰu	year	ˈlo ʒe
wide <in diameter>	ˈbu	year before last	ˈʒe ni ɣu
wife	ˀgi mu	year after next	ˈrə pʰo / ˈrə ʰo
wild boar	ˀpʰjeʔ ʰgoʔ	yellow	ˈsʰə ʰpu
wild goose	ʰtsa ɡə ˀri: ti	yesterday	ˈkʰa zō
willow	ˀdo wō pʰe	yoghurt	ˈta ro
win; gain	˘tʰowʔ	you (sg)	ˀtɕʰeʔ
wind	ˀliũ maʔ	you (pl)	ˀtɕʰeʔ ʒā
wind blows	ˀliũ ma: ˈlō	you two	ˀtɕʰeʔ ni: ʰnə
window	ˀga kʰe	young	ˈlu tɕʰi: mə
wing; fin	ˀda pu	younger brother	ˀʒa ni
wipe	ˀmʰtsʰa mə	younger sister	ˀsʰi: mo
wolf	ˀpa fio		