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# LINGUISTICS OF THE TIBETO-BURMAN AREA

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LINGUISTICS OF THE TIBETO-BURMAN AREA is a peer reviewed (refereed) journal devoted to the synchronic and diachronic study of the languages of the Southeast Asian linguistic area, especially the vast and ramified Tibeto-Burman family, the only proven relatives of Chinese. In addition to Tibeto-Burman, articles have appeared on all the major language families of mainland Southeast Asia, notably a monograph on the Waic branch of Mon-Khmer (Vol. 5.2), a special issue containing fourteen articles on Hmong-Mien (Vol. 10.2), and two issues on Lai (Vols. 20.2 and 21.1). Other issues devoted entirely to a single monograph include Vol. 18.2 on the etymology of an ancient Chinese zodiacal sign; a pioneering grammar of a Loloish language (Vol. 20.1); and a full scale reconstruction of Proto-Kra (Vol. 23.1). LTBA was founded in 1974, and is now published twice per year.

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# LINGUISTICS OF THE TIBETO-BURMAN AREA

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# ONCE MORE ON THE LETTER a 1

### Nathan W. Hill

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W. S. Coblin, in a contribution (2002) to the ongoing discussion about the phonetic value of the Tibetan letter  $\alpha$  (transcribed as  $\nu$ ), has argued that this character has no phonetic value per se but is rather an orthographic device. A review of the previous literature and consideration of Coblin's arguments in contrast agree with the finding that before vowels and the glide -w- the letter  $\nu$  represents a voiced fricative, while before consonants it stands for prenasalization; in the former position, the value  $[\gamma]$  is argued for. The use of final  $-\nu$  in Old Tibetan inscriptions suggests that in that position too  $-\nu$  has the value  $[\gamma]$ . Finally, with a view to the internal reconstruction of the Tibetan verbal system, consideration is given to the question of whether the various phonetic values of  $\nu$ - represent a unitary phoneme.

Keywords: Tibetan, orthography, Tibeto-Burman, Sino-Tibetan

# 1. INTRODUCTION

The phonetic value of the character  $^{\alpha}$   $v^2$  has been the subject of controversy for over a century. The consensus is that before vowels and the glide -w- the letter v represents a voiced fricative (either [fi] or [ $\gamma$ ]), and before consonants it stands for prenasalization. W. S.

I would like to thank Prof. Jay Jasanoff, Prof. Stephanie Jamison, and Prof. Zev Handel for their suggestions on an earlier version of this paper.

For the purposes of this essay I follow the Chinese convention of transliterating  ${}^{\alpha}$  as  $\nu$ , in order to avoid the use of the confusing symbol <5.

<sup>&</sup>lt;sup>3</sup> Compare Dragunov 1939; Miller 1955b: 481-82; 1994: 71; Róna-Tas 1962; 1966: 129 n. 142, and p. 143; 1992: 699; Siklós 1986: 308-309; and Zhang 1987: 75-80.

Coblin (2002) has recently challenged this understanding of initial v-, but an examination of his alternative explanation shows it to be wanting. The use of -v as a final has not been well researched; most researchers believe that the letter has no phonetic value in final position (e.g. Beyer 1992: 43 n. 6). The examination of final -v in Old Tibetan texts to follow gives some indication that it indeed has a phonetic value, most likely  $[\gamma]$ .

# 2. 'A-CHUNG' AND 'A-CHEN'

The letter  $^{\alpha}v$  is called the 'a-chung' (little a) by Western scholars as opposed to  $^{\aleph}$   $q^4$  the 'a-chen' (big a), but these names appear never to have been used by Tibetan grammarians themselves, and are avoided here. Since these two letters are often erroneously conceived of as a pair a short digression on the letter q is in order.

The Indic ancestor of the character q is used to represent vocalic onset, and the corresponding character in the Vphags-pa script UV also represents vocalic onset (Ligeti 1961: 204-212). However, it has been suggested that in Tibetan q- indicates a glottal stop [?]. Jäschke describes it as such (1881: xiv), presumably for the reading pronunciation of Ladakh, and by Miller for 'Central' Tibetan (1955a: 47, §1.3.2 and 49, §3.3.1). However, in some dialects, words spelled with initial q- are pronounced as beginning with simple vowels (e.g. Balti, cf. Bielmeier 1985: 245; Shigatse, cf. Haller 2000: 296; Dingri, cf. Herrmann 1989: 304-305). In other dialects, there is no contrast between initial glottal stop and initial vowel (e.g. Drokpa, cf. Kretschmar 1986: 21).

Zhang (1987: 41-46) gives three reasons why she thinks q-represents a glottal stop in Old Tibetan: First, the transliteration of the Chinese character — 'one' in one text as qyi and not yi, reflects a glottal stop in Chinese. Second, the Tibetan grammarians describe the character as a consonant and not as a vowel. Third, Zhang's

I transliterate  $^{tq}$  as q, although it is omitted in transliteration by Western Tibetologists, and the Chinese transliterate it as x.

paraphrase of the Chinese translation of the *Gser tog sum rtags* (misspelled *rtogs* by Zhang) reads, "when producing the sound q the middle part of the tongue should be lifted near the palate" (1987: 46). She does not quote the Tibetan text (or the Chinese translation which appears in her bibliography) nor does she cite a page number. She seems to have intended the passage "qa ni rkan-las byung-zhing lcevi rked-par cung-zad nye bavi byed-pas bskyed-cing / brjod tshul ni shin-tu lhod-pa-dang / The q, arising from the palate, is produced by nearing the middle of the tongue a little [to the palate]; the mode of articulation is very relaxed" (Blo bzang tshul khrims rgya mtsho 1891: 48, my translation).

As for her first reason, Zhang herself admits that another motivation for such a transliteration is to match the tone of the Chinese original more closely (1987: 42). Regarding her second reason, it should be remarked that q- does not function in the Tibetan script as a vowel, but rather as a null consonant. The vowel a is inherent in any aksara unless another vowel is added to it. The interpretation of the character q- as marking vocalic onset is thus fully consistent with the indigenous description of it as a (null) consonant. Finally, the pronunciation Blo bzang tshul khrims rgya mtsho describes in 1891 seems little relevant to the Old Tibetan period a thousand years earlier. There are thus no strong arguments for analyzing q- as a glottal stop onset as opposed to vocalic onset. Since the Indic ancestor of this character indicates an initial vowel, and its heir in the Vphags-pa script does so as well, the neutral position is to assume that q- similarly indicated an initial vowel in Old Tibetan. Perhaps all vowel initial words were articulated with a sub-phonemic glottal stop as in German; in this case q- may have been accompanied by a glottal stop, but it certainly does not represent a glottal stop.

