

# THE GLOTTAL STOP AND GLOTTAL CONSTRICTION IN LEPCHA, AND BORROWING FROM TIBETAN

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The two phonetic features glottal closure and glottal constriction are of interest in their own right as part of the total phonological description of the Lepcha language, especially since there are few words in which Lepcha orthography symbolizes them; and they are also of interest in relation to borrowing from Tibetan.

It is convenient to distinguish four main classes of word in which these features occur: (I) words in which glottal closure is initial in the word; (II) words in which glottal closure is medial; (III) words characterized by glottal constriction; and (IV) words characterized either by glottal constriction or by glottal closure for emphasis.

## I. Word-initial Glottal Closure

This class of word is further divided into (A) those in which a glottal stop is the only initial consonant, and therefore immediately precedes a vowel ([?V]), and (B) words in which a glottal stop is the first of two consonants ([?C—]).<sup>2</sup>

### A. [?V]

A number of Lepcha words can have a glottal stop, symbolized in this transliteration by the apostrophe ('), e.g. *ʔ*, 'warm', *ʔung* 'water', *ʔul* 'sell' ([?—]), though glottal closure is not always present in fast-tempo utterances.<sup>3</sup> This type of word has been distinguished from that of section (B), in which glottal closure is not the only initial-consonant feature, because there does not seem to be any connection between the type in section (A) and borrowing from Tibetan.

### B. [?C—]

A connection with Tibetan can, however, be shown for some words in which the glottal stop is not the only initial consonant. In this type of word the glottal stop is the

first of two consonants; it can be followed by (a) a nasal ([ʔN-]), (b) a lateral ([ʔl-]), (c) a fricative ([ʔs-]), (d) a flap ([ʔr-]), or (e) a non-syllabic front spread vowel ([ʔj-]), but not by a plosive or affricate. There are three types of nasal consonant that can be preceded by the glottal stop: labial, dental, and palatal ([ʔm-, ʔn-, ʔnj-]). Examples of these five types of word follow, at (1):

1. [ʔC-]

a. nasal

labial [ʔm-]	<i>món</i>	medicine	<i>mâ</i>	pray
dental [ʔn-]	<i>nâk</i>	uncomfortable	<i>nen</i> <sup>4</sup>	press down on
palatal [ʔnj-]	<i>nyó</i>	borrow	<i>nyung</i>	ill;

b. lateral [ʔl-]

*lî* apple      *lâm* compensation;

c. fricative [ʔs-]

*sâm* clear away      *sât* appease, cleanse;

d. flap [ʔr-]

*ru* cane      *rât* gather;

e. non-syllabic front spread vowel [ʔj-]

*yúk* exchange      *yu* turquoise.

These four types of consonant and the non-syllabic vowel also occur initially in Lepcha words without any preceding glottal closure, as the only initial consonant of the word ([m-, n-, nj-, l-, s-, r-, j-]); e.g.

2. [C-]

a. nasal

labial [m-]	<i>món</i>	pig	<i>mâ</i>	call (dogs)
dental [n-]	<i>nen</i>	make sit	<i>nâk</i> <sup>5</sup>	look at
palatal [nj-]	<i>nyó</i>	stiff	<i>nyâng</i>	shaky;

b. lateral [l-]

*lâm* fly      *lî* house, seed, speak, ripe heavy;

c. fricative [s-]

*sâm* mind      *sót* kill

d. flap [r-]

*ru* far away      *rât* kind-hearted;

e. non-syllabic front spread vowel [j-]

*yúk* Tibetan      *yu* come down.

If the set of examples at (2), in which there is no initial glottal closure ([m- n- nj-l- s- r- j-]), is compared with the set at (1), in which there is ([ʔm- ʔn- ʔnj- ʔl- ʔs- ʔr- ʔj-]), it will be seen that it is only in the case of words in (1e) and (2e) that Lepcha orthography makes a distinction between the [ʔC-] and the [C-] type: [ʔj-] is symbolized by 'y', e.g. 'yúk' 'exchange', 'yu' 'turquoise', and [j-] by y, e.g. yúk 'Tibetan', yu 'come down'. In the remaining examples (a-d) both glottal-stop and non-glottal-stop initials are symbolized identically; and *món* 'medicine', *l̥* 'apple', and *ru* 'cane', for example, each of which does have initial glottal closure ([ʔm- ʔl- ʔr-]), is written identically with *món* 'pig', *l̥* 'house', 'seed', 'speak', 'ripe', 'heavy' and *ru* 'distant' respectively, which do not ([m- l- r-]).

