

DRENJONGKE PHONOLOGY, PHONOLOGICAL
DRENJONGKE AND ROMAN DRENJONGKE

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DRENJONGKE PHONOLOGY

The Drenjongke phoneme inventory comprises 45 segmental consonant phonemes and 13 vowel phonemes. Drenjongke distinguishes two register tones, high and low. The Drenjongke initials /k, kh, c, ch, t, th, p, ph, tr, thr, ts, tsh, sh, s, hr, lh, hng, hny, hn, hm, h, ʔ/ are inherently followed by the high register tone. The Drenjongke initials /g', g, j', j, d', d, b', b, dr', dr, dz, zh, z, zh', z', r/ are invariably followed by the low register tone. The Drenjongke continuant initial phonemes /y, w, l, ng, ny, n, m/ may occur in either high register or low register tone syllables.

In syllables beginning with the latter type of onset, phonetic studies have shown that the high pitched portion of the tonal contour is realised predominantly during the continuant onset rather than during the ensuing vowel (Lee & Kawahara 2018, Lee *et al.* 2018, Perkins *et al.* 2018, Namgyal & van Driem 2020), thus providing synchronic acoustic evidence that this articulation arose diachronically from the reduction of the historical 'nyönju ལྷོན་འཇུག་ *sñon-hjug* to the preglottalisation of the following continuant. Minor syllables might not themselves be tone bearing and so consequently assimilate for tone to the preceding syllable. The palatal approximant phoneme ཡ /y/ [j] may occur as a post-consonantal glide following any of the Drenjongke velar or bilabial plosive initials, and is written in traditional orthography with a yata ཡ་འདྲའམ་ *ya-btags*.

Consequently, any of 60 following different possible consonantal onsets may occur in a Drenjongke syllable. These onsets are shown in the following table. Each Drenjongke initial is given first in the phonemic script known as Roman Drenjongke followed by the corresponding phonetic transcription of the consonantal onset, as represented in the notation of the International Phonetic Association:

k [k]	kh [k ^h]	g' [k̥ ^h]	g [g]
ky [kj]	khy [k ^h j]	gy' [k̥ ^h j]	gy [gj]
c [tɕ]	ch [tɕ ^h]	j' [t̥ ^h]	j [dʒ]
t [t̪]	th [t̪ ^h]	d' [t̥ ^h]	d [d̪]
p [p]	ph [p ^h]	b' [p̥ ^h]	b [b]
py [pj]	phy [p ^h j]	by' [p̥ ^h j]	by [bj]
tr [t̪]	thr [t̪ ^h]	dr' [t̥ ^h]	dr [d̪]

ts [tʂ]	tsh [tʂ ^h]	dz [dʒ]
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zh [ʒ]	z [z]
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zh' [ʒ̥]	z' [z̥]
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sh [ʃ]	s [s]
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y [j]	'y [ʔj]
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w [w]	'w [ʔw]
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l [l]	'l [ʔl]	lh [l̥]
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ng [ŋ]	ny [ɲ]	n [n]	m [m]
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'ng [ʔŋ]	'ny [ʔɲ]	'n [ʔn]	'm [ʔm]
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hng [ŋ̥]	hny [ɲ̥]	hn [n̥]	hm [m̥]
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h [h]	' [ʔ]
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The traditional 'Ucen དབྱེ་བུ་མཚན་ *dBu-can* script, which in the seventh century emulated the earlier Indic model of the Gupta writing system, does not appear to treat the glottal stop in initial position as a consonant phoneme, but rather as one of two contrasting types of vocalic syllable onsets. We list the glottal stop in the table above for the sake of completeness, but we treat the phoneme in accordance with the native scholarly tradition, which opposes vocalic onsets beginning with breathy phonation, followed in the modern Bodish languages by low register tone, written ཨ་ *ha* [h̥a], ཨི་ *hi* [h̥i], ཨུ་ *hu* [h̥u] and so forth, in contrast to vocalic onsets char-

acterised by sudden glottalic release, followed in the modern Bodish languages by high register tone, written ཨ་ *a* [ʔa], ཨི་ *i* [ʔi], ཨུ་ *u* [ʔu] and so forth. In accordance with our phonological analysis of the language, in Roman Drenjongke vocalic onsets in breathy phonation are left unmarked <a, i, u>, whereas vocalic onsets commencing with abrupt glottalic release are marked with an apostrophe <'a, 'i, 'u>. Continuant onsets of syllables in high register tone are likewise marked with an apostrophe preceding the letter symbol <'y, 'w, 'l, 'ng, 'ny, 'n, 'm>.

Only a small subset of the Drenjongke consonant phonemes occur at the end of a syllable. These consonantal coda phonemes are /k/ [k], /p/ [p], /r/ [r], /l/ [l], /ng/ [ŋ], /n/ [n], /m/ [m] and /ʔ/ [ʔ]. The nasal coda phoneme /ng/ is often realised as nasalisation of the preceding vowel.¹

The Drenjongke vowel phoneme inventory comprises 13 phonemes. The phonetic realisation of the Drenjongke vowels differs subtly from that of their Dzongkha counterparts. Most notably, the phoneme rendered in Roman Drenjongke as <ä> [ɛ] does not have as open a realisation as the corresponding Dzongkha vowel. The Drenjongke vowels /a/ [ɑ], /e/ [e], /i/ [i], o [ɔ ~ ɔ], /u/ [u] have long Drenjongke counterparts /â/ [ɑ:], /ê/ [e:], /î/ [i:], ô [o:], /û/ [u:]. Just as in Dzongkha, Drenjongke phonology treats the three apophonic vowel phonemes /ä/ [ɛ], ö [œ], ü [y] as inherently long. The three vowels /e, ê, ä/ lie much closer to each other in phonetic space than do the corresponding vowels in Dzongkha.

The symbols of Roman Drenjongke have been chosen both to represent the sound system of the Drenjongke, using the Latin script as much as possible in conformity with the usage of the Roman alphabet in English and other Western orthographic traditions, and to remain in harmony as much as possible with the conventions of Roman Dzongkha (Tshering & van Driem 2019). The differences between Roman Drenjongke and Roman Dzongkha faithfully reflect linguistic differences between the phonologies of these two closely related Bodish languages.