# 3. V- AS A PLAIN INITIAL

The pronunciation of v- as a voiced fricative before the vowel -o and the glide -w (Róna-Tas 1962: 338-339, and 1966: 131) and between vowels (1966: 129 n. 142) is preserved in a number of Tibetan dialects. The position of v in the Tibetan alphabet suggests its value as a voiced correspondent of h (loc. cit.). The character v- has been used to transliterate a \*y- in Middle Chinese (Miller 1955b: 481-482). The discussion of indigenous Tibetan phonologists further buttresses the view that v- represents [ $\gamma$ -] or [fi-]. Bsod nams rtse mo (1142-1182) writes, "vas vphul gre-bavi phug-nas dbyung [the prescription with v is articulated from the cavity of the throat]" (qtd. in Róna-Tas 1985: 252, my translation). This description indicates a velar or glottal articulation. Bsod nams rtse mo's use of the word vphul 'prescription' might imply that he is discussing v- as the initial of a consonant cluster and not as a simple initial. Róna-Tas suggests that the pronunciation Bsod nams rtse mo describes "ist die Aussprache der isolierten Buchstaben, und daher gibt sie nur indirekt Auskunft über die Aussprache der Laute im Wort [is the pronunciation of the isolated letter, and therefore gives only indirect information about the pronunciation of the sound in a word]" (1985: Thus, although Bsod nams rtse mo appears to claim to describe the pronunciation of v- as the initial of a cluster, in fact the pronunciation he describes is that of a simple initial, as it would be pronounced when reciting the alphabet. Tavi si tu Chos kyi vbyung gnas (1699/1700-1774) describes v- as voiced and articulated in the velar or glottal region ("phyi-rol-du sgra thon-pa [the voice expelled

<sup>&</sup>lt;sup>5</sup> Róna-Tas cites the following examples from the literature of the pronunciation of *v*- before vowels: "L[iterary]T[ibetan] '*o-ma*' milk' // Gol[ok] *γo-ma*. [word list of] Prz[evlaskij] roma, Kha[m] *γo-ma*, L[iterary]T[ibetan] '*od* 'light' // Kha[m] *γod*, Cha[mdo] *hol*<sup>3</sup>. LhK [not included in list of abbreviations: Lhasa?] *fiol*..." (1966: 131 n. 155). He cites the following examples of *v*- between vowels: "L[iterary]T[ibetan] *spre'u* 'monkey' // Kha[m]J *štre-γŏ*, Der[ge]M *f're-wu*; [...]" (1966: 129 n. 142).

out]," "skye-gnas mgrin-pa [the place of articulation the throat]" quoted in Miller 1962: 922, 924, my translation).

Typological considerations weigh in on the question of whether the phonetic value of v- in this position is  $[\gamma]$  or [h]. Languages which have a phonemic contrast between /h/ and /h/ are very rare. Maddieson finds that only two languages out of the 918 languages he studied distinguish /h/ and /fi/ (1984: 57); unfortunately he does not name which two. I have found this contrast described in the phonologies of three languages. The Wu dialects of Chinese have distinct initials [h-] and [h-], but "[t]here is no actual contrast between murmured and voiceless initials that is not simultaneous with a tonal contrast" (Simmons 1999: 53). The Lamé language of Cameroon is described as having a true segmental contrast between /h/ and /h/, e.g. hào 'griller à la flamme, [to flame broil],' hào 'bagarre [row, ruckus]' (Sachnine 1982: 168). All words beginning with [h-] are low tone, whereas words beginning with [h-] are not restricted as to tone (op. cit.: 507-520).6 Finally, the Yadu dialect of Qiang also has a segmental contrast between /h/ and /fi/ as shown in the minimal pair ha-qa 'to go up' and ha-qa 'go down' (LaPolla with Huang 2003: 24). The authors note that "/fi/ only appears as the initial of one of the directional prefixes and a commonly used filler/emphatic interjection /ha/" (op. cit.: 23). Interestingly, no phonemic tonal contrasts are described for this language.

Considering the typological rarity of languages which distinguish [h-] and [ĥ-], if the Tibetan letter h- represents the sound [h-] then the letter v- is more likely to represent [ $\gamma$ -] than [ĥ-]. Concerning the phonetic realization of h Róna-Tas writes, "[i]t is uncertain whether this phoneme was a guttural [=velar] or laryngeal [=glottal] in O[ld]T[ibetan]" (1966: 128 n. 135). In contrast Coblin writes, "W[ritten]T[ibetan] h most often corresponds to laryngeal

The related Musey language of Cameroon also has distinct phonemes symbolized as <h> and <fi>, but in fact the distinction is not one of voicing. For a description of this contrast, and its relationship to the tonal system of Musey, see Shryock (1995).

[=glottal] fricatives in modern Tibetan dialects, and it is probable that the O[ld]T[ibetan] value was laryngeal rather than velar" (2002: 176), although he does not cite any dialect evidence. He could have cited the following dialects: Lhasa (Tournadre and Dorje 2003: 23 and 525), Shigatse (Haller 2000: 185, 186, and 296), Drokpa (Kretschmar 1986: 367-369), and Rebgong (de Roerich 1958: 155-156).  $^{7}$  In contrast, Balti has no reflexes of Tibetan h and all examples of h in Balti are in Persian loans (Bielmeier 1985: 238, 245). I have not located in the literature a correspondence between written h- and dialect pronunciation as [x-]. Also arguing in favor of the pronunciation [h-] is the fact that the Indic ancestor of the letter h- represents the sound [h-]. However, one fact could argue in favor of [x-]. Róna-Tas (1966: 129 n. 142) suggests on the basis of its placement in the alphabet that v is the voiced correspondent of h. If it is unlikely that the pair had the pronuncation [h-] and [h-], it would seem more likely that the pair had the pronunciation been  $[\gamma]$ and [x]. Languages which have  $[\gamma]$  do have a tendency to have [x]as well, but this generalization has a high exception rate of 37.5% (Maddieson 1984: 47). In my own view,  $[\gamma]$  and [h] are similar enough to warrant the placement of v in the Tibetan alphabet, even if this contrast were between  $[\gamma]$  and [h] rather than  $[\gamma]$  and [x]. The preponderance of evidence appears to point to the letter h-