That is the position in Lepcha orthography at present; but K. P. Tamsang, my Lepcha informant, made the interesting suggestion that the initial glottal closure should be systematically symbolized by the *rân* (transliterated in this article by circumflex accent). Some of the glottal-stop-initial words given above at (1), e.g. *mâ* 'pray', *nâk* 'uncomfortable', *l̥* 'apple' ([ʔm-, ʔn-, ʔl-]), already have the *rân*; they would remain as they are. To the remaining examples at (1) *rân* would have to be added; and *nen* 'press down on', for example, would be written as *nên*, *nyung* 'ill' as *nyûng* and *ru* 'cane' as *rû*. In the case of words of the type exemplified at (1e) not only would *rân* be added but the initial consonants of the orthography would be changed from the present 'y' to 'y': and 'yok' 'work' and 'yu' 'turquoise', for example, would be written as *yôk* and *yû*.

In the set of examples at (2), on the other hand, in which there is no initial glottal stop, there are a number of words that are currently spelt with the *rân* but do not, at least in Tamsang's pronunciation, have the initial glottal-closure feature, e. g. *mâ* 'call (dogs)', *nâk* 'look at', *l̥* 'speak', 'house', 'ripe', 'seed', 'heavy' ([m-, n-, l-]); the *rân* would then be unjustified in words of this type, and would be removed to give, for example, *ma*, *nak*, and *li*.<sup>6</sup>

As a result of this orthographic innovation *món* 'medicine', for example, *ru* 'cane', *mâ* 'pray', and *l̥* 'apple', each of which has the initial glottal-closure feature ([ʔm-, ʔr-, ʔm-, ʔl-]), would become distinguishable, by the *rân*, from *món* 'pig', *ru* 'distant', *mâ* 'call (dogs)' and *l̥* 'speak', 'house', 'ripe',

'seed', 'heavy' respectively, which do not have the initial glottal closure ([m-, r-, m-, l-]). 'yúk' 'exchange', *yu* 'turquoise', and other examples of [ʔj-], which are at present distinguished from *yúk* 'Tibetan' and *yu* 'descend', and other examples of [j-], by 'y- as against y-, would cease to be distinguished from them by this means, and would also become distinguishable from them by the *rân*.

Since the number of [ʔC-] words in Lepcha is small, and since they have not been published before, a list of all those in the available material is given here, classified by vowel (*ó, o, u, ú, â, î, e, á*); where a corresponding Tibetan word is known, it is given too.