¹ Contrary to what Yliniemi (2019: 38) maintains, there are no glottalised nasal finals. His example རྩམ་ 'incense' is correctly pronounced [sã]. Yliniemi anglicises the name of the Drenjongke language as 'Denjongke', though acknowledging that this transcription misrepresents actual native speaker pronunciation (Yliniemi 2019: 1, fn. 3). In his phonetic transcriptions, Yliniemi (2019) uses an inverted apostrophe for Drenjongke devoiced aspirate plosives in low register tone. The use of an inverted apostrophe is considered obsolete in International Phonetic Association notation. Conventionally, an inverted apostrophe is used to transcribe the Arabic sound 'ayn, and in some Polynesian romanisations, e.g. Hawai'ian, the inverted apostrophe indicates a glottal stop. In Armenian linguistics, the inverted apostrophe indicates aspiration, e.g. <p', t', k'>.

PHONOLOGICAL DRENJONGKE

Phonological Drenjongke is a phonemic writing system for the language in the native Sikkimese 'Ucen དབྱེ་ཅན་ *dBu-can* script. A one-to-one correspondence obtains between the pronunciation of the spoken language and the spelling. Each Drenjongke consonant initial in the following table is listed first in Roman Drenjongke followed by its rendering in Phonological Drenjongke:

k ཀ	kh ཁ	g' ག	g ག
ky ཀྱ	khy ཁྱ	gy' གྱ	gy གྱ
c ཅ	ch ཅ	j' ཇ	j ཇ
t ཏ	th ཐ	d' ཏ	d ཏ
p བ	ph བ	b' བ	b བ
py བྱ	phy བྱ	by' བྱ	by བྱ
tr ཎ	thr ཎ	dr' ཎ	dr ཎ
	ts ཅ	tsh ཅ	dz ཅ
	zh གཞ	z གཞ	
	zh' ག	z' ག	
	sh ག	s ག	
	y ཡ	'y རྩ-	
	w ཡ	'w རྩ-	
	r ར	hr ར	
	l ལ	'l ལ	lh ལ
ng ར	ny ར	n ར	m ར
'ng ར	'ny ར	'n ར	'm ར
hng ར	hny ར	hn ར	hm ར

h ཏ

The conventions of Phonological Drenjongke are as much as possible in accordance with the traditional and historical use of the 'Ucen དབྱེ་ཅན་ *dBu-can* script for rendering Tibetan and also reflect the historical processes of phonological change that have unfolded over the course of centuries in the South Bodish languages, Drenjongke and Dzongkha.

Phonological Drenjongke uses the rago ར་མགོ་ *ra-mgo* 'superscripted r' in respect of traditional orthographic convention, where gocen མགོ་ཅན་ *mgo-can* 'superscript letters' and 'nyönju སྟོན་འབྲུག་ *sñon-hjug* 'prefixed letters' have protected initials from the inexorable forces of phonological change by hardening the initials, or rather maintaining their 'hard' or dra drakpa ལྷ་རྟགས་ *sgra drag-pa* pronunciation. The unshielded letters on the other hand were left exposed, as it were, to the corrosive forces of phonological change and thus evolved into devoiced aspirate initials or 'soft' or dra jampa ལྷ་འཇམ་པ་ *sgra hjam-pa* sounds in Drenjongke and Dzongkha, with subtle differences in the acoustic quality of these initials between these two closely related South Bodish languages. In Roman Drenjongke and Roman Dzongkha, such historically softened initials are therefore marked by an apostrophe after the letter symbol <g', gy', j', d', b', by', dr', zh', z'>.

Ideally, for the sake of orthographic consistency we would prefer to use the rago ར་མགོ་ *ra-mgo* as well in Phonological Drenjongke for the combinations representing the hard or dra drakpa ལྷ་རྟགས་ *sgra drag-pa* initials ལྷ་ /by/, ལྷ་ /dr/, ལྷ་ /zh/ and ལྷ་ /z/, if only the computer fonts for the Tibetan script were to be so malleable at this time. At such time as computer fonts for Tibetan script are updated accordingly, Phonological Dzongkha could be likewise refined.

The sago ས་མགོ་ *sa-mgo* 'superscripted s' is used in the orthographic combinations that represent the voiceless nasal phonemes unique to Drenjongke. This convention respects the historical phonology of the language over the course of centuries by reflecting the phonetic environment that led to the historical development that gave rise to these Drenjongke phonemes: /hng/ ལྷ་, /hny/ ལྷ་, /hn/ ལྷ་, /hm/ ལྷ་, e.g. ལྷ་ལེ་ hngâle [ŋaːle] 'early', ལྷ་ hno [ŋo] 'snot' (Lachen), ལྷ་ཅུ་ hneu [ŋeu] 'snot', ལྷ་པ་ hnyap [ŋap] 'claim, seize', ལྷ་ hnya [ŋa] 'borrowed', ལྷ་ལེ་ hnyê ~ hnyî [ŋeː ~ ŋiː] 'trap', ལྷ་ལྷ་ hnyik [ŋik] 'squeeze', ལྷ་མ་ hnyima [ŋima] 'impure', ལྷ་མེ་ hme [ŋe] 'lower'. A similar historical development can be seen in Burmese, but Dzongkha lacks voiceless nasal sounds. In the historical phonological development of Drenjongke, the lost sibilant represented in traditional orthography by the sago ས་མགོ་ *sa-mgo* also exerted this devoicing

effect on the liquid /l/ in native or *tadbhava* words, e.g. ལྷན་པ་ [lapdza] ‘counsel, advice’.