The number of Written Tibetan words beginning with h- is quite small. Lhasa dialect has such examples as hago 'comprendre [understand]' and halas 's'étonner [be surprised]' (Tournadre and Dorje 2003: 23 and 525). Shigatse has  $h\bar{a}$   $kh\underline{o}r < hago$  'wissen [know],'  $h\bar{a}tc\bar{a} < ha$  cang 'überaus [very much],'  $h\bar{a}\eta s \dot{a}\eta < hang$  sang 'erstaunt sein [be astonished],'  $h\bar{a}p < hab$  'großer Stich [a bad sting],'  $h\bar{a}mp\bar{a} < ham$  pa 'Lüge [a lie],' and  $h\bar{u}:p\bar{o} < hur$  po 'fleißig [diligent]' (Haller 2000: 185, 186, and 296). Drokpa has  $h\bar{a}kh\underline{o} < ha$  go 'verstehen, erkennen [understand],'  $h\bar{a}l\bar{a}m < ha$  lam 'ungefähr, etwa [about, around],'  $h\bar{a}mp\bar{a}t\bar{s}\bar{a}n < ham$  pa can 'habgierig [greedy],'  $h\bar{a}\dot{n} < hang$  sang 'erstaunt sein [be astonished],'  $h\bar{o}nth\bar{o}r < hon$  vthor 'entsetzt sein [to be appalled],' and  $h\bar{u}rth\bar{a}k < hur$  thag 'unvermittelt [abruptly]' (Kretschmar 1986: 367-369). Rebgong has two examples: ho- $d\bar{t}r < ho$ - $d\bar{t}r$  'hurlement [cry, howl]' and ha-lam 'presque, environ [almost, about]' (de Roerich 1958: 155-156).

representing the sound [h-] and not [x-]. Consequently, the phonetic value of v- is more likely to be [ $\gamma$ -] than [ $\beta$ -].

Despite the convincing dialect data that v- represents a voiced fricative, the view persists that v- as an initial before vowels represents no consonant at all.

When this graph [...] appears in the center graph position, [i.e. before a vowel or glide] it indicates the absence of an INITIAL consonant: that is, it represents a smooth vocalic ingress. (Beyer 1992: 43 n. 6, small capitals in original)

[I]n a small number of words, which in many modern dialects have pure or smooth vocalic ingress rather than an initial consonant, 'a-chung [= v] indicates the absence of any other consonant. (Coblin 2002: 169, emphasis in original)

Either Beyer and Coblin are unaware of the dialect evidence suggesting the value of  $[\gamma-]$ , or they intend to suggest that such pronunciations have developed from zero in those dialects where they are attested. Fricatives have been known to arise ex nihilo, as in the case of rough breathing before all upsila in Greek (e.g.  $U\pi\epsilon\rho < *uper(i)$ ; Frisk 1955-1972), or [h-] for erstwhile vocalic onset in the Drokpa dialect of Tibetan. However, because dialects such as Golok, Kham, and Chamdo tend to be phonetically conservative (e.g. they preserve consonant clusters), their testimony in the case of  $[\gamma-]$  for v- should not be lightly disregarded (see note 5).

The letter q- has already been shown to represent vocalic onset. Old Tibetan is unlikely to use both q- and v- to represent vocalic onset, and indeed much evidence points instead to the pronunciation of a simple initial v- as  $[\gamma$ -]. If Beyer and Coblin, in contrast to most

<sup>&</sup>lt;sup>8</sup> Drokpa has both [h] < v and [h] < q (e.g. huo < vong 'kommen [come],' and  $h\bar{a}p\bar{a} < qapha$  'Vater [father];' Kretschmar 1986), so Drokpa has developed an initial h- where Old Tibetan has vocalic onset, regardless of which letter represented vocalic onset in Old Tibetan.

researchers, believe that v- and not q- represents vocalic onset, the onus to demonstrate this is theirs.

As a simple initial consonant *v*- occurs only before the vowel -*o* (e.g. *vod* 'light'), the vowel -*u* (e.g. *vung-nas* 'after this'), and the glide -*w*- (e.g. *vwa* 'fox'); combinations such as \**va* and \**vya* do not occur. A simple initial *v*- is also found following a vowel before the genitive suffix or the diminutive suffix (e.g. *rgyal-povi* 'of the king,' *byivu* 'small bird').

# 4. V- AS THE INITIAL CONSONANT OF A CLUSTER

As the initial of a cluster *v*- appears as the homorganic nasal to the following stop in conservative dialects such as Golok and Kham as well as in loanwords to Mongour (Róna-Tas 1966: 143-144, Sprigg 1968: 310). In other dialects it occurs as various nasals (Róna-Tas 1966: 144 n. 270). Even the innovative Lhasa dialect has a nasal within a word, where *v*- has been reanalyzed as the final of the preceding syllable, e.g. *dge-vdun* [gendün] 'clergy' (Siklós 1986: 308-309). Therefore, in Old Tibetan *v*- before a consonant

The Written Tibetan letter 智 w- is historically an Old Tibetan diagraph ? vw-(Uray 1955: 110). Old Tibetan has no words with initial w-. This fact is overlooked by Sun when he writes, "[t]here is some doubt concerning the original phonetic quality of the O[ld]T[ibetan] w, written <w>, as some modern dialects show voiced uvular reflexes, e.g. B- (Amdo Xiaman, J. Sun 1996) or Bw- (Dári達日 <Dar.lag>, Zhang 1996: 23)" (2003: 781 n. 17, emphasis in original). These reflexes would be expected from written vw-. The bibliographic information for J. Sun 1996 is lacking in his bibliography; he appears to intend Sun 1986: 204 #44.

Golok has such examples as *vkhor-lo* [ŋkhor-] 'watch,' *vgro* [ŋgjo] 'go,' *vcham* [nt'šham] 'dance,' *vthung* [nthoŋ] 'drink,' *sku-vdra* [-ndra] 'image,' *vjav* [ŋd 'źa] 'rainbow,' *vdod-mo* [ndod] 'wish,' *mdav-vben-gvi* [-mpheŋ] 'of the target,' *vbar* [mbar] 'burn' (Sprigg 1968: 310). Kham has examples such as *vkhol*- [nk'ol-] 'to boil,' *vgul*- [ngul-] 'to shake,' *vthag*- [nt'ag-] 'to bind,' *vdod*- [ndod-] 'to wish,' *vdzin* [ndzen-] 'to seize,' and *vbab*- [mbab-] 'to fall' (Róna-Tas 1966: 143 n. 264). Examples of Mongour loanwords include *vkhor-lo* [ŋk'uorlo] 'circle,' *vdu-khang* [nDogôŋ] 'meeting-house,' *vphul*- [mp'urla] 'to push,' and *rdo-vbum* [rëDuomBen] 'heap of stones' (Róna-Tas 1966: 143).