- |       |                   |                     |                  |              |                              |
|-------|-------------------|---------------------|------------------|--------------|------------------------------|
| i.    | Lepcha <i>ó</i> ; | Tibetan <i>a</i>    |                  |              |                              |
|       | <i>mon</i>        | medicine            | <i>sman</i>      | <i>mó</i>    | sore <i>rma</i>              |
|       | <i>móng</i>       | crowd               | <i>dmangs</i>    | <i>nóng</i>  | bless <i>gnang</i>           |
|       | <i>nyó</i>        | borrow              | <i>brnya</i>     | <i>nyó</i>   | hell <i>dmyal</i>            |
|       | <i>nyóm</i>       | ulcer               | [ʔ] <i>gnyan</i> | <i>glóng</i> | ox <i>glang</i>              |
|       | <i>'yók</i>       | yak                 | <i>g.yag</i>     | <i>lót</i>   | fall, degenerate <i>slad</i> |
|       | <i>lók</i>        | spoil, spoiled      | [ʔ] <i>slad</i>  | <i>lóp</i>   | shield                       |
|       | <i>'yók</i>       | rubber              |                  | <i>'yók</i>  | (tie) behind                 |
|       | <i>yót</i>        | bend                |                  | <i>'yór</i>  | scattered                    |
| ii.   | Lepcha <i>o</i> ; | Tibetan <i>o</i>    |                  |              |                              |
|       | <i>mo</i>         | plough              | <i>rmo'</i>      | <i>'yok</i>  | work <i>g.yog'</i>           |
|       | <i>'yong</i>      | stale               |                  |              |                              |
| iii.  | Lepcha <i>u</i> ; | Tibetan <i>u</i>    |                  |              |                              |
|       | <i>nyung</i>      | ill                 | <i>snyung</i>    | <i>lut</i>   | manure <i>lud</i>            |
|       | <i>'yu</i>        | turquoise           | <i>g.yu</i>      | <i>ru</i>    | cane                         |
|       | <i>sut</i>        | exorcise            |                  | <i>'yum</i>  | beauty                       |
| iv.   | Lepcha <i>ú</i> ; | Tibetan <i>u</i>    |                  |              |                              |
|       | <i>lú</i>         | naga                | <i>klu</i>       | <i>yúk</i>   | exchange                     |
|       | <i>yúr</i>        | bake                |                  | <i>yúi</i>   | pot-bellied                  |
| v.    | Lepcha <i>â</i> ; | Tibetan <i>o</i>    |                  |              |                              |
|       | <i>mâ</i>         | pray                | <i>smon</i>      | <i>mât</i>   | pray <i>dmod</i>             |
|       | <i>nân</i>        | suppress            | <i>gnon</i>      | <i>nâk</i>   | uncomfortable                |
|       | <i>lâm</i>        | recompense          |                  | <i>sâm</i>   | clear away                   |
|       | <i>rât</i>        | gather up           |                  |              |                              |
| vi.   | Lepcha <i>î</i> ; | Tibetan <i>i</i>    |                  |              |                              |
|       | <i>î</i>          | apple               | <i>sli</i>       |              |                              |
| vii.  | Lepcha <i>e</i> ; | Tibetan <i>e, o</i> |                  |              |                              |
|       | <i>lep</i>        | flatten             | <i>gleb</i>      | <i>nen</i>   | press down on <i>gnon</i>    |
| viii. | Lepcha <i>á</i>   |                     |                  |              |                              |
|       | <i>'yák</i>       | choked with.        |                  |              |                              |

Seventeen of these forty Lepcha glottal-stop-initial words appear to have no connection with Tibetan. They comprise: one of the fourteen words in [ʔN-], i.e. *nâk* 'Uncomfortable', two of the nine words in [ʔl-], all four of the words in [ʔs-] and [ʔr-], and ten of the thirteen words in [ʔj-]. This suggests that initial glottal closure was a feature of Lepcha, at least in association with a fricative or a flap type of articulation ([s-, r-]), and certainly in association with the non-syllabic vowel [j], for which there is provision in the orthography ('y), quite independently of Tibetan; in consequence, it would not have been difficult to extend this feature to words borrowed from Tibetan.

The remaining twenty-three words, including a majority of the nasal-initial ([ʔN-]) and lateral-initial ([ʔl-]) words, each resemble a Tibetan word in pronunciation. All of the twenty-three Tibetan words except one (*lud* 'manure') have a high pitch in adjacent Tibetan dialects symbolized in the Tibetan orthography by one of the 'prefixes' in association with *m*, *n*, *ny*, *l*, and *y*.<sup>8</sup> The initial glottal stop in the corresponding Lepcha words is thought to be an attempt to render this high pitch, and preserve in the Lepcha words at least some indication of a distinction characteristic of the language from which they were borrowed.