Phonological Drenjongke renders the use of the tshala ཚ་ལག་ *tsha-lag* superfluous. This Sikkimese diacritic invented in the 1980s by རྣམ་ལུགས་ཚེ་རིང་ ལྷོ་ལཱ་ Norden Tshering Bhutia and བསྐྱེད་ལཱ་འཛིན་ལྷན་རྒྱལ་རྒྱུ་དང་པོ་ Pema Ringzing Takchungdarpo mimics the flourish normally found on the upper right corner of the letters ཅ་, ཚ་ and ར་, but was transposed innovatively onto the letters བ་, བ་ and བ་ to indicate that the bilabial initials represented had not morphed into a palatal by the addition of a yata ཡ་བཏགས་ *ya-btags*. In Phonological Drenjongke, the tshala becomes unnecessary, since the combinations བ་ /py/, བ་ /phy/, བ་ /by’/ and བ་ /by/ invariably represent the unique Drenjongke retention of a bilabial initial in combinations with a palatal approximant offglide. In phonemic writing, palatal phonemes are represented in a straightforward and consistent way by the palatal letter symbols ཅ་ /c/, ཚ་ /ch/, ར་ /j’/ and ར་ /j/.

ལྷན་	‘throat’	ken	ཀེན་
ཀེན་	‘palate’	ken	ཀེན་
ཀྱེན་	‘reason’	kyen	ཀྱེན་
ཕྱེན་	‘meet’	phe	ཕེན་
ཕྱེ་	‘separate’	phye	ཕྱེ་
རྒྱུན་	‘winter’	gün	རྒྱུས་ན་
རྒྱུན་	‘continue’	gyün	རྒྱུས་ན་

With the new phonemic writing system in native Sikkimese script, other uses of the tshala are likewise rendered superfluous because Phonological Drenjongke brings back the use of the ’Ucen དབྱེ་ཅན་ *dBu-can* letter symbols to their original intent at the time of the venerable inventor of the script. The august linguist Thonmi Sambhoṭa understood the principles of phonology and developed a streamlined phonological writing system ideally suited to the language as it was spoken in the seventh century. However, the language has changed relentlessly since then and given rise to the modern Tibetan language as spoken in Shikàtsé and Lhásá, the Dzongkha language of Bhutan, the Drenjongke language of Sikkim as well as the many other divergent Bodish languages as far as Amdo in the northeast and Baltistan in the west.

The symbols in the following table show the Phonological Drenjongke conventions for syllable beginning with a vowel. The thirteen Drenjongke vowels may occur in either the high or low register tone. The left half of the table shows the representations for vocalic onsets beginning with breathy phonation, followed by low register tone. The right side of the table shows the representations for vocalic onsets characterised by abrupt glottalic release, followed by high register tone.

ཨ་	ཨི་	ཨུ་	ཨེ་	ཨོ་	ཨ་	ཨི་	ཨུ་	ཨེ་	ཨོ་
a	i	u	e	o	'a	'i	'u	'e	'o
ཨྱ་	ཨྲི་	ཨྲུ་	ཨྲེ་	ཨྲོ་	ཨྱ་	ཨྲི་	ཨྲུ་	ཨྲེ་	ཨྲོ་
â	î	û	ê	ô	'â	'î	'û	'ê	'ô
ཨས་	ཨོས་	ཨུས་			ཨས་	ཨོས་	ཨུས་		
ä	ö	ü			'ä	'ö	'ü		

All thirteen vowels shown occur in Drenjongke in the high and low register tones. Not all vowel-initial possibilities shown occur at the beginning of attested Drenjongke words, but all are permissible within Drenjongke phonology. The following table illustrates the orthographic rendering of all thirteen Drenjongke vowels in a syllable with a consonantal onset.

ཀ་	ཀི་	ཀུ་	ཀེ་	ཀོ་
ka	ki	ku	ke	ko
ཀྱ་	ཀྲི་	ཀྲུ་	ཀྲེ་	ཀྲོ་
kâ	kî	kû	kê	kô
ཀས་	ཀོས་	ཀུས་		
kä	kö	kü		

In accordance with the traditional usage of the 'Ucen script to indicate Indic long or *dīrgha* vowels, the ཨ་ཟུར་ *ḥa-zur* or subscripted ཨ་ *ḥ* is used in Phonological Drenjongke to indicate vowel length, e.g. ཨུྱ་ *hû* 'kettle'. The three apophonic vowels are indicated by a following ས་ *s* in accord-

ance with the historical regularity that the codas ས་ *s*, ད་ *d*, ལ་ *l*, ན་ *n* triggered apophony or *Umlaut*, e.g. སྐད་མོ་ *skodm* ‘neck’ köm [kœm], ཡུལ་ *yul* ‘place, village’ ü [y], consistently at least in Chöke.

In *tadbhava* words both in Drenjongke and in Dzongkha, a historical final ས་ *s* has not generally yielded apophony, but has produced lengthening instead. For example, Drenjongke བགས་ཀོས་ *pags-kos* ‘skin’ is pronounced as པཱཀོ་ pākô, whereas historical གོས་ *gos* ‘cloth, Bhutanese male garb’ has come to be pronounced in modern Dzongkha as གོ་ g’ô, but this particular word has been written as བགོ་ *bgo* in Bhutan since the 1970s. The latter orthographic choice made at a time of modernisation is linguistically unfortunate because the spelling བགོ་ *bgo* suggests that the word is pronounced in the same way as གོ་ *sgo* ‘door’, whereas, in fact, both the initial consonant and the vowel are different in the two words. This phonological difference in the modern language is faithfully represented in the Phonological Dzongkha and Roman Dzongkha spellings as གོ་ g’ô ‘Bhutanese mail garb’ and གོ་ go ‘door’. Likewise, Phonological Drenjongke and Roman Drenjongke serve the purpose of accurately representing the pronunciation of the modern living language in Sikkim today.

Both Drenjongke and Dzongkha are replete with *tatsama* borrowings that have in many cases crowded out the native forms. Therefore, just as Phonological Dzongkha, in Phonological Drenjongke too, a final ས་ *s* is likewise used to indicate apophony (*Umlaut*) of the vowel. Phonological Drenjongke must be consistent in that there must be a one-to-one correspondence between sound and spelling. Since a final ན་ *n* does not trigger apophony in native *tadbhava* forms, in Phonological Drenjongke, the letter ས་ *s* is used to indicate an apophonic vowel, even before a coda ན་ *n*.

