THE GLOTTAL STOP AND GLOTTAL CONSTRUCTION
IN LEPCHA, AND BORROWING FROM TIBETAN

—R. K. SPRIGG

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-]).

A. [?V]

A number of Lepcha words can have a glottal stop, symbolized in this transliteration by the apostrophe ('), e.g. 'i, 'warm', 'ung 'water', 'ul 'sell' ([?-]), though glottal closure is not always present in fast-tempo utterances. 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 ([?N-]), (b) a lateral ([?l-]), (c) a fricative ([?s-]), (d) a flap ([?r-]), or (e) a non-syllabic front spread vowel ([?j-]), 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 ([?m-, ?n-, ?nj-]). Examples of these five types of word follow, at (1):

1. [?C-]
   
a. nasal
   labial [?m-] món medicine mā pray
   dental [?n-] nāk uncomfortable nen4 press down on
   palatal [?nj-] nyō borrow nyung ill;
   
b. lateral [?l-]
   ? apple lām compensation;
   
c. fricative [?s-]
   sām clear away sāt appease, cleanse;
   
d. flap [?r-]
   ru cane rāt gather;
   
e. non-syllabic front spread vowel [?j-]
   yūk 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-] món pig mā call (dogs)
   dental [n-] nen make sit nāk5 look at
   palatal [nj-] nyō stiff nyāng shaky;
   
b. lateral [l-]
   lām fly lē house, seed, speak, ripe heavy;
   
c. fricative [s-]
   sām mind sōt kill
   
d. flap [r-]
   ru far away rāt kind-hearted;
   
e. non-syllabic front spread vowel [j-]
   yūk 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 ([?m- ?n- ?nj- ?l- ?s- ?r- ?j-]), 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 [C-] and the [C-] type: [?j-] is symbolized by 'y, e.g. 'yūk 'exchange', 'yu 'turquoise', and [j-] by y, e.g. yūk 'Tibetan', yu 'come down'. In the remaining examples (a-d) both glottal-stop and non-glottal-stop initials are symbolized identically; and món 'medicine', nū 'apple', and ru 'cane', for example, each of which does have initial glottal closure ([?m- ?l- ?r-]), is written identically with man 'pig', nū '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 rān (transliterated in this article by circumflex accent). Some of the glottal-stop-initial words given above at (1), e.g. mā 'pray', nāk 'uncomfortable', nū 'apple' ([?m- ?,n-, ?l-]), already have the rān; they would remain as they are. To the remaining examples at (1) rān would have to be added; and nen 'press down on', for example, would be written as nēn, nyung 'ill' as nyùng and ru 'cane' as rū. In the case of words of the type exemplified at (1e) not only would rān 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 yōk and yū.

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 rān but do not, at least in Tamsang's pronunciation, have the initial glottal-closure feature, e.g. mā 'call (dogs)', nāk 'look at', nū 'speak', 'house', 'ripe', 'seed', 'heavy' ([m- n- l-]); the rān would then be unjustified in words of this type, and would be removed to give, for example, ma, nak, and li.

As a result of this orthographic innovation món 'medicine', for example, ru 'cane', mā 'pray', and nū 'apple', each of which has the initial glottal-closure feature ([?m- ?,r-, ?m- ?,l-]), would become distinguishable, by the rān, from món 'pig', ru 'distant', mā 'call (dogs)' and nū 'speak', 'house', 'ripe',
'seed', 'heavy' respectively, which do not have the initial glottal closure ([m-, r-, m-, 1-]). 'yīk 'exchange', yu 'turquoise', and other examples of [ʔj-], which are at present distinguished from yūk '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 ran.

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, ŋ, e, ē); where a corresponding Tibetan word is known, it is given too.

i. Lepcha ó; Tibetan a

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>món</td>
<td>medicine</td>
</tr>
<tr>
<td>móng</td>
<td>crowd</td>
</tr>
<tr>
<td>nyó</td>
<td>borrow</td>
</tr>
<tr>
<td>nyóm</td>
<td>ulcer</td>
</tr>
<tr>
<td>'yök</td>
<td>yak</td>
</tr>
<tr>
<td>lôk</td>
<td>spoil, spoiled</td>
</tr>
<tr>
<td>'yök</td>
<td>rubber</td>
</tr>
<tr>
<td>yôt</td>
<td>bend</td>
</tr>
</tbody>
</table>