In the Lhasa dialect the Tibetan words in (i), all nine of which are spelt with *a*, e.g. *sman*, *rma*, *dmangs*, are pronounced with non-rounded lips, the vowel being either an open vowel, in, for example, *rma* and *dmangs*, or a half-open front vowel, in, for example, *sman*; Lepcha has very similar vowel sounds, symbolized by *á* and *e*, but these Lepcha vowel sounds have not been used for the Tibetan loan-words in (i). On the contrary, these loan-words are pronounced in Lepcha with lip-rounding, and with a half-open back vowel symbolized orthographically by *ó*, e.g. *món*, *mó*, *móng*. This pronunciation suggests that the Tibetan dialect from which these words were borrowed was not the Lhasa but one in which words spelt with *a* are pronounced with lip-rounding. P. S. Ray records lip-rounding in the Kham dialect for a speaker from the Kanze area in the words *kham*s 'Kham', *gla-ba* 'mountain deer', *yar* 'up' (op. cit., p. 5); I have myself observed lip-rounding in *glang* 'ox', *nang* 'inside', *gtsang* 'Tsang' as pronounced by Tenzing Namdak, a Khampa of Khungpo Tengchen.

In the Lhasa dialect the Tibetan words in *u* at (iii) e.g. *snyung* 'ill', *lud* 'manure', and *g.yu* 'turquoise', are pronounced with lip rounding. Lepcha has a lip-rounded close back vowel ([u]), symbolized by *ú*, e.g. (iv) *lú*, 'yúk', 'yúr', that closely resembles the vowel of the Lhasa pronunciation of *snyung* and *g.yu*, but does not use it *nyung* and 'yu. On the contrary the types of vowel that Lepcha uses in the three loan-words of section (iii) are all spread; back close and half close spread vowels symbolized by *u*. This suggests that they were borrowed from a Tibetan dialect that used lip-spreading in at least some words spelt with *u*. P. S. Ray records a 'mid central unrounded' vowel, in *sbrul* 'snake' for the Kanze Kham dialect, (op. cit. p.5); Tenzing Namdak, referred to above, used no lip-rounding in, for example (*za-gi-*) 'dug 'eats', (*ma-*) 'thung 'I do not drink', and *bu* (*-isa*) 'son', and only slight lip-rounding in e.g. *sus* 'by whom', *bsus* (*-song*) 'welcomed'.

The three Lepcha loan words in *â* also give some slight support to the suggestion that the origin of these loan words is to be sought in an east-Tibetan dialect. The corresponding Tibetan words in *o*, *emon*, *dmod*, and *gnon* are all pronounced with lip-rounding in the Lhasa dialect, with a half-close front rounded vowel in fact; but the Lepcha loan words all have non rounding, the vowel being central. P. S. Ray observes that the vowel /u/and/o/ of his Kanze Khampa informant's pronunciation are 'all noticeably centralized even when stressed' (op. cit., p.5); my Khampa informant Tenzing Namdak, pronounced *bzos* (*-song*) 'made' with a non-rounded central vowel.

## II. Medial Glottal Closure ([-V?C-])

In the nineteen disyllabic words in which medial glottal closure has been observed, the closure is preceded by a vowel, always a (non-rounded) central or an open vowel (symbolized by *a* and *á* in Lepcha orthography), followed by a consonant; it is not indicated in the orthography except by 'y in *ta-yu* 'woman', *pa<sup>h</sup>yór* 'yellow'.

In some of these nineteen words the glottal closure is better treated as belonging to the preceding syllable. There are eight words in which the preceding syllable is *cá*, e.g. *cá-náp* ([-a?n-]) 'last night', *cá-lóng* [-a?l-] 'just now',

*cá-zóng* ([-aʔz-]) 'as before', *cá-bá* [-aʔb-] 'some time ago'; and glottal closure always accompanies this syllable, as the final feature. The same may be true of *ná*, in *ná-mún* ([-aʔm-]) 'evening' and *ná-hán* ([-aʔh-]) 'in front', and perhaps *ná-óng* ([-aʔʔ-]) 'fool'.

In the remaining words, however, there are no good grounds for treating the closure as belonging to one syllable rather than the other, unless the examples in *cá* and *ná* are treated as a model for all such disyllabic words, and the glottal closure assigned to the preceding syllable accordingly. These words are:

*sa-nyĩ(m)* day    *ta-lyáng* sky    *sa-ʃm* breeze  
*pa-nyóm* old man    *ta-'yu* woman    *pa-'yór* yellow.