In this respect as well, Phonological Drenjongke follows Phonological Dzongkha (Tshering & van Driem 2019), e.g. བདུན་ *bDun* [du:] ངུ་ dü ‘seven’, whereas a coda ན་ *n* does trigger apophony in *tatsama* or Chöke forms, e.g. བདུན་ *bDun* [dyn] ངུ་དྲན་ dün ‘seven’. Therefore, the letter ས་ *s* is written in the Phonological Drenjongke rendering of དུམ་ལྷོ་ *dGun* [gyn] ལྷོ་ gün ‘winter’, but not in the word ལྷོ་འབྲུག་ *rGun-hbrum* [gundrum] ལྷོ་ ལྷོ་ ‘grapes’. This regularity is likewise manifest in the native pronunciation of proper nouns. For example, the name ལུན་བཟའ་ *Kun-bzan* [kun-zan] is pronounced ལུན་གཟའ་ Kunzang or commonly also as [kunzo:] ལུན་གཞོ་ Kunzô, whereas ཕུན་སུམ་ཚོགས་པོ་ *Phun-sum-tshogs-po* [punsumtshokpo] is pronounced ཕུན་སུམ་ཚོགས་པོ་ ‘thrice endowed’, and the frequent proper name ཕུན་ཚོགས་ *Phun-tshogs* is commonly pronounced [puntsho:] ཕུན་ཚོ་ Puntshô, without apophony of the vowel in the first syllable and with the loss of aspiration in the initial as well.

Some examples adduced below illustrate the rendering of the long and short vowels in Roman Drenjongke and Phonological Drenjongke.

བཀའ་	‘cover’	kap	ཀའ་
དཀར་པོ་	‘white’	kâp	ཀའ་པོ་
འཇམ་	‘soft’	j’am	ཇམ་
འཇགས་	‘squirrel’	j’âm	ཇགས་
ཚུ་	‘tongue’	ce	ཅེ་
བཅད་	‘cut’	cê	ཅེ་
སིམ་	‘dissolve’	sim	སིམ་
གསིང་མ་	‘sieve’	sîm	སྲིམ་
སོ་	‘tooth’	so	སོ་
གསོ་	‘sustain’	sô	སྲོ་
དགུ་	‘nine’	gu	གུ་
བརྒྱུག་	‘wait’	gû	གུ་

In Phonological Drenjongke, the consonantal coda phonemes are represented as follows, with the representation in Roman Dzongkha shown underneath:

-ཀ་	-པ་	-ར་	-ལ་	-ང་	-ན་	-མ་	-ག་
-k	-p	-r	-l	-ng	-n	-m	-’

The Drenjongke voiceless occlusive finals /-k/ and /-p/ are represented by the symbols -ཀ་ *k* and -པ་ *p* respectively, whereas the phonemic glottal stop is represented by the letter symbol -ག་ *g*. The following examples illustrate that a final glottal stop contrasts phonemically with final /-k/.

ཏ་	‘horse’	ta	[ta]	ཏ་
སྟག་	‘tiger’	tâ	[ta:ʔ]	ཏག་
བརྟག་དུད་	‘examine’	takcê	[takce:]	ཏག་ཐཱ་
པ་	‘letter pa’	pa	[pa]	པ་
དཔའ་	‘hero’	pâ	[pa:]	པ་
པག་	‘dough’	pâ	[pa:ʔ]	པག་
དཔག་	‘estimate’	pak	[pa:ʔ]	པག་
ལྷགས་	‘skin, hide’	pak	[pak]	པག་

It is helpful at this point to be remind ourselves that, following Classical Tibetan, Drenjongke has inherited orthographic variation even when a conservative spelling is being favoured. The word for ‘dough’, for example, is spelt both as སྟག་ *sPag* and as པག་ *Pag*. Sometimes rival spellings co-exist in semantically differently shaded senses, the orthography པགས་ ‘skin, peel’ being in use alongside the spelling ལྷགས་ ‘hide, leather, bark’, with the latter tending to be used once the integument has been removed, although there is no difference in pronunciation between the two.

In the table adduced above, the choice of the letter symbol པག་ *g* to indicate a glottal stop final is motivated by one of the linguistic ideas underlying the genius of the Tibetan script designed by Thonmi Sambhoṭa. Generations of students of Tibetology have posed the question as to why the letters representing voiced occlusives <-g, -d, -b> occur in final position in traditional Tibetan orthography, but not those representing the voiceless occlusives <-k, -t, -p>, whilst it is more natural for voiceless occlusives to occur in final position. The answer lies in the fact that, as observed in Tibetan dialects and in many Tibeto-Burman languages across the Himalayan region, final voiceless occlusives /-k, -t, -p/ are often strongly glottalised. This situation is also likely to have obtained in the Tibetan language as it was spoken in the seventh century.

In the script as it was originally designed, the letters ཀ་ *k*, ཏ་ *t*, པ་ *p* represented voiceless plosives, the letters ཁ་ *kh*, ཐ་ *th*, ཕ་ *ph* represented the feature aspiration, thus designating the aspirated plosives. On the other hand, the letters ག་ *g*, ད་ *d*, བ་ *b* must have represented the feature of glottalic involvement in the informed linguistic conception of Thonmi Sambhoṭa, whether the articulatory nature of this involvement was voicing in syllable-initial position or the glottal reinforcement of an occlusive

in syllable-final position. For this reason, the choice of the letter symbol -ག g to represent the phonemic glottal stop /ʔ/ in Phonological Drenjongke has taken its inspiration from the linguistic genius of the creator of the Tibetan script.

Because a glottal stop phoneme does not occur in Dzongkha, and because the distribution of the glottal stop final in Drenjongke is somewhat restricted, the question might arise as to whether this segment has phonemic status in the Drenjongke language. In his grammar, Ylienemi appears to be at great pains to adduce minimal pairs for the glottal stop that do not also involve vowel length and therefore do not, in fact, represent minimal pairs. In his attempt to arrive at a ‘phonemic script’, he therefore qualifies the glottal stop as a ‘problematic issue’, hedging that the segment ‘functions in an intricate relationship with pitch, vowel length and vowel quality’ (2019: 69).