Examples from Derge include *vkhyags* ["čha<sup>k</sup>] 'cold,' *vgro*- ["dzro-] 'to go,' *vcham*- ["chom-] 'to agree,' *vjam*- ["dzampo-] 'soft,' and *vthag*- ["thopa-] 'to bind' (Róna-Tas 1966: 144 n. 270).

represented the nasal homorganic to that consonant.  $^{12}$  In this environment v- occurs before voiced and voiceless oral stops.  $^{13}$ 

#### 5. -VAS A FINAL

In Written Tibetan -v at the end of a syllable indicates that the preceding character is followed by the vowel a and is not a final consonant. Thus,  $5^{44}$  < dg> is read /dag/ whereas  $5^{44}$  < dgv> is read /dga/. In the Old Tibetan inscriptions this use also seems to be at play; we have the standard Written Tibetan spellings dgav 'like, be fond of' (Zhol N54), dmav 'low' (Zhol N57), and mngav 'own' (Zhwavi Lha-khang W29, W59, E41). 14 However, in Old Tibetan the final -v occurs with mysterious inconsistency. In the Zhol inscription several words are inconsistently spelled with a final -v where it would not be expected following Written Tibetan orthography. The examples of grammatical endings are: -stev at S62, but -ste at S20, S32, S44, etc.; -pav at N44, but -pa at E11; nav at N66, but -na at N10, N15, N26, N33, and N51; and -lav at S2, and S42, but -la at S2, S3, S5, S7, etc. The examples of lexical words are: dpyav 'tax' at S48, S51, but dpya at S47; yi-gev 'letter' at N32, but yi-ge two lines later at N34; bu-tshav 'descendents' at N50, but bu-tsha at N58; and dgrav 'enemy' at S28, but dgra at S37.

Although there appear to be no circumstances under which -v is required, it is also not the case that the use of -v is entirely haphazard and unpredictable. The character -v occurs only after the vowels a-, u-, and e-, never following i- or o-. The final -v occurs primarily on inflectional morphemes. In the Old Tibetan Annals

The letter v- represents [m-] before labials; although the Tibetan letter m- can occur as the initial of a cluster, it nowhere occurs before labials (such as \*mph- or \*mb). Therefore the letters v- and m- are not in competition.

According to Written Tibetan spelling rules, voiceless consonants following vmust be aspirated, but this rule is not consistently observed in Old Tibetan.

All epigraphic citations are from Li and Coblin (1987).

(Wang and Bsod nams skyid 1988: 12-29)<sup>15</sup> the allative is written -lav on five occasions, the locative -nav on seven, the terminative is written -duv five times, and the semi-final converb appears twice as -stev. 16 The only other examples of -v are: Rtsang.rhyav. || a name PT1288.20 [652], vdun||mav 'council' IO750.29 [681], dmev 'internecine strife' IO750.39 [685], Ldeg.ren.pav: || a name 10750.99 [705], and bkyev/ 'send, emit' 10750.190 [726]. In the Zhol inscription half the examples of -v occur on such inflexional morphemes (vide supra).

There is a marked tendency for a final -v to be placed immediately before a line break. In the Old Tibetan Annals ten of the 24 examples of this unexpected final -v are found immediately before a line break.<sup>17</sup> Six of the remaining 14 examples occur just before a shad. 18 I see no graphic motivation for the remaining eight examples. 19 The tendency for -v before a line break is also found in the Zhol inscription (with the three exceptions being both examples of dpyav and the single occurrence of -nav, vide supra).

I have not considered the so-called 'military annals' here because it is a separate text and has considerably different paleography.

The five examples of -lav are PT1288.5, PT1288.12 [643], PT1288.35 [659], PT1288.50 [670], and IO750.5 [673]. The seven examples of -nav are PT1288.7, PT1288.14 [649], PT1288.16 [650], PT1288.26 [654], 10750.121 [709], 10750.144 [714], and 10750.193 [727]. The five examples of -duv are PT1288.26 [654], PT1288.30 [656], IO750.30 [682], IO750.37 [684], and IO750.240 [742]. The two examples of -stev are PT1288.22 [653] and PT1288.28 [655]. These and all other examples of -v in the *Old Tibetan Annals* are given in the appendix.

The ten examples of -v before a line break are PT1288.5, PT1288.20 [652]. PT1288.26 [654], IO750.30 [682], IO750.37 [684], IO750.99 [705], IO750.121 [709], IO750.144 [714], IO750.193 [727], and IO750.240 [742].

The six examples of -v before a shad are PT1288.7, PT1288.12 [643]. PT1288.14 [649], PT1288.22 [653], PT1288.28 [655], and PT1288.50 [670].

The eight remaining examples are: PT1288.16 [650], PT1288.26 [654], PT1288.30 [656], PT1288.35 [659], IO750.5 [673], IO750.29 [681], IO750.39 [685], and IO750.189 [726].

Such occurrences of -v become less frequent as the text of the Old Tibetan Annals proceeds. Whereas the first ten datable examples cover 643-659 (17 years), the last ten examples cover 681-742 (62 years). These data are consistent with the view that the Annals (or at least its archetype) was written nearly contemporaneously with the events it describes (Uray 1975). As the use of -v decreased with time, it also became less frequent in the entries of this document.

According to Written Tibetan spelling rules, when an -s is suffixed to a word ending with -v, the -v is dropped before adding the -s. In Old Tibetan this rule is not consistently observed. In the Bsam-yas inscription (l. 15) the past of vdav 'to pass beyond' is spelled as vdavs rather than vdas. In the Skar-chung inscription (l. 50) the past of vdav 'to lower, reduce' is spelled as vdavs rather than the expected vdavs. The Zhol inscription observes the rule in the example (N19) vdavs (= vdavs +vdavs) 'word (instrumental/ergative),' but the Rkong-po inscription has vdavs three times (Il. 13, 20, and 21) and the Mtshur-pu inscription consistently has vdavs (Il. 4, 27, 31, 34, 39, 46, and 66).