ii. Lepcha o; Tibetan o

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>mo</td>
<td>plough</td>
</tr>
<tr>
<td>'yong</td>
<td>stale</td>
</tr>
</tbody>
</table>

iii. Lepcha u; Tibetan u

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>nyung</td>
<td>ill</td>
</tr>
<tr>
<td>'yu</td>
<td>turquoise</td>
</tr>
<tr>
<td>sut</td>
<td>exorcise</td>
</tr>
</tbody>
</table>

iv. Lepcha ē; Tibetan u

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>hú</td>
<td>naga</td>
</tr>
<tr>
<td>yûr</td>
<td>bake</td>
</tr>
</tbody>
</table>

v. Lepcha a; Tibetan o

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>mā</td>
<td>pray</td>
</tr>
<tr>
<td>nān</td>
<td>suppress</td>
</tr>
<tr>
<td>lām</td>
<td>recompense</td>
</tr>
<tr>
<td>rāt</td>
<td>gather up</td>
</tr>
</tbody>
</table>

vi. Lepcha i; Tibetan i

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>lē</td>
<td>apple</td>
</tr>
</tbody>
</table>

vii. Lepcha e; Tibetan e, o

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>lep</td>
<td>flatten</td>
</tr>
</tbody>
</table>

viii. Lepcha ē

<table>
<thead>
<tr>
<th>Lepcha</th>
<th>Tibetan</th>
</tr>
</thead>
<tbody>
<tr>
<td>'yök</td>
<td>choked with</td>
</tr>
</tbody>
</table>
Seventeen of these forty Lepcha glottal-stop-initial words appear to have no connection with Tibetan. They comprise: one of the fourteen words in [?]N-], i.e. nakh ‘Uncomfortable’, two of the nine words in [?]l-], all four of the words in [?]s-] and [?]r-], and ten of the thirteen words in [?]j-]. 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 ([?]N-l) and lateral-initial ([?]l-]) 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. 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 a' 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 o, e.g. món, mó, món. 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 khams ‘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', lüd 'manure', and g.yu 'turquoise', are pronounced with lip rounding. Lepcha has a lip-rounded close back vowel ([u]), symbolized by u, e.g. (iv) lú, 'yük, 'yuə, 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 (-sa) 'son', and only slight lip-rounding in e.g. sus 'by whom', bsus (-song) 'welcomed'.

The three Lepcha loan words in á 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, snon, 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'yôr '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-nádp ([-a?n-]) 'last night', cá-löng [-a?l-] 'just now',
cá-zóng ([-a?ez-]) ‘as before’, cá-bá [-a?b-] ‘some time ago’; and glottal closure always accompanies this syllable, as the final feature. The same may be true of ná, in ná-mún ([-a?m-]) ‘evening’ and ná-hán ([-a?h-]) ‘in front’, and perhaps ná-òng ([-a?ʔ-]) ‘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-nya(m) day
- ta-lyang sky
- sa-fím breeze
- pa-nyöm 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
- fút 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 rán 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 (I B) above, but the glottal constriction and long vowel duration. Since, with the exception of fút, the glottally constricted words all have plosion as an initial feature, and the initial glottal-stop of the words at (I B) is associated with nasality, laterality, or some feature other than plosion, there would be little ambiguity in giving to the rán 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:

(‘a-re) pa-no-sá gri this is the king’s fort,
cf. a-re pa-no-sá gri this is the king’s fort;
(na-va’) dâ-ká fâ-bám the boat is floating on the lake

cf. a-re na-va’ ká hrón climb up onto this boat;
(hu-ya) shi-bí nónng where did they go?
cf. hu-ya bám-nyí they are at home.

B. Glottal Closure [-V?] [-C-]

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):

(pé) bu-di bring that
cf. pé bu-di bring that
(hu) shi-bí nónng where did he go

cf. hu shi-bí nónng 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) [?m-] 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 ([?m-]) with món ([?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.9

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; [?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 [nj], 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 rā (op. cit., p. 5) has been rendered by the circumflex, e.g. a, (ii) 'y has been used for his g, and (iii) an apostrophe (') has been used where he uses one of the vowel letters as first letter of the syllable, e.g. my 'f and 'ung for his and 'ung.

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 Grumwedel, 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 ān cf Mainwaring, Grammar, p. 5, and also p. 6: 'when superscribed by ān [i.e. a] it 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 mi and ʔûk, though the pronunciation ʔjok is usual in reading.


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’.