With the vowels /a/ and /â/, the glottal stop appears more frequently to be associated with the long vowel /â/, e.g. ཏ ta [ta] ‘horse’ vs. ཏྱ ta’ [ta:ʔ] ‘tiger’, ཁ kha [kʰa] ‘mouth’ vs. ཁྱ khâ [kʰa:ʔ] ‘soup, gravy’. By contrast, with the other Drenjongke vowels, this relationship appears to be reversed.

With the other vowels /e/, /ê/ and /ä/, the glottal stop appears to be more frequently associated with the short vowel /e/, e.g. ཇ je [dʒe] ‘penis’ vs. ཇཇ jê [dʒe:] ‘meet’ (honorific) vs. ཇཇཇ je’ [dʒeʔ] ‘forget’, ཇཇཇ shä [ʃe] ‘roam about, go from one to the next’ vs. ཇཇ shê [ʃe:] ‘know’ vs. ཇཇཇ she’ [ʃeʔ] ‘explain’, ཇཇ gye [gje] ‘fall’ vs. ཇཇཇ ge’ [gjeʔ] ‘eight’ vs. ཇཇཇ ge’ [geʔ] ‘blast’ vs. ཇཇ gä [gɛ] ‘old’ vs. ཇཇཇ gyä [gje] ‘win’, ཇཇ ce [tʃe] ‘tongue’ vs. ཇཇཇ ce’ [tʃeʔ] ‘cut’, ཇཇ dze [dʒe] ‘gunpowder, element’ vs. ཇཇཇ dze’ [dʒeʔ] ‘leprosy’.

Similarly, with the vowels /o/ and /ô/, the glottal stop appears more frequently to be associated with the short vowel /o/, e.g. ཏ so [so] ‘tooth’ vs. ཏཏ sô [so:] ‘save, keep alive, sustain’ vs. ཏཏ so’ [soʔ] ‘life, vitality’, ཏ lo [lo] ‘year’ vs. ཏཏ lo’ [loʔ] ‘light’. Likewise, with the vowels /i/ and /î/, the glottal stop appears more frequently to be associated with the short vowel /i/, e.g. ཏཏ zi [zi] ‘onyx’ vs. ཏཏཏ zi’ [ziʔ] ‘leopard’ vs. ཏཏཏ zî [zi:] ‘watch’ (honorific). Finally, with the vowels /u/ and /û/, the glottal stop appears likewise more frequently in association with the short vowel /u/, e.g. ཏཏ ’u [ʔu] ‘head’ (honorific) vs. ཏཏཏ ’û [ʔu:] ‘breath’ vs. ཏཏཏ ’u’ sing [ʔuʔsiŋ] ‘threadworm’ (intestinal parasite).

Minimal pairs do exist, however, that show that the glottal stop final and vowel length are independent in Drenjongke, confirming the phonemic status of the glottal stop, e.g. ཇ khe [khe] ‘profit’ vs. ཇཇ khe’ [kheʔ]

‘ice’ vs. ཁྲ་ khä [khe] ‘tax’ vs. ཁྲ་ khä’ [kheʔ] ‘difference’. The glottal stop phoneme also occurs in association with apophonic vowels, e.g. ལྷོ་ལྷོ་ lhölhö’ [l̥œ̥œʔ] ‘calm, relaxed’. Historically, the glottal stop represents a phonetic residue of a former final, preserved in traditional orthography by the letter symbols -ས་ -s, -ད་ -d, or -ག་ -g.

Finally, the Drenjongke rhotic and liquid finals /-r/ and /-l/ are represented by the symbols -ར་ r and -ལ་ l respectively. The liquid final occurs infrequently, principally in *tatsama* loan words from Chöke. The Drenjongke nasal finals /-ng/, /-n/ and /-m/ are represented by the letter symbols -ང་ ṅ-, -ན་ n and -མ་ m respectively. The Drenjongke velar nasal phoneme /-ng/ [ŋ] in syllable-final is often realised in natural allegro speech as the nasalisation of the preceding vowel [~̃].

Drenjongke exhibits salient dialect differences across the regions of Sikkim and the Chumbi valley. These dialect differences pertain not just to the realm of phonetics but also involve morphological and lexical differences in the language. This dialectal variation should be documented urgently before this rich Sikkimese linguistic legacy disappears forever. Already young people from Lachung are adopting the speech spoken in Gangtok, whereas the variety of the language spoken by their grandparents shared many commonalities with G’yumbe kê ལུ་པའི་སྐད་ *Gyum-pahi skad*, the language of the Chumbi valley. Drenjongke dialectal differences are not limited to those between the speech varieties spoken in northern Sikkim and what the inhabitants of Lachung call Markê མར་སྐད་ *mar-skad* ‘lowland language’ varieties, spoken in the high mountains of three lower southern regions of West, South and East Sikkim.

Drenjongke also shares other traits in common with Dzongkha. In disyllabic words, the ’nyönju ལྷོ་འཇུག་ *sñon-hjug* ‘prefixed letter’ of the second syllable is retained in modern pronunciation as the coda of the first syllable, e.g. Jamtsho ལྷོ་མཚོ་ *rgya-mtsho* ‘ocean’, Chundzom ལྷོ་འཇུག་ *chu-hdzom* ‘confluence’, although in recent years the artificial Chöke pronunciation ‘Chudzom’ for the Bhutanese place name can newly be observed to be making inroads due to the prominent placement of road signage containing this hypercorrect spelling in Roman script, which may lead to the gradual obliteration of the native Bhutanese pronunciation. The nasal realisation of the ’nyönju ལྷོ་ h in the coda of the preceding syllable in this and other analogous forms is in keeping with the rhinoglottophylic tendency that a relaxed state of the vocal tract simultaneously involves both a lowered velum, characteristic of nasality, and a relaxed state of the glottis, associated with breathy phonation.