Spelling tends to be conservative; perhaps originally -ν represented a final [γ] which was subsequently lost. Such a loss of a final voiced velar fricative is relatively common in the world's languages (e.g. in various Turkic languages, cf. Johanson 1998: 100; and in Finnish, cf. Hakulinen 1961: 41). Even though -ν was no longer pronounced as a final consonant it was inconsistently spelled in those words and morphemes where it had once been pronounced. However, -ν was not generally written where it had not represented a historical reality. Where there was an additional graphic motivation to follow the more archaic spelling, such as to fill out the end of a line or to disambiguate the location of the vowel, final -ν was kept with more consistency than elsewhere. After the spelling reforms of the ninth century (Taube 1978; Scherrer-Schaub 2002) only the use of the character as a mater lectionis was retained. This

preliminary investigation into the use of -v in the *Old Tibetan Annals* and the Old Tibetan inscriptions has shown that this use of -v as a final is not an entirely meaningless and desultory orthographic practice.

# 6. OTHER USES OF V?

Coblin (2002) finds that in Old Tibetan v is used to mark foreign stop consonants in transcription, especially when the stop is voiced. He suggests that in such cases v was not used to approximate the foreign sound in Tibetan phonology, but rather simply "to alert readers to the fact that the Tibetan consonant letters to which 'a-chung [=v] was attached were not to be pronounced in their 'normal' way" (2002: 176). In a similar context Miller writes:

When we recall what may happen in orthographic attempts between closely related languages at the hands of native-speakers well acquainted with both varieties – but lacking technical linguistic training – we may well be inclined to place somewhat less blind faith in the orthographic experiments of the unknown scribe [...] confronted with the truly formidable task of writing one totally different and unrelated language [...] in the received orthography of another language. (1993: 171)

In Coblin's own data voiceless stops are intermittently transliterated as voiced and voiced stops are transliterated as voiceless. <sup>20</sup> It cannot be concluded that Tibetan makes no distinction between voiced and unvoiced consonants. Instead, one concludes that the transcribers were imperfect in their transcriptions. If v is frequently but inconsistently used to mark certain types of foreign stop consonants in transliterations of Chinese and Sanskrit, far from proving that v "has no phonetic value of its own" (Coblin 2002:

<sup>&</sup>lt;sup>20</sup> For example, Chinese | puk, Tibetan vbug; Ch. 弗 pjuət, Tib. vbur; Ch. 父 bju:, Tib. vphu; Ch. 等 təng, Tib. ding (Coblin 2002: 172-173).

181), it shows merely that the transcriber had done his best to capture the foreign sound in his own orthography, and to him that sound was in some way like the sound that he wrote in his own language with a  $\nu$ .

Coblin mentions three particular occurrences of v in transcription which he finds noteworthy: the transcription of Chinese labiodentals, the transcription of Chinese velar fricatives, and the transcription of Chinese murmured or voiced stops. Coblin is correct when he points out that the Chinese consonant series most often transliterated with v in his data is the labiodentals and that Tibetan has no labiodentals. However, the two consonant series least often transliterated with v – the retroflex stops and the retroflex fricatives – also do not occur in Tibetan. If the letter v were used to mark foreign consonants as foreign, the retroflex stops and fricatives would not have been spared. The motivation for transliterating the labiodentals with v must be sought elsewhere.

The transcription of a voiced labiodental fricative, in an example like 復 bjuk (<bj> here represents [v]) as vbug (Coblin 2002: 172), is not difficult to account for. The Tibetan letter v represents a voiced velar fricative and the letter b represents a voiced bilabial stop, thus the combination vb could easily represent a voiced bilabial fricative [ $\beta$ ] which in turn is a good transcription for a voiced labiodental fricative [v]. In an example such as  $\beta pjuu$ -( $\beta p$ ) here represents [f]) transcribed as  $\beta pjuu$ - (loc. cit.), the letter  $\beta ph$ - indicates both the position of articulation and the lack of voicing. The letter  $\beta ph$ - indicates both the position of articulation and the lack of voicing. The letter  $\beta ph$ - indicates a transcription [ $\beta ph$ ] for [f], which is again not inaccurate. However, a transcription such as  $\beta phh$ -, the current transcription in Tibet for a Mandarin Chinese  $\beta ph$ -, might have been better.

It should be kept in mind that Coblin's data include only those cases where  $\nu$  could not be interpreted as transiterating prenasalization. Thus, discussion of frequency is relative to this selection criterion.

The group of consonants second most often transcribed with v is Coblin's "velars and laryngeals" (2002: 175). Coblin argues that, since Chinese had the velar fricatives  $\gamma$  and  $\chi$  whereas Old Tibetan had the glottal fricative h, in the Tibetan transcription of Chinese  $\gamma$ and  $\gamma$  as vh- the letter v served merely to point out that the fricative in question had a different place of articulation than [h]. In fact, as v had the value  $[\gamma]$ , the transcription vh- would be a phonetically motivated way of writing  $[\gamma]$ , the v- showing the place of articulation precisely and the h emphasizing that the sound is voiceless. There remains the question of why a Chinese  $\gamma$  was transcribed as vh when v alone would have sufficed to represent  $[\gamma]$ . This question however can be subsumed to the frequent misalignment of voicing between the Chinese consonants and their Tibetan transcription in general, which probably indicates merely that Chinese and Tibetan had difference voice onset times for their voiced series.

