

TIBETAN <ḥ> AS A PLAIN INITIAL AND ITS PLACE IN OLD TIBETAN PHONOLOGY¹

Nathan W. Hill

School of Oriental and African Studies, University of London

Abstract: Beginning with de Kőrös (1834) many researchers have held that the Tibetan letter ^ḥ<ḥ> as a simple initial represents a voiced fricative. In 1881 Jäschke initiated an alternative view, which holds that this letter has no phonetic value, instead representing vocalic onset. An examination of the reflexes of relevant Old Tibetan words in the modern Tibetan languages, the order of the Tibetan alphabet, and Old Tibetan phonotactics confirms the earlier tradition of scholarship. It is concluded in addition that in Old Tibetan <ḥ> represented a voiced velar fricative in all syllable positions and that the Common Tibetan values of prenasalization before consonants and vowel lengthening as a final are due to sound change from Old Tibetan to Common Tibetan.

Keywords: Old Tibetan, phonology, sound change

1. TWO VIEWS OF INITIAL <ḥ> IN OLD TIBETAN

Many previous researchers have suggested that [h] or [ɣ] is the sound which the Tibetan letter ^ḥ<ḥ> was meant to represent as a simple initial. According to de Kőrös this letter is pronounced as “a soft aspirate, and may be represented by *h* or *a*” (1834: 5). A similar description is included in the grammars of Schmidt “мягкий, гортанный звук [a soft, guttural sound]” (1839a: 14), “ein schwacher Hauch [a soft aspiration]” (1839b: 9) and Foucaux “l’aspiration douce de *h* [the soft aspiration of *h*]” (1858: 5), but these are probably derivative of de Kőrös (1834: 5). Desgodins explains “la lettre ^ḥ se prononce *ha*, quand elle est radicale [the letter ^ḥ is pronounced *ha*, when it is simple initial]” (1899a: 17) and “comme radicale, elle se prononce *ha*, avec une faible aspiration [as a simple initial, it is pronounced *ha*, with weak aspiration]” (1899b: 893). De Roerich calls it “a soft guttural spirant” (1932: 166), Dragunov a “очень слабая звонкая аспирация [very weak voiced aspirate]” (1939: 292 note 1). Miller calls the sound which this letter represents “a voiced glottal spirant” (1955b: 481, also cf. 1968: 162 and 1994: 71). Migot calls it a “[s]pirante laryngale sonore [voiced laryngeal fricative]” (1957: 445). Róna-Tas regards the letter as representing the voiced velar fricative *ɣ (1962; 1966: 129 note 142, and page 143; 1992: 699). Siklós suggest “the most probable original value being the voiced spirant γ” (1986: 309). Hill also argues for the pronunciation as γ (2005). Most recently

¹ This essay employs the Library of Congress system for Tibetan transliteration, with the exception that the letter ^ḥ is transliterated <ḥ> rather than the confusing <'>.

Schwieger writes “[᳚] ist ein *a* mit weichem, leicht gehauchtem Stimmansatz [[᳚] is an *a* with a weak, lightly aspirated voiced onset]” (2006: 22), i.e. *fi*a.

There exists however, an alternative tradition in interpreting the phonetic value of the letter <ḥ-> as a simple initial. Jäschke writes: “We meet here with the idea of *vowel absolute*, the pure vocalic note, freed altogether from any presence of a consonant” (1881: xiv, emphasis in original). Clauson and Yoshitake claim that “the primary phonetic value of [᳚] ḥ, as a radical is the smooth vocalic ingress” (1929: 850). Sun holds that [᳚] <ḥ> “never seemed to have any distinct phonetic value” and “its function was NEGATIVE — the mark for the ABSENCE of the glottal stop” (1986: 114, capitals in original).² Beyer suggests “it indicates the absence of an INITIAL consonant: that is, it represents a smooth vocalic ingress” (1992: 43 note 6, small capitals in original). Coblin considers that this letter “indicates the absence of any other consonant” and “carries the vowel where the system provides no other grapheme for this purpose” (2002: 169). Finally, Lalou may be mentioned for maintaining an interesting mixture of the two views. She refers to [᳚] <ḥ> as a “semi-voyelle [semi-vowel]” and a “gutturale sonore [voiced velar]” implying the interpretation [q] or [w], which are not far from value posited by the first tradition, but she also refers to this letter as a “support vocalique [vocalic support]” (1950: 1-2), a description more in keeping with the latter tradition.

Because of the continuing controversy this letter in this position has provoked, the evidence which bears on the pronunciation of simple initial <ḥ-> deserves a fresh reexamination. The authors quoted above generally do not sufficiently distinguish the phonetic value this letter represents from the phonemic value, and its place in Old Tibetan phonology. The most pertinent evidence for the phonetic value the letter represents is the reflexes of the relevant words in the modern Tibetan languages. The comparative study of the modern Tibetan languages reveals the phonetics of Common Tibetan, the language ancestral to these languages, spoken at the time of the expansion of the Tibetan empire (circa 750-900). Old Tibetan phonology, as reflected in the Tibetan script, and the received orthography of Old Tibetan texts, reflects an older language dating from around 650, when the writing system was conceived. As a method for approaching Old Tibetan phonology, one must establish the phonetic value in Common Tibetan corresponding to letters used in writing Old Tibetan. In order to arrive at the phonemic value of a particular letter in Old Tibetan, this phonetic value, valid for Common Tibetan, must subsequently be adjusted to match the evidence of the script and orthography, and the evidence of linguistic change between Old Tibetan and Common Tibetan. The first task in approaching simple initial <ḥ-> is to survey the reflexes in the Tibetan languages of words written with this letter in Old Tibetan, in order to establish the phonetic value of this letter in this position for Common Tibetan.

² Sun has since changed his thinking, writing: “the written sign *achung* [= ḥ] must have represented [...] some voiced guttural spirant (*ḥ or *ɣ or *ʁ) as a root initial” (2003: 779 n. 14, emphasis in original).

2. REFLEXES OF PLAIN INITIAL <h> IN THE TIBETAN LANGUAGES

The following is a list of dialect reflexes for the Written Tibetan words *ho-ma* ‘milk’, *hod* ‘light’, *hwa* ‘fox’,³ and *rtehu* ‘colt, pony’ in various Tibetan languages. In those cases where more phonetic precision, or transcription into the International Phonetic Alphabet (IPA) is discussed in the source, I have provided an IPA transcription in brackets []. In the case of sources where the transcription requires some interpretation, my best guess is provided within parentheses following an equals sign (=). The interpretation of these sources is based upon previous treatment in Uray (1955), Róna-Tas (1966), and Kara (1984).

<ho-ma> ‘milk’

West Tibet

- ona [oŋa], Balti (Vigne 1842, vol. 2: 434)
- oma, Balti (Read 1934: 100)
- o-ma [ʔoma], Balti, Khapalu (Sprigg 1987: 52, 2002: 227)
- o-nga [ʔŋa], Balti, Skardu (Sprigg 1987: 52, 2002: 227)
- oña, Balti, Kharku Garbong (Bielmeier 1985: 204)
- ʔoma, Zangskar (Hoshi and Tsering 1978: 41 #0528)
- óma, Ladakh (Sandberg 1894: 306)
- ‘a-ma [ʔama], Ladakh (Jäschke 1881: xvi)
- oma, Ladakh, Leh (Noman 2001: 126)
- fioma, Ladakh, Gyen-skad (Zeisler, Bettina pers. comm. 10 September 2005)
- ‘o-ma [ʔoma], Lahul (Jäschke 1881: xvi)
- o-ma, Lahul, Kolong (de Roerich 1933: 16)
- ho-ma [fioma]⁴, Lahul, Koksar (de Roerich 1933: 16)
- oã:ʌ, Mñaḥ-ris, Sgar (Qu and Tang 1983: 236 #169)
- oɭmaʌ, Mñaḥ-ris, Ru-thog (Qu and Tang 1983: 236 #169)
- oã:ʌ, Mñaḥ-ris, Spu-hreñ (Qu and Tang 1983: 237 #169)
- oã:ʌ, Mñaḥ-ris, Rtsa-mdaḥ (Qu and Tang 1983: 237 #169)
- oɭmaʌ, Mñaḥ-ris, Dge-rgyas (Qu and Tang 1983: 237 #169)
- oã:ʌ, Mñaḥ-ris, Mtsho-chen (Qu and Tang 1983: 237 #169)
- oɭmaʌ, Mñaḥ-ris, Sger-rtse (Qu and Tang 1983: 237 #169)

Central Tibet

- wóma, Central (Sandberg 1894: 306)
- o-ma, Central (Bell 1905: 268)
- ʔo-ma, Central (de Roerich and Phuntshok 1957: 9)

³ Some authors mistakenly believe this word begins with *w-*. However, Old Tibetan has no means for writing initial *w-*, and this word is clearly spelled *hw-* in Old Tibetan texts (cf. Uray 1955: 110, Róna-Tas 1962: 339, Hill 2006: 79-83).