An additional feature which Drenjongke shares with Dzongkha is the tendency for some historically disyllabic words to conflate into a monosyllable, e.g. སྐར་མ་ *skar-ma*, pronounced ཀམ་ *kâm* [ka:m] ‘star’, the proper name པདྨ་ *pad-ma*, pronounced པེམ་ *Pêm* [pe:m] ‘lotus flower’, ལྷོ་མ་ *khyos-ma*, pronounced ལྷོམ་ *khyôm* [k^hjo:m] ‘reward, gift’.

Inevitably the variety of the Drenjongke language spoken in the capital city of གང་རྟོ་གྲོ་གཉེན་ *Gangtok*, pronounced གོང་རྟོ་གོང་ལྷོ་གོང་ *Gongtö* [goŋtœ], sometimes in allegro speech even as གོ་རྟོ་གོ་ལྷོ་གོ་ *Gôtö* [go:tœ], will prevail everywhere, and the Sikkimese heritage of dialectal diversity will be lost. Roman Drenjongke and Phonological Drenjongke furnish valuable tools for preserving information on the native regional dialects, since both systems of writing represent the language phonologically and can therefore accommodate any Drenjongke dialect. Roman Drenjongke and Phonological Drenjongke can therefore be used to capture the diversity and document this Sikkimese linguistic heritage before this rich legacy vanishes.

THE SLOW EMERGENCE OF THE VERNACULAR

The phonologically conservative Bodish languages of Baltistan and the comparative study of Tibetan dialects tell us that the dBu-can script once exhibited a one-to-one correspondence between the letters devised by Thonmi Sambhoṭa and the speech sounds which they represented in the living spoken language of the seventh century. Language changes inexorably, and so Tibetan spelling was already reformed during the reign of king ལྷི་ལྷེ་སྲོང་བཙུན་ *Thride Songtsen*, also known as སང་ན་ལེགས་མཚན་ཡོན་ *Setnalek Jinyön*, who ruled from 804 to 815, and king ལྷི་རལ་པ་ཅན་ *Thri Ralpacen*, who ruled from 815 to 841. A second spelling reform was carried out by ལོ་ཚེན་རིན་ཚེན་བཟང་པོ་ *Lochen Rinchen Zangpo* in the eleventh century during the reign of ལྷ་སྐྱ་མ་ཡེ་ཤེས་འོད་ *Lha 'Lama Yeshê Öt*. Afterwards, Tibetan spelling got fossilised and was viewed as something sacrosanct and therefore not allowed to change.

The various older spelling systems used for the liturgical and scholarly language Chöke, or Classical Tibetan, are referred to collectively as བད་རྟིང་ *da'nying* ‘old spelling’. The Chöke spelling in use since the eleventh century is still called བད་གསར་ *dasar* ‘new spelling’, except that this spelling is no longer new but in fact very old and rather difficult to learn. Meanwhile, the local languages evolved and diversified, all over Tibet as well as in Bhutan and in Sikkim.

The first and, for over a century, the only description of Drenjongke, the ‘rice district language’ འབྲས་ལྗོངས་སྐད་ *hBras-ljoñs-skad* spoken in the lush and fertile country of Sikkim, was the succinct grammar written by

Graham Sandberg (1888, 1895), first published at Calcutta and later in a modified edition at Westminster. In the first part of the third volume of the *Linguistic Survey of India*, George Abraham Grierson (1909) included some of Sandberg's data under the name 'Dänjong-kä'.

Ernest Herbert Cooper Walsh (1905) compiled a glossary of the 'Tromowa' རྩོམ་བ་ *Gro-mo-ba* language, spanning a few dozen pages in length. The northeastern dialects of Drenjongke form a dialect continuum with the western dialects of Dzongkha, with transitional dialects represented by the Dzongkha dialect of Hâ in western Bhutan, historically also spoken in the lower Chumbi valley, and the intermediate dialect spoken in the upper Chumbi valley, described by Walsh (1905). The Central Tibetan name for the valley is རྩོམ་བ་ *Gro-mo*, but this toponym is written རྩུམ་ *Gyu-mo* in Drenjongke and Dzongkha and pronounced Gy'umo in Drenjongke and J'umo in Dzongkha, hence the English name 'Chumbi valley', taken from the Dzongkha adjectival form རྩུམ་པའི་ J'umbi.

Essentially, the Chumbi valley had been under Sikkimese rule even before the establishment of the Chos-rgyal dynasty and the emergence of the Sikkimese state. This state of affairs dates from the thirteenth century, when རྩུད་འབྲུམ་བསགས་ *Gyad ḥBum-bsags*, pronounced རྩུ་བུ་སུ་ས་ Gy'e Bumsä in modern Drenjongke, who ruled over the Chumbi valley, extended his rule to Sikkim. Gy'e Bumsä was the name given by ས་སྐྱ་པཎྜིཏ་ *Sa-skya Paṇḍita* (1182–1251) to this མི་ཉག་ *Mi-ñag* prince of ལམས་ Khams. The descendant of Gy'e Bumsä, Phuntshô 'Namgye ཕུན་ཚོགས་རྣམ་རྒྱལ་ *Phuntshogs rNam-rgyal*, established the Chos-rgyal dynasty in 1642 as the first Sikkimese *dharmarājā* or ཚོས་རྒྱལ་ *chos-rgyal*, pronounced chögye or, in a *tatsama* pronunciation, chögye (Mullard 2011, Ardussi *et al.* 2021: 67–72).

Gy'e Bumsä was a Mi-ñag prince in Khams. The Tibetans used the term མི་ཉག་ *Mi-ñag* both to refer to the Tangut (黨項 *Dǎngxiàng*) state that arose in the eleventh century in the land of རག་འ་ *ḥGah* (夏 *Xià*) and was subsequently vanquished by Genghis Khan in the thirteenth century, as well as to their close linguistic relatives, the མི་ཉག་ *Mi-ñag* (弭藥 *Mīyào*), whose ancestors had remained behind in ལམས་ Khams (Stein 1947). After the destruction of the Tangut capital by the Mongols in 1227, the Tangut dispersed in all directions, but a large segment of the population remigrated to eastern Tibet, where they rejoined their linguistic brethren in Khams (van Driem 2001, 2018). Ksenia Borisovna Kepping proposed that the modern མི་ཉག་ *Mi-ñag* (木雅 *Mùyǎ*) in eastern Tibet, or — after the redrawing of political boundaries by Chinese occupying forces — in western Sichuān, represent their linguistic descendants. Sperling (2011)

reported that this view is also held by Chinese scholars. Sperling likewise observed that the prevalence of the attribution of descent of the Sikkimese royal dynasty from the Tangut imperial family, both inside and outside of the literary sources, does not warrant us dismissing this tradition.