Finally, Coblin notes "another striking feature of the data as a whole is the rather large number of Chinese syllables with voiced or murmured (i.e. zhuo 濁) initials" (2002: 176). The motivation for transliterating murmured stops with v is plain enough. Since v had the phonetic value  $[\gamma]$  or [h] it is hard to imagine a better transcription for a sound like [bh] than something like bv or vb. There is even good phonetic motivation for spelling the voiced sounds [g-], [b-], etc. with an apparently erroneous v as vg-, vb-, etc. The phonology of the Tibetan language at the time of the script's invention before 650,  $^{22}$  the phonology of common Tibetan as reconstructable from dialectology, and the phonology of ninth century central dialect Tibetan (the language of much of Coblin's material) are not equivalent. In the Central Tibetan dialect

The year 650 is when annual record keeping begins in the *Old Tibetan Annals*. Previous years are reported retrospectively from that year. The year in which an annalistic practice on the part of the state began is at least a *terminus ante quem* for the invention of the script (cf. Uray 1975, Takeuchi 1995: 25 n. 5).

described by Denwood (1999)<sup>23</sup> syllables written with a plain voiced consonant initial are pronounced with voiceless low tone initials (e.g. ga [ ka], 1999: 57), whereas syllables written with an initial cluster of v- and a voiced consonant are pronounced as a voiced low tone initial (e.g. vgav [\_ga], 1999: 64). A speaker of this dialect would therefore be likely to transcribe foreign [g-], [b-], etc. as vg-, vb-, etc. If the transcribers of Coblin's evidence spoke such a dialect, there would be no mystery in their use of v. There is ample reason to suspect that the transcribers spoke just such a dialect. In a study of Tibetan and Chinese bilingual inscriptions Laufer concludes that "the tone system existed in the language of Lhasa at least as early as the first part of the ninth century" (1914: 79-80) and that "[t]he superscribed and prefixed letters [i.e. initials of consonant clusters] were already mute at that time" (1914: 86). Miller, studying the same material, concludes that by the ninth century "the language of Central Tibet seems to have reached, as far as its phonetic structure is concerned, very nearly the same status in which we find it today" (1955c: 290). Zhang arrives at similar conclusions based both on Chinese transcriptions and on spelling variation in Old Tibetan texts. She finds that "the voiced unaspirated stops and affricates [...] had already become voiceless unaspirated stops" (1987: 105), but "the voiced stop consonant letters were actually pronounced [as voiced] when they appear in positions other than single [sic] initial position" (1987: 56). Finally, in the material examined by Róna-Tas, "Turkic k- and t- are transcribed as a rule with Tibetan g- and d- respectively" (1992: 699). But when "Turkic had an initial d-[...] this was rendered as a rule by an a-chung+d [= vd] combination" and "[t]he Turkic initial b- can be expressed either with 'b- [= vb] or with db-" (1992: 702).

Denwood himself describes the dialect of his study as 'Lhasa' but from linguistic criteria it is clear that it is the dialect of the region around Lhasa (or perhaps even of the standard Koiné of the Tibetan Exile) and not Lhasa city proper. Other descriptions of Central Tibetan agree with Denwood on these points (e.g. Miller 1955a: 49 §3.3.2-§3.3.7)

The data which Coblin finds so surprising are in fact not so. Rather than v- being used as a 'diacritic' to mark foreign sounds, combinations such as vg- or vb- were used to represent normal voiced stops, because in the dialect of the transcriber sound change had already led Written Tibetan words spelled with vg-, vb-, etc. to be pronounced [g-], [b-], etc., and Written Tibetan words spelled g-, b- etc. to be pronounced [k-], [p-], etc.

Coblin goes on to argue that the use of v as a 'diacritic' in transcribing foreign sounds suggests a similar use as a diacritic with indigenous words (2002: 177). Even if his premise were correct, his method would still be faulty. The use of a character to transliterate a foreign language would be determined by the character's function in indigenous vocabulary and not vice versa. In order to make sense of the use of v to transliterate foreign stops, it is first necessary to show how it is used in indigenous vocabulary.

There is a diacritic in Written Tibetan but not Old Tibetan 3, which looks like a small v written below an aksara. This symbol is used to transliterate a Sanskrit long vowel, e.g. \[ \frac{\sqrt{3}}{2} \] \[ \bar{a} \] \[ \alpha \] ananda 'peace.' Although this symbol can be accurately described as a diacritic, it is in fact not v but rather a new symbol with a new size put in a new place. Just as the Tibetan character  $\overline{\zeta}$ , used to represent the Sanskrit sound t [t], is not the same character as the Tibetan character 5, used to represent the Tibetan sound [t], so too the symbol used to mark Sanskrit long vowels q is not the same character as letter q v used in the functions  $[\gamma-]$ , [N-], and  $[-\emptyset]$ . This new symbol q should not be considered a use of v, although it does derive its graphic form from v. The use of v as a mater lection is is the prototype of the new symbol's use to mark Sanskrit long vowels. As a mater lectionis the letter v marks the location of a vowel, but is not itself articulated. This graphic shape is thus a logical choice for a symbol used to mark vowels in foreign words. Tibetan does not distinguish vowel length, so this new symbol a also has no articulator realization.

The letter v itself has no other uses apart from the three [ $\gamma$ -], [N-], [- $\emptyset$ ] described previously.

# 7. AN ECONOMY OF SYMBOLIZATION

Coblin concludes his recent essay thus:

In summary then, we concur with the views of Sun [1986: 113-114<sup>24</sup>] and Sprigg [1987: 52-53] that 'a-chung [= v] was an "all-purpose orthographic device," utilized for "economy of symbolization," whether we speak of W[ritten]T[ibetan] or O[ld]T[ibetan], of native texts or of transcriptional texts. (2002: 183 emphasis and quotation marks in original)

It may be fair to call v a 'multi-purpose' orthographic device, but it is hardly an 'all-purpose' orthographic device. The letter v has three uses in indigenous Tibetan words, and no other uses. The question, then, is whether these different uses are clearly motivated, or are a haphazard collection of orthographic idiosyncrasies used for 'economy of symbolization' where v serves as a mere "diacritic" (2002: 177).

The principle of 'economy of symbolization' does not seem to play a large role in other orthographic traditions. Traditional Russian orthography used both the 'soft sign' b to indicate palatalization and the 'hard sign' b to indicate non-palatalization. As the Russians later realized, only one of the two was necessary.

Sun has since changed his thinking, writing: "the written sign achung [=v] must have represented prenasalization as a prefix [i.e. initial of a cluster] and some voiced guttural spirant (\*fi or \* $\gamma$  or \*B) as a root initial, but must have had nil phonetic value at the syllable coda position" (2003: 779 n. 14, emphasis in original). Later in the same essay: "I believe (contra an earlier view expressed in J. Sun 1986: 114) that O[Id]T[ibetan] originally had three voiced spirants: z. z <zh>, and a guttural B or B (written with root-initial achung <'> [=v]), the dialect reflexes of the latter include B (in many Amdo varieties, while in other Amdo varities it has dropped), B (Lhasa and many Central varieties), and B (Zhongu, Baima)" (2003: 781 n. 18).