⁴ De Roerich uses <h> for a “soft guttural fricative” (1933: 16) and <fi> for “a guttural spirant (hard), corresponding to the Sanskrit ढ fia [ha]” (1933: 18). It seems therefore that confusingly his <h> represents [ɦ] and his <fi> represents [h].

‘o-ma, Central (de Roerich 1958: 159)
 oJmaḷ, Lhasa (Qu and Tang 1983: 236 #169)
 omā, Skyid-groñ, Lende (Huber 2005: 332)
 omā, Diñ-ri (Hermann 1989: 386)
 oma [fiomā], South Mustang (Kretschmar 1995, vol. 4: 216)
 fió³ ma², Central, Gżis-ka-rtse (Jin 1958: 31)
 omā [fiomā], Central, Gżis-ka-rtse (Haller 2000: 22)

Amdo

róma (= yoma), Amdo (Prževal’skij 1875: 259)
 óma, Amdo (Széchenyi 1898, vol. 3: 421)
 o ma, Amdo (Dños grub 1989: 472)
 ‘o ma [LH] [fioma (LH)], Amdo Sherpa (Nagano 1980: 66 #0528)
 ryma (= yuma), Amdo, Sbra-nag (Grum-Gržimajlo 1899: 419, cf. Kara
 1984: 342 #124)
 o-ma, Amdo, Reb-goñ (Gō 1954: 64 #895, cf. Stein 1955)
 o-ma, Amdo, Reb-goñ (de Roerich 1958: 159)
 oma, Amdo, Mdzo-dge-sde-pa (Sun 1986: 221 #140)
 /ōwa/ [ōwã], Amdo, A-mchog (Wu 1982: 57)
 ywa, Amdo, Žo-ñu (Sun 2003: 780)
 yo-ma, Mgo-log (de Roerich 1958: 159)
 Ɪma, Mgo-log (Sprigg 1987: 52)

Khams

yo-ma, Khams (Jäschke 1881: xvi-xvii)
 yo-ma, Kham (de Roerich 1958: 159)
 wɔ-, Khams, Dar-rtse-mdo 1 (Migot 1957: 434)
 ɔ-, Khams, Dar-rtse-mdo 2 (Migot 1957: 434)
 ‘r’ɔ- [ḥrḥɔ (?)], Khams, Rtaḥu (Migot 1957: 434)⁵
 o-, Khams, Dkar-mdzes (Migot 1957: 434)
 o-, Khams, Sde-dge (Migot 1957: 434)
 ^oma [fioma], Khams, Nangchen (Causemann 1989: 43)

Others

om, Dzongka (de Roerich 1958: 159)
 om, Sikkim (de Roerich 1958: 159)

< ḥo ja > ‘tea with milk’

Central Tibet

o tɕa, Lhasa (Hua 2001: 98: #538)

⁵ By the sign < ‘ > Migot intends “L’aspiration faible, légèrement nasale [weak aspiration, slightly nasal]” (1957: 420).

Amdo

- o t̥ɕa, Amdo, Ba-yan-mkhar (Hua 2001: 99 #538)
- ɕo t̥ɕa, Amdo, Rme-ba (Hua 2001: 99 #538)
- o t̥ɕa, Amdo, Them-chen (Hua 2001: 99 #538)

<h̥o kha> ‘skin on the top of milk’

Amdo

- o kha, Amdo, Bsañ-chu (Hua 2001: 100 #549)
- o ka, Amdo, Reb-goñ (Hua 2001: 101 #549)
- o ka, Amdo, Rdo-sbis (Hua 2001: 101 #549)
- o ka, Amdo, Ba-yan-mkhar (Hua 2001: 101 #549)
- o ɣa, Amdo, Them-chen (Hua 2001: 101 #549)

<h̥od> ‘light’

West Tibet

- ot, Balti (Read 1934: 99)
- ot [ʔot], Balti (Sprigg 1987: 52, 2002: 225)
- ʔot, Zangskar (Hoshi and Tsering 1978: 38 #0476)
- ot, Ladakh (Sandberg 1894: 300)
- ‘od [ʔot], Ladakh (Jäschke 1881: xvi)⁶
- fiot, Ladakh, Gyen-skad (Zeisler, Bettina pers. comm. 10 September 2005)
- öt, Purik (Bailey 1920: 40)
- ‘od [ʔot], Lahul (Jäschke 1881: xvi)
- wø^ʔɭ, Mñah-ri, Sgar (Qu and Tang 1983: 286 #584)
- wø^ʔɭ, Mñah-ri, Ru-thog (Qu and Tang 1983: 286 #584)
- wø^ʔɭ, Mñah-ri, Spu-hreñ (Qu and Tang 1983: 287 #584)
- ø^ʔɭ, Mñah-ri, Rtsa-mdah (Qu and Tang 1983: 287 #584)
- wø^ʔɭ, Mñah-ri, Dge-rgyas (Qu and Tang 1983: 287 #584)
- wø^ʔɭ, Mñah-ri, Mtsho-chen (Qu and Tang 1983: 287 #584)
- u^ʔɭ, Mñah-ri, Sger-rtse (Qu and Tang 1983: 287 #584)

Central Tibet

- ō̇, Central (Jäschke 1881: xvi)
- w̃ö’-, Central (Sandberg 1894: 300)
- ö, Central (Bell 1905: 249)
- wöx, Central (Miller 1955a: 49)⁷
- üö, Central (de Roerich and Phuntshok 1957: 9)

⁶ Final voiced stops are reported nowhere in the literature except in Jäschke (1881). His transcription must be a phonemic analysis, perhaps based upon the written tradition or the phonemics of his own native German. This “d” should be understood as “t”.

⁷ Miller’s <x> indicates low tone (cf. Miller 1955a: 47 note 5).

ǒ, Central⁸ (de Roerich 1958: 159)
 f̥øː, Skyid-groñ, Lende (Huber 2005: 332)
 f̥øʔ³, Central, Lhasa (Jin 1958: 10)
 øʔ¹², Central, Lhasa (Hua 2001: 40 #3)
 ö [f̥œ], South Mustang (Kretschmar 1995, vol. 4: 223)

Amdo

ot-, Amdo, (Dños grub 1989: 472)
 ‘ö? [L] [f̥øʔ (L)], Amdo Sherpa (Nagano 1980: 60 #0476)
 Od-, Amdo, Sbra-nag (Rockhill 1891: 365)
 ol, Amdo, Bsañ-chu (Hua 2001: 40 #3)
 ot-, Amdo, Reb-goñ (Gō 1954: 1 #5)
 ol’, òl’, Amdo, Reb-goñ (de Roerich 1958: 159)
 ø, Amdo, Reb-goñ (Hua 2001: 41 #3)
 o, Amdo, Rdo-sbis (Hua 2001: 41 #3)
 o, Amdo, Ba-yan-mkhar (Hua 2001: 41 #3)
 ot, Amdo, Mdzo-dge-sde-pa (Sun 1986: 234 #48)
 /o/, Amdo, A-mchog (Wu 1982: 120)
 ɤot, Amdo, Rme-ba (Hua 2001: 41 #3)
 ol, Amdo Them-chen (Hua 2001: 41 #3; Haller 2004: 416)
 ɤot, Mgo-log (Sprigg 1987: 52)

Khams

ɣod [ɣot], Khams (Jäschke 1881: xvi)
 f̥ø³, Khams, Chab-mdo (Jin 1958: 49)
 wʂt̚, Khams, Dar-rtse-mdo 1 (Migot 1957: 434)
 œ/ɔt̚, Khams, Dar-rtse-mdo 2 (Migot 1957: 434)
 ‘œr [f̥œr], Khams, Rtaḥu (Migot 1957: 434)
 œ, Khams, Dkar-mdzes (Migot 1957: 434)
 œ, Khams, Sde-dge (Migot 1957: 434)
 wöː, Khams, Brag-g.yab (Schwieger 1989: 173)
 ʰo’- [f̥ioʔ], Khams, Nangchen (Causemann 1989: 367)

As a loanword from Tibetan there are:

ɣ̥uor, Mongour (Róna-Tas 1966: 129)⁹
 ɣot, Japhug, Rgyalrong (Jacques 2004: 109)

<ɥwa> ‘fox’

Region unspecified

kwa (= ɣwa), (von Klaproth 1823: 350)

⁸ Although Roerich gives this dialect as Lhasa it is according to Róna-Tas (1966: 33 note 40) a “Central” dialect.