After the destruction of the Tangut empire, there was evidently more than a single line of direct patrilineal descent. The Mi-ñag prince Gy'e Bumsä, who was ancestral to the Sikkimese royal dynasty, was himself one of three brothers. Another descendant of the Tangut imperial family in Khams is mentioned in a portion of the འབྲས་ལྗོངས་རྒྱལ་རབས་ *hBras-ljoñs rGyal-rabs* that presents a rather heady cocktail of fact and fancy. Sperling (2011) demonstrated that the མི་ཉག་ *Mi-ñag* mentioned in connection with སེ་ལུ་རྒྱལ་པོ་ *Se-hu rgyal-po* was indeed the Tangut empire in the land of འགམ་ *hGah*, although other documents make the connection with the Mi-ñag of Khams. There need be no contradiction here, but the particular family into which of *Se-hu rgyal-po* was born is depicted as demoniacal, and he was not ancestral to the Sikkimese royal dynasty, but instead to the དར་སེང་ *Dar-señ* family in ལ་སྟོད་བྱང་ *La-stod Byañ* in གཙུང་ *gTsañ* (Stein 1947, Rock 1953, Balikci 2008: 67, Ardussi *et al.* 2021: 61).

From the time of Gy'e Bumsä in the thirteenth century, the Chumbi valley constituted an autonomous self-governing polity, but at the beginning of the seventeenth century under ཞབས་བྱུང་པག་དབང་རྣམ་རྒྱལ་ *Zh'apdru Ngawa 'Namge* (1594–1641), the lower Chumbi valley came to be administered by the Bhutanese from ཧཱ་ *Hâ*. The Sikkimese historical claim over the Chumbi valley was reaffirmed at the time that land grants were accorded by the Tibetan government to the third chögye Châdor 'Namgye ཕྱག་རྗོངས་རྣམ་རྒྱལ་ *Phyag-rdor rNam-rgyal* (*regnabat* 1700–1717). These land grants comprised གཏིང་སྐྱེས་རྫོང་ *gTiñ-skyes rDzoñ* and རྒྱལ་མཁར་ནང་མ་ *rGyal-mkhar Nang-pa* to the northwest of Sikkim and དཔལ་སྟོང་རྫོང་ *dPal-sde rDzoñ* and སྤ་དཀར་རྩེ་རྫོང་ *sNa-dkar-rtse rDzoñ* on lake ཡར་འབྲེག་གཡུ་མཚོ་ *Yar-hbrog gYu-mtsho* to the northeast. The remains of the Sikkimese summer palace in Chumbi are believed to stand on the site of Gy'e Bumsä's original residence (Ardussi *et al.* 2021: 122, 517).

Over a century and a half later, in the wake of the Sikkim War of 1888, today sometimes referred to as the 'Sikkim expedition', Tibet began to exercise what Walsh (1907) described as 'merely nominal' control over this sliver of territory wedged in between eastern Sikkim and western Bhutan. Yet, ever since the illegal Chinese occupation of Tibet began in 1950, contact between the speakers of the Chumbi dialect and the other speakers of Drenjongke in Sikkim has been hampered, and the very

fate of the native forms of speech of the Chumbi valley now hangs in the balance.

In the 1960s, both the Sikkimese and Bhutanese governments were aware that the discrepancy between the vernacular and written Chöke presented a challenge to the national education systems. At the time, the spoken tongues were often popularly viewed as corrupted forms of the written language, instead of as the direct modern living linguistic descendants of the language of which Chöke was the surviving literary exponent. In Bhutan in the 1960s, the language taught as Dzongkha in the schools was essentially still the liturgical language Chöke, and in Gangtok the government weekly *Sikkim Herald* was published in Tibetan and Nepali from 1962.

The use of Chöke spellings for modern spoken Dzongkha was challenged by Bhutanese scholars in the 1970s. Both ལློབ་དཔོན་གནག་མདོག་ 'löbö 'Nâdo and ལློབ་དཔོན་པོ་ལ་ 'löpö Pêmalä proposed innovations to Dzongkha spelling. Most of their proposals were rejected, and have since been forgotten. The Zhung Dr'atsha གཞུང་གྲུབ་ཚོ་ *gZuñ Grwa-tshañ* or Central Monk Body opposed changes to the spelling because at the time many people still mistakenly equated Dzongkha with Chöke in their minds. The Central Monk Body was, of course, correct to insist that we cannot change the historical spelling of Chöke. However, neither should the modern vernaculars of Sikkim and western Bhutan ever have been confused with Chöke.

Sikkim underwent a similar vernacularisation campaign in 1975, spearheaded by the maverick lexicographers and textbook writers རོན་ལྷན་ ཚོ་རིང་གློ་ལེ་ Norden Tshering Bhutia, པདྨ་རིག་འཛིན་སྟག་རྒྱུང་དར་པོ་ Pema Ringzing Takchungdarpo, དོན་རིན་ཆེན་སྐུ་མ་ Dorjee Rinchen Lama and དཔལ་ལྷན་ལ་རྒྱུང་པ་ Palden Lachungpa. New spellings were introduced in new dictionaries, and school books and primers were produced under the auspices of the Directorate of Education of the Government of Sikkim. Balikci (2008: 327) reports that vernacular language classes only reached some localities in Sikkim in the late 1980s. Similar work was undertaken for Dzongkha during the same period by the Dzongkha Development Commission in Thimphu.

However, both in Sikkim and Bhutan, the unsystematic nature of the newly introduced *ad hoc* spellings in combination with a reluctance to abandon most of the familiar, and therefore beloved but hopelessly archaic, spellings rendered both Drenjongke and Dzongkha even more difficult to learn for schoolchildren in Sikkim and Bhutan than it had been for them previously to learn the Classical Tibetan liturgical language.