Chinese orthography has apparently embraced the exact opposite principle, using many thousands of symbols where about twenty would do. Even within Tibetan orthography 'economy of symbolization' has played a very small role. If reigning opinion is correct, Old Tibetan had two symbols ( $\sim i$  and  $\sim i^{25}$ ) for the same vowel /i/. Laufer (1914: 84) and Miller (1966) argue that the two represented sub-phonemic allophones. All other authors (e.g. Ulving 1972 and Róna-Tas 1992: 698-699) have regarded these two characters as meaningless graphic variants. Similarly, according to Benedict (1972: 20) and his followers, Old Tibetan needlessly distinguishes aspirate and non-aspirate voiceless stops, enshrining a sub-phonemic distinction in the orthography. In these two cases Tibetan orthography uses two symbols for one phoneme. Therefore it is unlikely that it uses one symbol for the two phonemes  $\gamma$ - and N-in order to conserve on symbols.

When diacritics are necessary in the West, rather than simply employing an underused character (such as z) scholars modify a pre-existing character with dots, hooks, or slashes. The symbol 't' represents a voiceless retroflex stop because 't' already represents an voiceless dental or alveolar stop. The Tibetans did likewise. The Indic script which they modelled their script after had a symbol for  $[t\int]$ , namely  $\mathfrak{T}$  (or something looking very like it), but lacked a symbol for the Tibetan sound [ts]. Therefore a hook was added to  $\mathfrak{T}$  c in order to make  $\mathfrak{T}$  c the new symbol for [ts]. The diacritic  $\mathfrak{T}$  used to mark Sanskrit long vowels derives its use from the late diacritic like function of  $\mathfrak{T}$  as a mater lectionis. When creating diacritics Tibetan practice has not been to redeploy an underused symbol in a phonetically unmotivated way in order to conserve the total number of symbols needed to write the language. Instead, they

The transliteration of this character is not standardized; many authors do not transliterate it at all. One sees also <I> and <I>, but I prefer <I>, and employ it here.

have invented new phonetically motivated symbols, as have other orthographic traditions.

Coblin could be interpreted as making the milder claim that the three uses of v cannot be regarded as the same phoneme. The only two uses of v which have been phonemically associated are its use before vowels (a voiced velar fricative) and its use before consonants (prenasalization). Róna-Tas treats these two uses of v ( $\gamma$ - and N-) differently in his 1966 monograph, for which Miller makes the following criticisms:

[I]n his treatment of W[ritten]T[ibetan] h [= v], he has taken apart a phonemic unit which, both for descriptive and for historical consideration, is better left intact. [...] The decision to lump together two phonetic entities in complementary distribution, one an initial voiced velar spirant [fricative], the other a homorganic nasal initial in consonant cluster, under a single phoneme, W[ritten]T[ibetan] h [= v], is a phonemic decision as old as the Tibetan script. The Tibetan grammarians learned their phonemics long ago in India or from Indic sources, and when they made a decision of this kind, it is generally difficult to fault them. (1968: 162)

If Róna-Tas is correct to find the origin of v in the Khotanese g, and Khotanese g already had both these functions (1985: 259-260), the Tibetans may have simply borrowed the same symbol for two phonemes. However, this theory about the graphic origin of v has not been demonstrated, and in the absence of other evidence Miller's argument is persuasive. By using the same character for both  $\gamma$ - and N- the redactors of the Tibetan script intended to represent a single phoneme. The letter v is not a diacritic, and is certainly not an 'all-purpose' diacritic used for 'economy of symbolization.'

#### 8. THE PREHISTORY OF V

The letter v had the phonetic value [N] in the position vC(y/r)V-, the value  $[\gamma]$  in the positions vo-, vu-, and vwa-, and the value  $\emptyset$  (perhaps originally  $[\gamma]$ ) in the position -Vv. Since these uses are in complementary distribution and are represented by the same symbol, in the absence of evidence to the contrary, they are best regarded as allophones of a single phoneme. This phoneme could have two imaginable origins. In the first possibility, due to independent sound changes the distribution of these three sounds became complementary, and were thus perceived to be allophones of the same phoneme at the time of the script's invention. A similar event took place in Eastern Kiranti where:

As a results of the merger of Tibeto-Burman \*r- and \*y- in initial position [...] word-initial \*r- disappeared, leaving Tibeto-Burman \*l and \*r in complementary distribution so that they were re-analysed as two allophones of a single liquid phoneme l/l/. (van Driem 1990: 83)

The second possibility is that at one time the same sound was pronounced in all three environments, but later these environments conditioned three different allophonic realizations. Which of these two options is correct can only be shown by detailed comparison to closely related languages. Unfortunately, the most closely related languages such as Bumthang (Michailovsky and Mazaudon 1994; van Driem 1995), Tshangla (Hoshi 1987; Andvik 1999), Dakpa (Lu 1986; Sun et al. 1991), and Zhangzhung (Nagano and LaPolla 2001) are not currently well enough documented or researched to permit such inquiry. I will tentatively explore the possibility of the second option here.

At a very early stage v represented the single sound  $[\gamma]$  in any position, and subsequent sound changes led to the complementary distribution of [N],  $[\gamma]$ , and  $[\emptyset]$ . The preservation of  $[\gamma-]$  as a simple

initial needs no explanation. The change of final  $[-\gamma]$  to  $[-\emptyset]$  has already been argued for. After that change, final -v was reinterpreted as a mater lectionis indicating the absence of a final consonant, at which point v had become a sort of diacritic, and was therefore chosen as the model for a new symbol used to mark vowel length in the transcription of Sanskrit. The only questionable sound change is  $\gamma C$ - > NC-. It is possible for fricatives to become nasals. In Avestan intervocalic [h] gave rise to a velar nasal (i.e. aha > anha; cf. Beekes 1988: 19). In Thai the three low vowels /ɛ/, /a/, and /o/ are "allophonically nasalised [...] after syllable-initial /h/ and /?/" (Matisoff 1975: 266). In Hayu initial [h] becomes the nasal homorganic to the final oral stop in the preceding syllable (Michailovsky 1975: 293). Voiced fricatives themselves can become nasalized (Ladefoged and Maddieson 1996: 132); a sound change such as  $\gamma C_- > \tilde{\psi} C_- > NC_-$  is thus not unimaginable. One piece of evidence argues that vC was at one point not pronounced [NC]. In a number of Tibetan verbs with lateral initial roots, the present stem begins with ld- (ldug [present], blugs [past], blug [future], lhugs [imperative] 'to pour'; ldud, blud, blud, lhud 'to offer, pour'; ldog, logs, log, - 'to reverse'). Since the normal present prefix is v-, there is good ground to internally reconstruct ld < \*vl. However prenasalized laterals [NI] are so far unattested in the world's languages (Ladefoged and Maddieson 1996: 119). Most likely the relevant sound change was \*yl > \*dl > ld and only later did the more general sound change  $\gamma C > NC$  occur. I hope that better descriptions of Tibetan's endangered relatives will one day allow these questions to be answered definitively.