⁹ The symbol ɣ̥ represents a postvelar semivoiced consonant in the Uralic phonetic alphabet.

West Tibet

- wa, Balti (Read 1934: 96)
 wa, Balti (Sprigg 2002: 213)
 házá, Ladakh (Sandberg 1894: 274)
 fiatse, Ladakh, Gyen-skad (Zeisler, Bettina pers. comm. 10 September 2005)
 watse, Ladakh, Leh (Norman 2001: 113)
 ŷa-tse, Lahul (de Roerich 1933: 14)
 ałseł, Mñah-riś, Sgar (Qu and Tang 1983: 292 #643)
 ałmoł, Mñah-riś, Ru-thog (Qu and Tang 1983: 292 #643)
 ałtseł, Mñah-riś, Spu-hreñ (Qu and Tang 1983: 293 #643)
 ałtseł, Mñah-riś, Rtsa-mdah (Qu and Tang 1983: 293 #643)
 ałseł, Mñah-riś, Dge-rgyas (Qu and Tang 1983: 293 #643)
 ał, Mñah-riś, Mtsho-chen (Qu and Tang 1983: 293 #643)
 ałmoł, Mñah-riś, Sger-rtse (Qu and Tang 1983: 293 #643)

Central Tibet

- wá-tsé, Central (Sandberg 1894: 300)
 wa-mo, Central (Bell 1905: 107)
 we:gò:, Skyid-groñ, Lende (Huber 2005: 330)
 wa:, Central, Diñ-ri (Hermann 1989: 489)
 wa³ mo³, Central, Gżis-ka-rtse (Jin 1958: 31)
 wa, Central, Gżis-ka-rtse (Haller 2000: 280)
 wa³ mo³, Central, Lhasa (Jin 1958: 10)
 wa¹¹ mo⁵³, Central, Lhasa, (Hua 2001: 84-85 #409)
 asi, South Mustang (Kretschmar 1995, vol. 4: 216)

Amdo

- ka, Amdo (Dños grub 1989: 469)
 gaa (= ȷā), Amdo (Prževal'skij 1875: 259)
 ra (= ka), Amdo (Széchenyi 1898, vol. 3: 425)
 kva (= ȷwa), Amdo (Széchenyi 1898, vol. 3: 425)
 chwa (= ȷwa), Amdo, Dpa-ri (Hermanns 1952: 196)
 ȷa, Rtaḥu, Amdo (Zhang 1996: 23)
 wa [H], Amdo Sherpa (Nagano 1980: 155)
 ȷa, Amdo, Bsañ-chu (Hua 2001: 84-85 #409)
 ȷwa, Amdo, Reb-goñ (Gō 1954: 90 #1260)
 ȷa, Amdo, Reb-goñ (de Roerich 1958: 23, Hua 2001: 84-85 #409)
 ȷa, Amdo, Rdo-sbis (Hua 2001: 84-85 #409)
 ȷa, Amdo, Ba-yan-mkhar (Hua 2001: 84-85 #409)
 ka, Amdo, Rme-ba (Hua 2001: 84-85 #409)
 ka, Amdo, Them-chen (Haller 2004: 389, Hua 2001: 84-85 #409)
 kœ, Amdo, Mdzo-dge-sde-pa (Sun 1986: 204 #44)
 ȷœ, Amdo, Źo-ñu (Sun 2003: 812)

ra [°ra], Amdo, A-mchog (Wu 1982: 62)

Khams

wa³, Khams, Chab-mdo (Jin 1958: 49)
 wā/ũā [wa:], Khams, Dar-rtse-mdo 1 (Migot 1957: 434)
 wā- [wa:], Khams, Dar-rtse-mdo 2 (Migot 1957: 434)
 wa- [wa], Khams, Rtaḥu (Migot 1957: 434)
 wa- [wa], Khams, Dkar-mdzes (Migot 1957: 434)
 wa/ũā [wa:], Khams, Sde-dge (Migot 1957: 434)
 wa:, Khams, Brag-g.yab (Schwieger 1989: 173)
 wa, Khams, Nangchen (Causemann 1989: 43)
 ʎo / ʎa-, Khams, Gser-pa (Sun 2006: 110)

Other

ʎa, Baima (Chirkova 2005: 10 et passim)
 ɛwa, Dar-lag (Zhang 1996: 23)

<rteḥu> ‘colt, pony’

West Tibet

tiu:l, Mñaḥ-ris, Ru-thog (Qu and Tang 1983: 288 #605)
 tiu:l, Mñaḥ-ris, Dge-rgyas (Qu and Tang 1983: 289 #605)
 tiḥkiḥ, Mñaḥ-ris, Mtsho-chen (Qu and Tang 1983: 289 #605)

Central Tibet

ti-ki, Central (Bell 1905: 78)
 tiki [tiyi], Diñ-ri (Hermann 1989: 433)
 tiwu / tiu, South Mustang (Kretschmar 1995, vol. 4: 338)
 tiū / tiki, Gżis-ka-rtse (Haller 2000: 150)
 tiḥkiḥ, Lhasa (Qu and Tang 1983: 288 #605)

Amdo

szti, Amdo (Széchenyi 1898, vol. 3: 422)
 hteü, Amdo (Gō 1954: 93 #1292)
 ṣteḥu, Amdo, (Dños grub 1989: 469)
 rtiyə, Amdo, Rme-ba (Hua 2001: 77 #342)
 rtiyə, Amdo, Them-chen (Hua 2001: 77 #342)
 ṣtiyə, Amdo, Them-chen (Haller 2004: 329)
 htiyɣ, Amdo, Mdzo-dge-sde-pa (Sun 1986: 202 #25)
 xti, Amdo, Reb-goñ (de Roerich 1958: 125)
 hti, Amdo, Reb-goñ (Hua 2001: 77 #342)
 hti-, Amdo, Bsañ-chu (Hua 2001: 76 #342)

3. ANALYSIS OF THE CONTEMPORARY REFLEXES OF <ḥ>

The initials of the word for ‘milk’ *ḥo-ma* can be summarized as: vowel initial, ʔ, ḥ, w, ɣ and ɣ. For the word ‘light’ *ḥod* they are: vowel initial, ʔ, ḥ, w, ɣ and ɣ, and as a loanword into Mongour ᠭ. The initials of the word ‘fox’ are: vowel initial, w, ɣ, ɣw, ɣ, ɣw, ḥ, and h. However, in the citation of Sandberg (1894: 274) ‘h’ should perhaps be regarded as ḥ. The reflexes ɣw and ɣw preserve the Old Tibetan cluster onset for this word. Because, in this way, they are particularly close to the Old Tibetan form, their testimony for the value of <ḥ>, i.e. ɣ and ɣ, should perhaps be given particular weight.¹⁰ The dialect reflexes of <ḥ> in the word *rteḥu* are: zero, w, ḥ, ɣ, and most surprisingly k. Considering these various dialect reflexes of <ḥ>, any one of these sounds could reflect the historically original pronunciation, or they could all derive from a pronunciation unattested in the modern dialects. To assume that one of these pronunciations does reflect the original pronunciation, because it would require a smaller number of sound changes, is a simpler hypothesis than supposing that they all derived from an unattested pronunciation, and is therefore a preferable hypothesis in the absence of evidence to the contrary. Each of the contemporary reflexes must be considered individually to determine which is the most likely original value of <ḥ- >.

3.1. Glottal stop

Those languages which have a glottal stop reflex for <ḥ- > do not distinguish between glottal initial and vowel initial. For example, Jäschke (1881) gives no vowel initial words in Ladakh or Lahul, only glottal stop initials. Sprigg (2002) phonemicizes glottal stop initial as vowel initial. In the case of Diu-rì “Vokale in absoluten Anlaut können mit oder ohne glottalen Plosiv realisiert werden [vowels as absolute initials can be realized with or without a glottal plosive]” (Hermann 1989: 21).