### III. Constricted Voice Quality

Six words are regularly pronounced with the type of voice quality sometimes referred to as 'creaky', with glottal trill and associated muscular constriction, and with long duration, of vowel :

*klóng* groan    *ká* terrace    *kám* sieve  
*kán* hurry    *ták* pick    *fát* sacrifice

This voice-quality feature distinguishes them, respectively, from the following, which have 'normal' voice quality:

*klóng* send    *ká* cackle    *kám* stay  
*kán* smoke    *tak* keep quiet

Tamsang wished to add two more to the list of glottally constricted words: *pút* 'pick', *gân* 'stand on end'; but, although these two have the long vowel duration the constricted-voice quality was not always observable.

Tamsang also wished to extend the use of the *rân* to five of the six glottally constricted examples (*ták* already has it), to indicate, in their case, not the initial glottal closure for which it was proposed in (IB) above, but the glottal constriction and long vowel duration. Since, with the exception of *fát*, the glottally constricted words all have plosion as an initial feature, and the initial glottal-stop of the words at (IB) is associated with nasality, laterality, or some feature other than plosion, there would be little ambiguity in giving to the *rân* these two different but phonetically somewhat similar functions.

#### IV. Emphatic Glottal Constriction and Closure

##### A. Glottal Constriction

Glottal constriction is always a feature of the words listed in section (III); but there are also words for which glottal constriction, with the associated long vowel duration, is an occasional feature, designed to give emphasis to the word. These words are all disyllabic, and it is the first syllable of the word that is characterized by these features. This syllable is also commonly, but by no means always, characterized by a fall in pitch, and is always more prominent than the other syllable (otherwise, in most words, it is the second syllable that is the more prominent). The glottal constriction is often strong enough to give the impression of two vowels, separated by glottal closure. These emphatic features are not indicated in the Lepcha script; in the following examples, however, they have been indicated by brackets:

- (*'á-re*) *pa-no-sá gri* this is the king's fort,  
cf. *á-re pa-no-sá gri* this is the king's fort;  
(*na-vár*) *dâ-ká fá-bám* the boat is floating on the lake  
cf. *á-re na-vár-ká hrón* climb up onto this boat;  
(*hu-yú*) *shi-bi nóng* where did they go?  
cf. *hu-yú bán-nyi* they are at home.

##### B. Glottal Closure [-V?] [ʔC-]

The glottal constriction described in section (A) is a device for emphasizing disyllables; monosyllables are brought into prominence through final glottal closure if they end in a vowel [-V?], together with short duration of vowel and fall in pitch; e.g. (brackets are again used in the Lepcha text to indicate these features):

- (*pe*) *bu-di* bring that  
cf. *pe bu-di* bring that  
(*hu*) *shi-bi nóng* where did he go  
cf. *hu shi-bi nóng* where did he go.

Only one example has been observed in which the emphasized word ends in a consonant. Here, too, the word is also characterized by fall in pitch and by glottal closure; but in this case the glottal closure is word-initial; e.g.

- (*món*) [ʔm-] *kát bu-di* bring me a pig  
cf. *mon [m-] kát bu-di* bring me a pig.

Thus, when emphasized, but only when emphasized, *món* 'pig' is identical in its initial features ([<sup>?</sup>m-]) with *món* ([<sup>?</sup>m-]) 'medicine' (cf. I B); but no doubt situational features are usually sufficient to dispose of any possibility of misunderstanding.

## CONCLUSION

Lepcha makes considerable use of both glottal closure and glottal constriction. Both features may be used stylistically, to bring a word into prominence within the sentence (IV); and for such words these features are alternative features only. This alternation of glottal closure and glottal constriction with the absence of these features is purely Lepcha, and has nothing to do with Tibetan.