#### APPENDIX

# Examples of -v as a final in the Old Tibetan Annals

- PT1288.5. Va.zha.dang: Rgya.lav || on Vazha and China
- PT1288.7. - - nav/ btsan.po: gcen. srong.rtsan:dang/ in... the emperor the older brother Srongrtsan and
- PT1288.12 [643]. btsan:po: Khrĭ.srong.rtsan.gyĭ: ring.lav/ Lǐg:snya:shur. brlag.ste: in the time of the emperor Khrĭ-srongrtsan, Lĭg-snya-shur lost...
- PT1288.14 [649]. de.nas: lo.drug.nav/ btsan:po: Khrĭ.srong.rtsan: dgung.du. gshegso/ after that in six years, the emperor Khrĭ-srong-rtsan went to heaven.
- PT1288.16 [650]. /:/ khyĭvi.lo.la. bab.ste/ bstan.po: myes: Khri.srong.rtsan:gyi. spur: Phyĭng.bavĭ. ring.khang:nav. rĭng:mkhyud.ching: || bzhugste/ The dog year arriving, the corpse of emperor the grandfather, Khri-srong-rtsan was corpse-concealed in the corpse-house of Phying-ba
- PT1288.20 [652]. blon.che. Stong.rtsan.gyis: Glo:bo:dang. Rtsang.rhyav. || bkug:par: lo:gcĭg/ The prime minister Stongrtsan subjugated Glo-bo and Rtsang-rhyav.
- PT1288.22 [653]. glang.gi. lo.la: bab.stev/ btsan.po.Nyen.kar.na. bzhugs.shing/ The year of the ox arriving, the emperor stayed at Nyen-kar.
- PT1288.26 [654]. stagi.lo.la. bab.ste/ btsan.pho. Mer:khe.nav .bzhugs.shing/ The year of the tiger arriving, the emperor stayed at Mer-khe

- PT1288.26 [654]. blon.che: Stong.rtsan:gyis/ Mong.pu: Sral: Vdzong.duv: || bsduste/ The prime Minster Stong-rtsan convened [the council]. at Mong-pu Sral Vdzong.
- PT1288.28 [655]. yos.buvi. lo.la. bab.stev/ btsan.po. Mer.khe.na. bzhugs.shing/ the year of the hare arriving, the emperor stayed in Mer-khe.
- PT1288.30 [656]. blon.che: Stong.rtsan.gyĭs/ Gtsam.gyi. Yul:mar.duv.sha || lings: chen:pho. btab:phar: lo.gchĭg/ The prime minister Stong-rtsan levied a great meat tax at Yul-mar (the low land) in Gtsam. So one year.
- PT1288.35 [659]. *lugĭ*. *lo.lav*. *bab.ste/ btsan.po*. *Sprags.gyĭ*. *Sha.ra.na: bzhugs.shing/* the year of the sheep arriving, the emperor stayed in Sha-ra in Sprags
- PT1288.50 [670]. rtavi. lo.lav/ btsan.po: Vo.dang.na. bzhugs.shing/ The year of the horse, the emperor stayed in Vo-dang.
- IO750.5 [673]. bya.gagĭ. lo.lav :btsan.po: dbyar.stod: Pho.dam:mdo.na. bzhugs.shĭng/ The year of the bird arriving. In the early summer the emperor stayed at Pho-dam-mdo.
- IO750.29 [681]. vdun || mav. Rgyas:gyĭ. Lung.rĭngs.sdu: bsdus:par: lo.gchĭg/ The council was convened at Lung-ring in Rgyas.
- IO750.30 [682]. blon. chen.pho: Btsan.snyas/ vdun.ma: Sgyog.ram:duv: || bsduste/ Prime minister Bstan-snya convened the council at Sgyog-ram.
- IO750.37 [684]. dgun.vdun. Shangs:kyĭ. Rab.kha.tshal.duv || vdus.nas/ when the winter council convened at Rab-kha-tshal in Shangs.
- IO750.39 [685]. blon.chen.po: Btsan.snya:dang/ Mang.nyen.stag. || tsab:gnyĭs/ dmev: byung/ Shang:gyĭ. Sum.chu.bor/ blon. chen.pho. Btsan.snya:gum. Both prime minister Btsan-snya and

- [Mgar]. Mang-nyen Stag-tsab, internecine strife arose. Prime minister Btsan-snya died at the Sum river in Shang.
- IO750.99 [705]. Ldeg.ren.pav: || Mnon:snang. grags:dang/ Khe.rgad. Mdo.snang. las:stsogs:ba: log.ste: Bon.mo:na.la. tser: Ldeg.ren.pa .log.|| pa.rnams: bkum/ Ldeg-ren-pav, Mnonsnang-grags, Khe-rgad Mdos-nang and others revolted, and at Bon-mo Na-la-tse, Ldeg-ren-pa and the insurgents were killed.
- IO750.121 [709]. pyĭ. Lhas.gang:tsal:nav: || bzhugs/ The grandmother stayed at Lhas.gang.tsal.
- IO750.144 [714]. dgun. btsan.po: Nyen.kar:nav: || bzhugs/ In the winter the emperor stayed at Nyen.kar.
- IO750.189 [726]. mngan.mched. brgyad.las: bzhĭr.bcos.pavī: zlugs:gyĭ. ring.lugs: || bkyev/ The decree publishing the reduction of great governors from eight to four was proclaimed.
- IO750.193 [727]. dgun. btsan.pho: pho.brang. Jor.gong.sna.nav. || bzhugste/ In the winter, he emperor's court stayed in Jor-gong-sna
- IO750.240 [742]. btsan.po: Srong.lde.brtsan: Brag.mar:duv. || bltam/ yum: Mang.mo.rje. nongs: phar:lo.gchig/ The emperor Srong-lde-brtsan was born in Brag-mar the mother Mang-mo-rje died.

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