Since these languages do not distinguish glottal stop and vocalic onset, their evidence can be treated together with those languages which have vocalic onset as the reflex of <ḥ- >. The languages that have glottal stop or vocalic onset as the reflex of <ḥ- > do not distinguish between words which are reflexes of <ḥ- > ʔ and those that are reflexes of ʔ (vowel initial). An unconditioned merger of initial ʔ and ʔ is much more plausible than independent unconditioned splits in the other languages, which happen to always effect the same group of words in agreement with the Written Tibetan distinction of <ḥ- > ʔ and <q> ʔ. Because all dialects which show a glottal stop for words beginning with <ḥ- > have unconditionally merged <ḥ- > ʔ and <q> ʔ, we know that their

¹⁰ Shafer reconstructs <ḥwa> ‘fox’ as Tibeto-Burman *gwa (1940: 318). If one believes this reconstruction it could lend further credence to understanding <ḥ- > as a voiced velar in Old Tibetan. It should perhaps be noted that, because Shafer thought <w> was the initial in <ḥwa> the g- of his reconstruction was arrived at without consideration of <ḥ- > and its value.

pronunciation of <ḥ> is innovative. Consequently, there is no reason to believe that the glottal stop is the original value of <ḥ> as a simple initial.

3.2. Voiced glottal fricative

To phonemically distinguish both /h/ and /ɦ/ is typologically quite rare among the world's languages (Maddieson 1984: 57).¹¹ Old Tibetan is unlikely to have had a distinction of [h-] and [ɦ-], and <ḥ> is unlikely to reflect an original pronunciation [ɦ].

3.3. Uvular consonants

Four reasons can be pointed to which mitigate against uvular consonants as the original value of <ḥ>. First, because the uvulars are at one extreme of the modern reflexes in terms of place of articulation they are less likely than other candidates to be original. In the absence of a reason to favor the uvular reflexes, it is more likely that a more intermediate pronunciation (such as the velar) led to the extreme ones (such as labial and uvular). While a velar may develop into a uvular and vice versa, velars also frequently change into bilabials, but I am unaware of a uvular changing into a bilabial in any language's history. Second, Old Tibetan is not generally regarded as having uvular consonants. A velar articulation for <ḥ> puts a voiced fricative in a place of articulation where Old Tibetan already has a voiced and voiceless stop and a nasal, but a uvular articulation for <ḥ> introduces a new place of articulation into the Old Tibetan phonological system. This is a phonemic argument, so the possibility must be admitted that Old Tibetan phonemically had a velar fricative here, but that it may have been articulated phonetically as a uvular. Third, all of the Tibetan languages which have uvular reflexes are in Eastern Tibet where other languages have also developed uvular consonants, e.g. the Mongolian languages Mongour or Bonan (Svantesson et al. 2005: 151-152). The region can be regarded as a uvular prone Sprachbund. Most or all of the modern Qiangic languages, which appear to be native to the region, have uvulars. In the Rgyalrong sub-branch of Qiangic, uvulars can be reconstructed to the Proto-Rgyalrong level (Jacques 2004: 305-310). Although no reconstruction of proto-Qiangic is yet available it is not unlikely that uvulars can be reconstructed for proto-Qiangic also. It seems uvulars have an older pedigree in the Qiangic language family than in Mongolian or Tibetan. The emergence of uvulars in Tibetan and Mongolian languages in this region is likely due to the influence of a Qiangic substrate. Before 1950 most Rgyalrongic speakers were bilingual in Amdo Tibetan and Rgyalrong. Although knowledge of Mongolian among Qiangic speakers is not well attested, many Mongolian speakers in the region are bilingual with Tibetan; perhaps these

¹¹ It is interesting to note the absence of forms like */fiwa/ 'fox'. Such a pronunciation is possible, as shown for example, by the forms 怀 fiua⁶ or 槐 fiua² from the Sinic language Chongming (Chen 2003: 206).

varieties of Mongolian developed uvulars under the influence of Tibetan languages which had already developed them through a Qiangic substrate.

The final reason why uvulars are not likely to be the original phonetic value of the letter <ḥ> is the overall relationship of the distribution of uvular consonants within the phonemic systems of those languages that have them to the phonemes of Old Tibetan. Several languages with uvulars do not have them as the reflex of <ḥ>, and languages which do have uvulars as the reflex of <ḥ> have other uvular consonants also, the latter deriving clearly from Old Tibetan non-uvulars.

None of the languages discussed here have a uvular as the reflex of <ḥ> in the word *rteḥu* ‘colt’. Only two languages, Rme-ba, and Mgo-log (following Sprigg 1987) have uvular reflexes for the words *ḥod*, ‘light’, and *ḥo-ma* ‘milk’. Them-chen, A-mchog and Mdzo-dge-sde-pa have uvular initials only for the word *ḥwa* ‘fox’ among the words considered. Rme-ba is the language most suggestive of /ɤ/ for Old Tibetan <ḥ>. Hua includes χ in the phonemic inventory of Rme-ba along with /ɤ/, the regular reflex of <ḥ> (2001: 35), but /χ/ appears to occur only in the word /χe jə/ (2001: 119 #715), which may be a loanword from Chinese 剪子 *jianzi* ‘scissors’, but in any case is of unclear Tibetan provenance. Sprigg nowhere discusses Mgo-log in sufficient detail to understand the place of /ɤ/ in the overall phonology of this language.

Them-chen, A-mchog and Mdzo-dge-sde-pa have various uvular consonants, but Old Tibetan <ḥ> has become vowel initials in these languages except in the word *ḥwa* ‘fox’. In Them-chen there are two uvular consonants /ɤ/ and /χ/. The former, /ɤ/, is the result not only of Old Tibetan <ḥw->, but also Old Tibetan <db-> as in the words <dbaŋ> /ɤaŋ/ ‘power’ and <dbu ba> /ɤo/ ‘foam’ (Haller 2004: 315-316). The latter, /χ/, is innovative: “χ kommt in absoluten Anlaut vor Vokal nur in Lehrwörtern zumeist chinesischen und mongolischen Ursprungs vor [χ appears in absolute syllable initial position only in loanwords, mostly from Chinese or Mongolian]” (Haller 2004: 19). Initial /χw-/ derives from Old Tibetan <dp-> and final /-χ/ from Old Tibetan <-g>, as can be seen in the examples <dpaḥ-bo> /χwawu/ ‘hero’ (Haller 2004: 357), and <ḥthag> /ntʰaχ/ ‘weave’ (Haller 2004: 285). A-mchog has the uvular consonants /χ/ and /ɤ/. In general /ɤC/ and /χC/ are reflexes of Old Tibetan <gC> where <C> is respectively voiced or voiceless. In addition <db->, <dk->, <bk-> > /ɤ/ (Wu 1982: 112-113). Old Tibetan <ḥ> yields /ɤ/ only in the word <ḥwa> > /ɤa/ ‘fox’ where it is a secondary, cf. <ḥo-ma> > /õwa/ and <ḥod> > /o/. The Mdzo-dge-sde-pa language has four uvular consonants, /qh, ɤ, χ/ and /χw/. The first, /qh/, occurs in very few words as a sporadic development of Old Tibetan <kh>, cf. <kha> > /khæ/ ‘mouth’ versus <kha-bo> > /qhæwo/ ‘bitter’ (Sun 1986: 125). The consonant /ɤ/ appears to occur in three words: /ɤæ/ ‘fox’ < <ḥwa>, /ɤu/ ‘center’ < <dbus>, and /ɤa/ ‘load’ < <khal>. The two examples given of /χ/ do not appear to derive from Old Tibetan, /χa/ ‘fibrous tissue of the bones’ and /χijor/ ‘oar’. The rounded voiceless velar fricative /χw/ originates from Old Tibetan <dp->, e.g. <dpe> > /χwe/

‘model’ (Sun 1986: 28). The preponderance of evidence suggests that uvular consonants are secondary developments in the Tibetan languages.

3.4. Labiovelar approximate

Those Tibetan languages which have [w-] corresponding to initial written <ḥ-> can be confidently credited as innovative in this respect. Old Tibetan plain initial <ḥ-> only occurs before <w->, <o>, and <u>. In this environment the appearance of [w-] as a reflex may be easily credited to the rounded vowel, or medial [-w-]. Haller mentions that in Gźis-ka-rtse “Gelegentlich tritt eine Labialisierung von k und fi vor o und œ auf. [Sometimes a labialization of k and fi occurs before o and œ]” (2000: 22).