Both features also have a lexical function: they are fixed features of certain Lepcha words, and serve to distinguish them, or help to distinguish them, from words having contrasting features. In this lexical function one of the two features, glottal constriction, has no connection with Tibetan (III). On the contrary the glottally constricted type of voice quality, though a prominent characteristic of Burmese, the other principal member of the Tibeto-Burman group of languages, seems to be quite foreign to Tibetan, and was heard with amusement by those Tibetans to whom I demonstrated it. It is, however, a noteworthy feature of the language of the Limbus, with whom the Lepchas have had close relations for upwards of a hundred years.<sup>9</sup>

It is the other feature, glottal closure, that has some connection with Tibetan, but only when it is both initial in the word and followed by a consonant (I B; [<sup>?</sup>C-]). A majority of Lepcha words of this type seem to have an origin in Tibetan.

## NOTES

1. Unless otherwise specified examples in this article are based on the Tamsangmu dialect of Lepcha as spoken by K.P. Tamsang, formerly Secretary of the Darjeeling Lepcha Association, of Bong Bustee, Kalimpong, West Bengal. The material was collected in London, where Mr. Tamsang was a Research Assistant at the School of Oriental and African Studies, University of London, in 1952, and revised during a visit to Kalimpong in 1965, though not, unfortunately, with Tamsang himself or with speakers of the same dialect.

Forms from other dialects I owe to Pastor Targain, of Kalimpong, and to Mr. Joseph Rongong, currently Secretary of the Darjeeling Lepcha Association, of Tirpai Dangra. Targain is from a Renjongmu-speaking family, and Rongong from an Ilamu-speaking family; but both have lived in Kalimpong for many years.

2. Phonetic symbols are indicated by square brackets. They have the values given to them by the International Phonetic Association except that [V] has been used to summarize all appropriate syllabic vowels, [C] to summarize all appropriate consonants, together with the non-syllabic vowel [j], [N] to summarize the three nasal consonants [m], [n], and [ŋ], and [nj] for palatal nasal.
3. The transliteration follows Colonel G.B. Mainwaring, *A Grammar of the Rong (Lepcha) Language*, Calcutta, 1876, except that (i) his Lepcha symbol *rān* (op. cit., p. 5) has been rendered by the circumflex, e.g. *ā̂*, *ṛ̂* (ii) 'y has been used for his *ay*, and (iii) an apostrophe (') has been used where he uses one of the vowel letters as first letter of the syllable, e.g. my *'ṛ* and *'ūng* for his *ṛ* and *ūng*.
4. This is Tamsang's spelling. Mainwaring gives *nān*; cf *Dictionary of the Lepcha-Language*, compiled by the late General G. B. Mainwaring, revised and completed by Albert Grunwedel, Berlin, 1898.
5. This spelling is Tamsang's; and the pronunciation with dental-nasal initial is Tamsangmu dialect (cf note 1). Targain and Rongong pronounce this word with a velar-nasal initial, and spell it *ngān*.
6. On the function of the *rān* of Mainwaring, *Grammar*, p. 5, and also p. 6: 'when superscribed by *rān* it [i.e. *a*] acquires a prolonged and guttural sound'.
7. Tamsang agrees with Targain and Rongong in pronouncing *mo* and *'yok* with a close back vowel ([ʔmu, ʔjuk]), as though spelt *mū* and *'yūk*, though the pronunciation [ʔjok] is usual in reading.
8. For the high pitch in Kham Tibetan see Punya Sloka Ray, 'Kham Phonology', p. 3, to be published in the *Journal of the American Oriental Society*; cf also R. K. Sprigg, 'Verbal Phrases in Lhasa Tibetan I', *Bulletin of the School of Oriental and African Studies (BSOAS)* 1954, xvi, 1, pp. 150-6, and 'The Tonal System of Tibetan (Lhasa Dialect) and the Nominal Phrase', *BSOAS*, 1955, XVII, 1, pp. 146-53.

The term *prefix* is used here for: (i) the *sngon-'jug* *g*, *d*, and *b*, (ii) *ra-mgo* and *sa-mgo*, and (iii) the *gsal-byed* *k* and *g* when combined with *la-btags*, e.g. *klu* 'naga', *glang* 'ox'.

9. cf R. K. Sprigg, 'Short Syllables in Limbu', to appear in *In Memory of J. R. Firth*, to be published in February, 1966.