The pedagogical difficulties of teaching and learning Dzongkha became a recurrent theme in the Bhutanese media, and voices airing similar concerns with regard to the didactic challenges of instruction in Drenjongke were heard in Sikkim.

Beginning in 2016, six workshops were organised by the Namgyal Institute of Tibetology and by Makhim at Gangtok, in which members of the Drenjongke language community and professional teachers of the Drenjongke language conferred with linguists on the phonology of the living spoken language of Sikkim. This community effort has yielded the two orthographic methods elucidated in this instalment, as presented at the seventh workshop on the 21st of June 2022.

Roman Drenjongke in the Latin alphabet and Phonological Drenjongke in the traditional Sikkimese 'Ucen འབྲུག་ཡིག་ཀླུ་ *dBu-can* script are both phonological writing systems. In both these phonemic scripts, an intuitive one-to-one correspondence obtains between the pronunciation of the spoken vernacular tongue and the spelling, making the system easy to learn and use.

In April 2019, Juha Yliniemi defended his grammar of Drenjongke as a doctoral dissertation at the University of Helsinki. In our previous paper (Namgyal *et al.* 2020) and in the present paper, we correct some of the inaccuracies in Yliniemi (2019). However, despite these and other blemishes not yet addressed, Yliniemi's contribution to the documentation of the language represents the most comprehensive account of Drenjongke grammar to date.

PERSPECTIVES FOR THE USE OF THE PHONEMIC SCRIPTS

Each of the two phonological writing systems is easy to learn, but this does not mean that they do not have to be learnt. Just as Ratru Drukpa and his colleagues currently organise workshops in Thimphu in order to train people in the use of Roman Dzongkha and Phonological Dzongkha, so too both Roman Drenjongke and Phonological Drenjongke have to be taught and learnt. Gifted individuals might be able to catch on quickly without any training, but most people would probably benefit from instruction by native speakers who have already acquired a mastery of the new writing systems.

The prospects for the use of these writing systems are diverse. In an overly cautious and conservative approach, the use of these newly developed phonemic scripts could be limited to pronunciation aids in dictionaries, and Phonological Drenjongke could be used to write Sikkimese words for which no Classical Tibetan orthography exists. This first op-

tion would leave Sikkimese schoolchildren to struggle with the obsolete orthography and compel them in future to memorise an erratic spelling, which make English and French spelling look like child's play.

The second option is to adopt the two phonemic scripts, developed in Gangtok since 2016 by a concerted Drenjongpa community effort, as the new Sikkimese འདས་ཅན་ *dasar* 'new spelling'. The Drenjongke language can be written in Phonological Drenjongke, that is in traditional 'Ucen དབྱེ་ཅན་ *dBu-can* script using a new, easy-to-learn and elegant Sikkimese spelling system. Roman Drenjongke, on the other hand, can be used as a learning aid for foreign learners unfamiliar with the 'Ucen script and on maps and road signage.

The late and dearly beloved Tashi Densapa was quite right to argue that people might as well learn traditional Tibetan spelling because today there is no literature of note written in Drenjongke. This argument can be turned around, however, because a young and budding Drenjongke literature is unlikely to flourish if constrained by a burdensome spelling that was designed for the Tibetan language as it was spoken in the eleventh century. Moreover, the old spelling has already been changed in Sikkim. Despite the noblest intentions, these efforts rendered the spelling more complex, with numerous new inconsistencies. So, for Drenjongke today the 'old' spelling effectively dates from 1975 and features the embellishment of the *tshala*, which represents a break with tradition.

In respect of another point contained in Tashi Densapa's argument, even if the living spoken Sikkimese vernacular is written in its own modern streamlined and user-friendly spelling, then Sikkimese students and youngsters enamoured of history, cultural heritage and Buddhist studies will still learn Chöke, just as before. Just as French, Italian and Spanish students learn Latin, but write their own languages each in its own spelling, so too Sikkimese students can learn Chöke, yet write their own native tongue in its own spelling, optimally suited to the phonology of the living language. Nothing will be lost, and for Drenjongke much stands to be gained.

Most of the world's languages today are endangered, and often it appears that written languages are more resilient to the threat of extinction than unwritten languages. French, English, Thai and Burmese are examples of written languages with spelling conventions that are challenging to learn. Mastering the orthographies of such languages is, however, still quite doable. The situation of Drenjongke and Dzongkha is far more difficult, however, because the spelling systems presently available are un-systematic and excessively archaic for the modern languages.

Once people acquire a difficult orthography, however, they cannot help but grow attached to the familiar spellings. If people of the younger generation wish to use Roman Drenjongke or Phonological Drenjongke to write new Sikkimese literature, conduct personal correspondence and produce new content in their own language, these easy phonemic methods may stimulate ever more creative use of the language and help the Drenjongke language to survive in the face of the relentless encroachment by Nepali and English. Roman Drenjongke and Phonological Drenjongke could serve as the most effective means to make the living spoken language thrive and to help writing in Drenjongke to flourish.

LINGUISTIC CONVENTIONS

- < > orthographic brackets, European morpheme brackets
- [] phonetic brackets, etymological brackets
- / / phonemic or phonological brackets

The spelling of words in written Drenjongke, Dzongkha and Tibetan is transliterated in accordance with European Tibetological convention, and in this article the transliterations of traditional orthography appear in italics.

ཀ	ཁ	ག	ང	ཞ	ཟ	འ	ཡ
k	kh	g	ñ	z	z	h	y
ཅ	ཆ	ཇ	ཉ	ར	ལ	ཤ	ས
c	ch	j	ñ	r	l	ś	s
ཏ	ཐ	ད	ན	ཏ	ཨ		
t	th	d	n	h	a		
པ	ཕ	བ	མ				
p	ph	b	m				
ཅ	ཆ	ཇ	ཉ	ཞི	ཟུ	ཞེ	ཞོ
ts	tsh	dz	w	i	u	e	o

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