Even if one rejects the explanation of initial [w-] in these words as due to the following vowel or glide, it is possible to consider it the result of an erstwhile [ɣ]. That a voiced velar fricative can turn into a [w] is amply attested in the history of English, e.g. *draw* < Middle English *drawen* < Old English *dragan* (this <g> represents [ɣ]), *fowl* < Middle English *fuwel* < Old English *fugol* (Prins 1972: 216). Also keeping in mind the English sound change Old English /y/ > /j/ initially before palatal vowels, e.g. Old English *geolu* ‘yellow’ cf. German *gelb*, Old English *geard* ‘yard’ cf. German *Garten*, and medially after the same palatal vowels, e.g. Old English *regn* ‘rain’, cf. German *Regen* (Prins 1972: 202), the alternation in Written Tibetan between <ḥ> and <y> in such examples as *hoñ / yoñ* ‘come’, *hog / yog* ‘below’, or the genitive suffix *hi / yi* also appears to point to [ɣ] as the original value. The nature of this variation in Written Tibetan has not been accounted for.

If one were to connect the use of <ḥ> before other consonants to mark prenasalization (Hill 2005: 114-115) with its use as a plain initial under discussion here, such an attempt would be much facilitated were the original pronunciation [ɣ] or [ɦ]. I know of no instance of [w] becoming prenasalization ([wC-] > [NC-]), but for a fricative at the back of the mouth to turn into a nasal is far from uncommon. In Avestan intervocalic [h] gave rise to a velar nasal (i.e. *aha* > *aṅha*; cf. Beekes 1988: 19). In Thai the three low vowels /ɛ/, /a/, and /ɔ/ are “allophonically nasalised [...] after syllable-initial /h/ and /ʔ/” (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 [ɣC-] > [ũɣC-] > [NC-] is thus not unimaginable. Because initial [w-] can be easily accounted for either by the medial or vowel that always followed <ḥ-> in Old Tibetan, or by the common sound change [ɣ] > [w], [w] cannot be considered the original value of Old Tibetan initial <ḥ>.

3.5. Velar stops

Among the various reflexes of <ḥ>, that in most need of explanation is probably /k/. In the case of Diñ-ri /tiki/ Hermann mentions specifically that an intervocalic /k/ is realized as [ɣ] (1989: 23). Tournadre and Dorje do not mention

how the phoneme /k/ is pronounced in intervocalic position in the standard of Central Tibetan they describe, but they do mention that /k/ appears as “[l]a spirante vélaire [ɣ] [...] à la finale de syllabe intérieure devant les consonnes /l, m, ny, n, ng, sh/ surtout si elle est précédée d’une voyelle postérieure /o, u, a/ [the velar fricative [ɣ] at the end of the interior syllable before the consonants /l, m, ny, n, ng, sh/ above all, if it is preceded by a back vowel /o, u, a/]” (2003: 386). In Bell’s form *ti-ki* (1905: 78) the letter *ki*, his usual transcription for ཀ g, he specifies to represent “a k but pronounced through the throat and more forcibly than ཀ [k]” (Bell 1905: 2). Those Tibetan languages which have /k/ in the word *rteḥu*, have either zero initial or /w/ in the words *ḥoma* and *ḥod*. In light of this, the following hypothesis presents itself regarding the origin of the forms in /k/. Word initial /ɣ/ was lost in these languages, after which word internal [ɣ] was rephonologized as an allophone of /k/. After that change, it would be later possible to substitute the allophone [k] of phoneme /k/ for the allophone [ɣ] of the phoneme /k/ in this position as well. An alternate account for these forms with /k/ reflecting <ḥ> may be that in some of these languages intervocalic /k/ is regularly represented by [ɣ], but that the recorders of these languages have failed to mention this phonetic detail.¹²

3.6. Conclusions drawn from contemporary reflexes of <ḥ>

In Old Tibetan there is no reason to think that <ḥ> represented different sounds in the four words *ḥo-ma* ‘milk’, *ḥod* ‘light’, *ḥwa* ‘fox’, and *rteḥu* ‘colt, pony’. Because all four are written with the same letter in the same position in the syllable, there is reason to think the same sound is represented in all four words. The only reflexes that occur in all four words are [ɣ] and [ḥ]. Consequently, these two values take precedence as hypothesized values of the Old Tibetan sound. As mentioned earlier, [ɣ] and [ɣ] are likely because they occur in the clusters [ɣw] and [ɣw] respectively reflecting Old Tibetan <ḥw>. For one reason [ɣ] and [ḥ] are likely; for another reason [ɣ] and [ɣ] are likely. Therefore, [ɣ] would appear to be the most likely value for <ḥ>. This conclusion is strengthened by the typological rarity of (especially non-tonal) languages to distinguish /h/ and /h̥/ mentioned previously. Since all other reflexes (w, ḥ, ɣ and k) are for various reasons each less likely than [ɣ], one can have a certain degree of confidence that in the Old Tibetan period the letter <ḥ> represented the sound [ɣ].

4. THE PLACE OF <ḥ> IN OLD TIBETAN PHONOLOGY

The phonetic value of <ḥ> in Common Tibetan that best accommodates the witness of the modern Tibetan languages is [ɣ]. Whether one can further claim that <ḥ> represents the phoneme /ɣ/ in Old Tibetan is a question that must be

¹² In *Gz̄is-ka-rtse* two words, /t̄iū/ and /t̄ik̄i/ (Haller 2000: 150), correspond to written <rteḥu>. I suspect that the former, /t̄iū/, is a reading pronunciation of the word whereas /t̄ik̄i/ is the genuine dialect descendent.

addressed separately. Two important factors in answering the latter question are the place of <ḥ> in the Tibetan alphabet, and the phonotactic distribution of <ḥ> as it occurs in Old Tibetan words. Finally, if <ḥ> represents /ɣ/ in Old Tibetan phonology it must do so in syllable positions other than simple initial. Therefore, the common Tibetan reflexes of Old Tibetan <ḥ> in other syllable positions must be argued to be due to sound change from Old Tibetan to Common Tibetan.

4.1. The position of <ḥ> in the Tibetan alphabet

The Tibetan alphabetic order contains in its structure an analysis of each letter in terms of place and manner of articulation. The letter <ḥ> occupies the place of a voiced laryngeal, the voiced correspondent of <h>. This fact alone would be sufficient evidence to suggest its Old Tibetan value as [ɦ] or [ɣ], even without the foregoing discussion of reflexes in the modern Tibetan languages, yet surprisingly Róna-Tas (1966: 129 note 142) is the only scholar to have drawn attention to this evidence. The place of <ḥ> in the Tibetan alphabet is quite incompatible with the view that it represents vocalic onset. The only letter that can come into question as representing vocalic onset is ལ <q>.

velars	ཀ k [k]	ཁ kh [k ^h]	ག g [g]	ང ñ [ŋ]
palatals	ཅ c [tʃ]	ཆ ch [tʃ ^h]	ཇ j [dʒ]	ཉ ñ [ɲ]
dentals	ཏ t [t]	ཐ th [t ^h]	ད d [d]	ན n [n]
labials	པ p [p]	ཕ ph [p ^h]	བ b [b]	མ m [m]
dental affricates	ཚ ts [ts]	ཛ tsh [ts ^h]	ཌ dz [dʒ]	(ཡ w [w]) ¹³
voiced fricatives	ཞ ž [ʒ]	ཟ z [z]	མ ḥ [ɦ]	
glides	ཡ y [j]	ར r [r]	ལ l [l]	
voiceless fricatives	མ ś [ʃ]	ས s [s]	ཏ h [h]	
null consonant	ལ q [Ø] or [ʔ]			

Table 1. The Tibetan alphabet in its traditional order

4.2. Phonotactics of <ḥ> in Old Tibetan

The letter <ḥ> occurs in a Tibetan syllable with the same distribution as the voiced consonants /g/, /d/, /b/, /m/, /r/, and /l/.¹⁴ These environments are the initial of a cluster, a simple initial, and a syllable final. The corresponding

¹³ This is the place of the letter <w> in Written Tibetan, but in Old Tibetan no such letter existed (cf. Uray 1955).

¹⁴ The only voiceless consonant with this distribution is /s/, a fact probably related to the lack of <z> in Indic scripts. Whereas normally the voiced consonants are favored in environments where the distinction of voicing is neutralized, in the case of /s/ the voiceless member of the pair is preferred.

voiceless consonants /k/, /t/, /p/, /ṛ/ <hr>, and /ʎ/ <lh> appear only as simple initials. Each of the letters <g>, <d>, , <m>, <r>, and <l> is universally believed to represent one and the same phoneme in all of the environments in which it is written, and is believed to indicate the phoneme with place and manner of articulation implied by its position in the Tibetan alphabet. From the perspective of Tibetan phonotactics there is nothing special about <ḥ>. This letter also occurs as the initial of clusters, as a simple initial, and as a syllable final.¹⁵ Only as a simple initial does it contrast with <h>, its voiceless partner. Given this information, the neutral view is that <ḥ>, like its brethren, represents a single phoneme in these three different positions, and has the place and manner of articulation implied by its place in the Tibetan alphabet, a voiced laryngeal. In contrast, the view that <ḥ> represents vocalic onset makes nonsense out of its place in the Tibetan alphabet and its phonotactic distribution.

4.3. The letter <ḥ> as a cluster initial and syllable final

The Common Tibetan pronunciation of simple initial <ḥ> as [ɣ] is fully compatible with the evidence of the Tibetan script, and Old Tibetan phonotactics. Unfortunately, the reflex of <ḥ> as a cluster initial and a syllable final do not point in such a clear-cut fashion to [ɣ]. There is a consensus that the Common Tibetan reflex of cluster initial <ḥ-> is the nasal homorganic to the following stop. I entirely accept this position; it need not be further dwelt upon here (cf. Hill 2005: 114-115). A syllable final <ḥ> is generally seen as reflecting no phonetic reality at all in Common Tibetan.

Although it is true that <-ḥ> as a final is not articulated as [ɣ], or any other consonant, in any of the modern Tibetan languages, it is not true that there is no evidence for its reality in Common Tibetan, and Old Tibetan. An orthographic final <-ḥ> in Written Tibetan corresponds to a long vowel in Common Tibetan. Long vowels have been lost in most Tibetan languages, but they are sporadically reported across the Tibetan Sprachgebiet by a number of investigators. Bell writes concerning Central Tibetan that as a final “^᠒ [-ḥ] is not itself pronounced but lengthens the sound of the vowel preceding it” (1905: 7). Sun suggests that this comment of Bell’s is “spurious and reflects the author’s ‘script consciousness’ rather than his sensitivity to phonetic details” (1986: 149 note 11). De Roerich also describes this phenomenon for Central Tibetan (1931: 299), offering the two examples <bkaḥ> *kā*, ‘order’ and <nam mkhaḥ> *nam-k^{hā}* ‘sky’. In a later publication, de Roerich also describes this phenomenon for the Lahul dialect, <nam mkhaḥ> *nam-k^{hā}* ‘sky’, <dgaḥ> *gā* ‘delight’, <dmaḥ> *mā* ‘low’ (1933: 17). For the Central Dialect he offers the additional examples

¹⁵ In calquing the Tibetan terms *snon-ḥjug*, *min-gzi*, *rjes-ḥjug* and *yan-ḥjug* many specialists use the terms pre-initial, initial, final and post-final. The terms “pre-initial” and “post-final” are patently oxymoronic. In the English word *spring* it is the *s* and not *p* which is considered the initial. I prefer to translate these Tibetan terms as “cluster initial”, “simple initial”, “final”, and “final of an Auslaut cluster”.

<dgah> *gā* ‘delight’, and <dmaḥ> *mā* ‘low’ (1933: 17). De Roerich credits the long vowels specifically to the loss of an earlier fricative, and suggests this is the explanation of the indigenous grammatical tradition, although he unfortunately does not cite an authority (1933: 17). These examples could be described as compensatory lengthening. Migot draws attention to the same correspondence between a written final <-ḥ> and a long vowel in speech (1957: 455). Sedláček discusses the complicated effects of original final <-ḥ> on tone in the Lhasa dialect, and separates this discussion clearly from his treatment of original open syllables (1959: 216-219). Sedláček additionally implies that final <-ḥ> has a segmental realization which he symbolizes in his International Phonetic Alphabet transcriptions as [˙], for example *mñah* ‘might, power’ [ṇa˙ ṽ55] (1959: 219), but he does not discuss this matter explicitly, nor describe what he intends with this symbol. Were Bell the only researcher to describe long vowels as corresponding to written final <ḥ>, this could perhaps reasonably be credited to his “script consciousness” but since this correspondence is found in the work of several researchers for languages spoken in various parts of Tibet, it is best to take it at face value. In assessing the evidence of final <ḥ> in Old Tibetan, Terjék also concludes that it represents the lengthening of a preceding vowel (1969: 298-303).

There is a prevalent misconception that <ḥ> is used in Written Tibetan to mark open syllables which would otherwise be ambiguous. A final <ḥ> is what distinguishes ཅག་ <dgah> ‘happy’ from ཅག ཅག་ <dag> ‘plural’, but the final <ḥ> does not serve this function in ཅག་ཅག་ <bkaḥ> which, because <k> cannot occur as a syllable final, would still unambiguously be read ཅག་ <bka> even without the <ḥ>. In Old Tibetan both ‘happy’ and ‘plural’ are sometimes spelled ཅག་ <dg>, and context alone requires that they be read as /dag/ or /dga/ (e.g. Pelliot Tibétain 1043 line 54 ཅག་ /dga/). Final <ḥ> also occurs in many more syllables in Old Tibetan than in Written Tibetan, where the letter is not needed to disambiguate closed and open syllables, for example the case morphemes <naḥ>, <laḥ>, <duḥ> etc. (cf. Hill 2005: 115-118 and 128-130). Put simply, if final <-ḥ> is used as a *mater lectionis*, then in Old Tibetan it is used when it is not needed and not used when it is needed. The simplest explanation for all of this is that in Old Tibetan final <ḥ>, just like all of the other final consonants, far from being an orthographic device used to disambiguate the location of the vowel, was itself pronounced.

Final <-ḥ> is unstable in Old Tibetan orthography, probably indicating that it was already then beginning to be lost, however this instability does not suggest that it is fictive. Appearing only after the vowels /a/, /e/ and /u/, the possibility of its occurrence is phonetically conditioned. It would be odd indeed for a phonetically meaningless graphic phenomenon to be phonetically conditioned. In examples such as *che* / *chen* / *ched* ‘big’ final <d> and <n> are also unstable in Old Tibetan, but no one would suggest that final <d> and <n> are phonetically meaningless orthographic devices. Instead they are credited to as yet

unexplained phonetic or morphological conditioning. Similarly, instability of final <-ḥ> in Old Tibetan does not undermine its phonetic reality.

4.3. Sound change from Common Tibetan to Old Tibetan

Believing that <ḥ> represents vocalic onset as a simple initial, and that final <-ḥ> functions as a *mater lectionis* indicating an open syllable, researchers like Coblin see prenasalization, vowel onset, and marking the absence of a coda as three unrelated uses of the letter <ḥ>, and believe that this diversity of functions is best accounted for by <ḥ> being regarded as an “all-purpose orthographic device” (Coblin 2002: 183). This opinion leaves inexplicable why the redactors of the Tibetan alphabet and Tibetan orthography gave this letter the place of a voiced laryngeal and the distribution of a unitary voiced phoneme. A more fruitful approach is to ask whether it is reasonable to believe that <ḥ> might have represented [ɣ] in all three positions in Old Tibetan,¹⁶ but by the time of Common Tibetan /ḥ/ [ɣ] as a cluster initial had changed into the nasal homorganic to the following stop, as a plain initial remained [ɣ], and as a final [ɣ] was lost, but through compensatory lengthening induced the lengthening of the preceding vowel. De Roerich (1933: 16-17), Miller (1968: 162), Beckwith (1996: 818), and Hill (2005: 126-127) hold versions of this unitary theory of the letter <ḥ> as [ɣ]. This theory accounts for the reflexes of <ḥ> in the Tibetan languages in all phonotactic positions, and it accords with the place of the letter in the Tibetan alphabet and its use in Old Tibetan orthography. The idea that <ḥ> serves as a “diacritic” representing a grab-bag of unrelated functions at best accounts only for reflexes of the modern languages, and does so using the inelegant strategy of simply listing them.

4.4. Does Old Tibetan need vocalic onset?

If one insists that Old Tibetan must have had a vocalic onset, the only letter that comes into question to represent this is ^ṽ<q>. The Indic ancestor of this letter, and its place in Tibetan alphabetical order, suggest that it represents vowel onset. In addition, words written with this letter in the modern Tibetan languages either begin with a vowel or a glottal stop. The phonotactic distribution of this letter in Tibetan orthography, since it cannot occur as a cluster initial or final, is also compatible with viewing the letter as representing vocalic onset. Some researchers believe that this letter represents a glottal stop in Old Tibetan (cf. Hill 2005: 108-109). If one believes that <q> represents a glottal stop, then all Tibetan syllables begin with a consonant. If that seems aesthetically unacceptable then one can instead choose to analyze <q> as vocalic onset. Largely it is a matter of taste. The point is, for the many reasons cited already, if one insists that Old Tibetan must have vowel initial words the only letter whose position in

¹⁶ Consistent with the overall pattern of Old Tibetan phonotactics this [ɣ] would have devoiced to [x] as a cluster initial before voiceless consonants, and as a final before a consonant initial suffix or word break.

the alphabet and whose phonotactic distribution even allow it to come into consideration is <q>. One cannot argue, simply on the grounds that one of the letters of the Tibetan alphabet must be assigned the value of vowel onset, that <ḥ> may have been phonemically zero despite being phonetically [ɣ], because the obvious choice of letter is <q> and not <ḥ>.

It is not possible to contrast reflexes of words beginning with <ḥ> and those beginning with <q>, because no native words widely attested in the Tibetan languages occur in Old Tibetan spelled with initial <q>. This suggests that pre-Tibetan has no syllables that were inherited into Old Tibetan beginning with <q>. It thus appears that one may have to ultimately live with a historic Tibetan phonology which admits at least one period (pre-Tibetan) where all syllables began with a consonant. If a certain analyst believes that a language with a minimal syllable structure CV is so objectionable that he must analyze <ḥ>, , <t>, or any letter he chooses as representing vowel onset, he is free to do so. However, he does so at the expense of ignoring the reflexes of the modern Tibetan languages, the order of the alphabet, and the phonotactics of Old Tibetan orthography. I am not in a position to weigh the merits of typological arguments against such considerations, but as a Tibetologist find explanations accounting elegantly for a maximum amount of the available Tibetan data more compelling than preconceived notions of how languages ought to behave.

5. THE ARGUMENTS THAT <ḥ> REPRESENTS VOCALIC ONSET

The evidence examined here leads to a conclusion in support of the first strain of scholarship outlined above, namely the position that the original value of the letter <ḥ> was [ɣ]. As a result, the arguments of the second strain, which argues that <ḥ> represents vocalic onset, must be re-examined. Sun (1986), Beyer (1992) and Coblin (2002) present no evidence or argumentation in favor of taking <ḥ> to represent “the absence of a consonant” or “smooth vocalic ingress”. They seem simply to take this view for granted, perhaps tacitly inheriting it from Jäschke (1881) or Clauson and Yoshitake (1929).

Regarding the dialect evidence which disagrees with his interpretation of <ḥ> Jäschke writes:

Improper are the expedients of some of the dialects, the sound being hardened to γ in Khams, to ^ᶄ[ʔ] in Western Tibet. [...] This is a case in which the true pronunciation has been preserved in the Central Provinces (1881: xiv).

Although he was aware of the counterevidence, he more or less dismisses it out of hand as “improper”.¹⁷ In almost every domain of Tibetan historical phonology

¹⁷ In favoring the change $w > \gamma$ over $\gamma > w$ Jäschke was perhaps thinking of the “hardening” that one sees in Proto-Indo-European $u > g$ in Armenian (e.g. Armenian *ganem* ‘I flog’, versus Lithuanian *vanoju* ‘id.’ and English *winnow* or Armenian *gorc* ‘work’ versus

it is the peripheral languages of the East and West which best preserve features of Old Tibetan. Why Jäschke believes that in this case the central languages exceptionally preserve the original pronunciation deserves further elaboration, yet he offers none.

The most sustained argument that <ḥ> represents vowel onset is that of Clauson and Yoshitake (1929). Clauson and Yoshitake organize the evidence that led them to conclude that <ḥ> represents smooth vocalic ingress into four types:

- (1) The prehistory of the Tibetan character ᳵ.
- (2) The purely Tibetan evidence, especially the statements of the native grammarians and the modern practice.
- (3) The early (? eighth to tenth centuries A. D.) transcriptions in Tibetan characters of Chinese Buddhist religious texts. [...]
- (4) The Ḥphags-pa texts in the Mongol and Chinese languages (1929: 843).

It is convenient to re-examine their evidence in the same order. By the “pre-history” of the character <ḥ>, Clauson and Yoshitake mean its graphic origin. Clauson and Yoshitake’s discussion leads them only to the following conclusion:

ᳵ was invented by Thonmi Sambhoṭa to represent a sound which did not exist, or, at any rate was not represented graphically, in the Indian languages or Khotanese, and which was sufficiently weak and indistinctive in nature to justify its representation by an adapted long vowel sign (1929: 845).

The graphic origin of <ḥ> remains a topic unresolved and controversial (Róna-Tas 1985: 259-260). Their crediting of the invention of the script to Thonmi Sambhoṭa and the derivation of <ḥ> from a long vowel sign must now be rejected (Miller 1976: 1-18; Uray 1955). The remaining conclusion, that <ḥ> represents a sound not represented in Indic alphabets, is hard to disagree with, and in fact favors the opinion of the opposing group of scholars. Indic alphabets do not have letters for velar or glottal fricatives, but they do for vocalic onset, namely ʃ.

The second type of evidence Clauson and Yoshitake consider, “the Tibetan evidence”, they divide into two parts: the first is a series of quotations from Bacot (1928), a study of the *Sum cu pa* and *Rtags kyi ḥjug pa*, with an anonymous commentary on them, and the second is consideration of the modern dialects. Concerning Bacot’s work Clauson and Yoshitake find that, “So far as the use of ᳵ as a radical is concerned, the meaning of the passages quoted above is pretty clear. The commentator clearly regards ᳵ as a sign indicating smooth vocalic ingress” (1929: 848-849). For my own part, this conclusion is in no way

English *work*, cf. Mann 1963: 153-154) or w > gu in Romance borrowings from Germanic, e.g. French *guerre* < Frankish *werra ‘war’, French *guise* < Frankish *wisa ‘manner’.

clear given the quoted passages, and in fact that “*ka-sde-dan ḥa ha qa rnams-kyi skyas-gnas mgrin-pa* [the place of articulation of the velar stops and ḥ, h, and q is the throat]” (Bacot 1928: 138)¹⁸ and that <ḥ> is included among the voiced sounds (*sgra-ldan*, Bacot 1928: 138, 48) seem fully compatible with the idea that <ḥ> represents a voiced velar fricative. As for modern Tibetan languages, Clauson and Yoshitake’s sources were only Jäschke (1883) and Bell (1905). In the former case they tacitly follow Jäschke’s rejection of the forms with [ɣ-], and in the later case they were only exposed to a language of Central Tibet, which does have vocalic onset as the reflex of <ḥ>. Too cursory a look at the attested reflexes of <ḥ> in the Tibetan languages has lead Clauson and Yoshitake to too hastily conclude that <ḥ>’s original value was vocalic onset.

The third group of evidence which Clauson and Yoshitake consider is transcriptions of Chinese into the Tibetan script. A thorough re-examination of this data would exceed both the scope of this paper and my competence. It is sufficient to point out that their interpretation of the Chinese data has not gone unchallenged. For example, Miller understands <ḥ> to transliterate a Chinese voiced velar fricative (1955b: 481). Coblin suggests that <ḥ> transliterates various Chinese sounds without any consistent use (2002).

As for Clauson and Yoshitake’s fourth category, the use of the Ḥphags-pa character which corresponds to <ḥ> in Chinese and Mongolian, in Mongolian this character is generally thought to represent vocalic onset (Poppe 1957: 23, Ĵayunasutu 1989, Svantesson 2005: 110), and in Chinese a glottal stop (Ligeti 1961: 229, Nakano 1971: 75-80, Coblin 2007: 45-46). This evidence does point to the kind of interpretation that Clauson and Yoshitake suggest. It may well be that in the Tibetan dialect which Ḥphags-pa spoke the reflexes of <ḥ> were either vocalic onset, or glottal stop, and that this led him to choose this character for these sounds in Mongolian and Chinese respectively. This evidence however, amounts in importance to a single Tibetan language. In light of the full array of reflexes, the voiced velar fricative, as discussed above, is the most likely value for <ḥ>. My own view is that the Ḥphags-pa letter <ḥ> represents [ɦ] at least when writing Mongolian (Hill, 2009). If this is true, then this piece of Clauson and Yoshitake’s evidence may be chimerical as well.

Perhaps it seems unnecessary to have belabored the failings of an argument presented almost 80 years ago. However, it must be kept in mind that Clauson and Yoshitake’s is the only sustained attempt to show that <ḥ> represented vocalic onset, and that this view, tacitly relying upon their work, persists to the present day.

5. CONCLUSION

Since 1834 numerous Tibetologists have agreed that <ḥ> was originally intended to represent [ɣ]. In 1881 Jäschke initiated another view, that <ḥ> represents vocalic onset. The earlier view can be supported with data from the

¹⁸ Translated by Bacot as “le groupe ཁྲ et ཁྲེ་ལྷོ་ལྷོ་ viennent de la gorge” (1928: 48).

modern Tibetan languages, the structure of the Tibetan alphabet, and the patterning of Old Tibetan phonotactics. Adherents of the newer view have never addressed this evidence. Clauson and Yoshitake (1929) are the only authors who have argued for the newer view, but the evidence they adduce in fact supports the older theory. Although in Common Tibetan <ḥ> represents prenasalization before consonants and as a final reflects a preceding long vowel, as first recognized by de Roerich (1933: 16-17), these reflexes in Common Tibetan are due to sound changes from Old Tibetan. In Old Tibetan the letter <ḥ> represents [ɣ] both phonetically and phonemically, and in all syllable positions; this letter does not represent a vowel initial.

Despite being published only four years after Clauson and Yoshitake's essay, and following in a tradition of scholarship now more than 170 year old, de Roerich's formulation of <ḥ> as [ɣ] in all syllable positions in Old Tibetan, and the understanding of simple initial <ḥ> as [ɣ] in both Old and Common Tibetan which it takes for granted, have yet to be generally incorporated into Tibeto-Burman historical linguistics. Baxter reconstructs an Old Chinese cluster initial *N-, citing <ḥ> /ɣ/ as a parallel (1992: 221), which it is not. Gong, in his correspondences among Old Chinese, Burmese, Tibetan, and Tángut, treats Tibetan syllables ending in <ḥ> /ɣ/ as open syllables, which they are not (1995). Tibeto-Burman historical linguistics could benefit greatly from taking full cognizance of the fact that <ḥ> represents /ɣ/.

REFERENCES

- Bacot, Jacques. 1928. *Une grammaire tibétaine du tibétain classique, les ślokas grammaticaux de Thonmi Sambhoṭa avec leurs commentaires (Annales du musée Guimet 37)*. Paris: Librairie Orientaliste Paul Geuthner.
- Bailey, T. Grahame. 1920. Purik. *Linguistic studies from the Himalayas (Asiatic Society Monographs 18)*. London: Royal Asiatic Society: 1-45.
- Baxter, William H. 1992. *A handbook of Old Chinese phonology*. Berlin: Mouton de Gruyter.
- Beekes, Robert. 1988. *A grammar of Gatha-Avestan*. Leiden: E. J. Brill.
- Bell, Charles A. 1905. *Manual of Colloquial Tibetan*. Calcutta: Baptist Mission Press.
- Beyer, Stephen. 1992. *The Classical Tibetan language*. Albany: State University of New York Press; reprinted Delhi, Sri Satguru Publications, 1993.
- Bielmeier, Roland. 1985. *Das Märchen von Prinzen Čobzañ*. (Beiträge zur tibetische Erzählforschung 6). Sankt Augustin: VGH Wissenschaftsverlag.
- Causemann, Margret. 1989. *Dialekt und Erzählungen der Nangchenpas*. (Beiträge zur tibetischen Erzählforschung 11). Bonn: VGH Wissenschaftsverlag.
- Chen, Zhongmin. 2003. *Studies on dialects in the Shanghai area: Their phonological systems and historical developments*. Munich: Lincom Europa.
- Chirkova, Katia. 2005. Baima nominal postpositions and their etymology. *LTBA* 28.2: 1-41.

- Clauson and Yoshitake. 1929. On the phonetic value of the Tibetan characters ཨ and ས and the equivalent characters in the Phags-pa alphabet. *Journal of the Royal Asiatic Society* 1929: 844-862.
- Coblin, W. South. 1994. An Old Tibetan variant for the word 'fox.' *LTBA* 17.2: 117-118.
- Coblin, W. South. 2002. On certain functions of 'a-chung in early Tibetan transcriptional texts. *LTBA* 25.2: 169-185.
- Coblin, W. South. 2007. *A handbook of 'Phags-pa Chinese*. Honolulu: University of Hawaii Press.
- Desgodins, Auguste. 1899a. *Essai de grammaire tibétaine pour le langage parlé*. Hong Kong: Imprimerie de Nazareth.
- Desgodins, Auguste. 1899b. *Dictionnaire tibétain-latin-français*. Hong Kong: Impr. de la Société des missions étrangères.
- Dños grub. 1989. *A mdoñi ka skad slob deb*. 安多藏語會話選編 *Anduo zangyu huihua xuanbian* [A textbook of spoken Amdo] Xining: mtsho sngon mi rigs dpe skrun khang.
- Dragunov, Aleksandr A. / Драгунов, Александр А. 1939. Особенности фонологической системы древнетибетского языка / Osobennosti fonologičeskoj sistemy drevnetibetskogo jazyka. [Peculiarities of the Old Tibetan Phonological System.] *Записки института востоковедения Акад. Наук СССР / Zapiski Instituta vostokovedeniia Akad. Nauk SSR* 7: 284-295.
- Foucaux, Philippe Edouard. 1858). *Grammaire de la langue tibétaine*. Paris: L'imprimerie impériale.
- Gō Minoru. 1954. *An Eastern Tibetan dictionary and a study of the Eastern Tibetan language, with special reference to the initial consonants*. Okayama: Minoru Gō.
- Gong Hwang-cherng. 1995. The system of finals in Proto-Sino-Tibetan. *The ancestry of the Chinese language*. William S.-Y. Wang, Ed. Berkeley: Project on Linguistic Analysis: 41-92.
- Grum-Gržimajlo, G. E. / Грумь-Гржимайло, Г. Е. . 1899. *Описание путешествія въ западный Китай / Opisanie putešestviija v zapadnyj Kitai*. St. Petersburg: Типографія В. Киршваума / Tipografija V. Kiršvauma.
- Haller, Felix. 2000. *Dialekt und Erzählungen von Shigatse*. (Beiträge zur tibetischen Erzählforschung 13.) Bonn: VGH Wissenschaftsverlag.
- Haller, Felix. 2004. *Dialekt und Erzählungen von Themchen: sprachwissenschaftliche Beschreibung eines Nomadendialektes aus Nord-Amdo* (Beiträge zur tibetischen Erzählforschung 14.) Bonn: VGH Wissenschaftsverlag.
- Hermann, Silke. 1989. *Erzählungen und Dialekt von Diñri* (Beiträge zur tibetischen Erzählforschung 9). Bonn: VGH Wissenschaftsverlag.
- Hermanns, Matthias. 1952. Tibetische Dialekte von A mdo. *Anthropos* 47.1-2: 193-202.
- Hill, Nathan. 2005. Once more on the letter ས. *LTBA* 28.2: 111-141.
- Hill, Nathan. 2006. Tibetan *vwa* 'fox' and the sound change Tibeto-Burman **wa* - > Old Tibetan *o*. *LTBA* 19.2: 75-90.

- Hill, Nathan. 2009. The ༀphags-pa letter ༀ and laryngeal phenomena in Mongolian and Chinese. *Central Asiatic Journal* 53.2: 183-205.
- Hoshi, Michiyo and Tondup Tsering. 1978). *Zangskar vocabulary: A Tibetan dialect spoken in Kashmir (Monumenta serindica 5)*. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.
- Hua Kan 華侃. 2001. 藏語按多方言詞彙 *Zangyu Anduo fangyan cihui*. [A vocabulary of Amdo Tibetan dialects]. Lanzhou: 甘肅民族出版社 Gansu Minzu Chubanshe.
- Huber, Brigitte. 2005. *The Tibetan dialect of Lende. Kyirong): A grammatical description with historical annotations (Beiträge zur tibetischen Erzählforschung 15)*. Bonn: VGH Wissenschaftsverlag.
- Jacques, Guillaume. 2004. Phonologie et morphologie du Japhug. Rgyalrong. PhD thesis, Université Paris VII – Denis Diderot.
- [Jayunasutu] 照那斯图 Zhaonasiu. 1989. 八思巴字中的零声母符号 Basabazi zhong de ling shengmu fuhao [Zero initial letters in the ༀphags-pa script] 民族语文 *Mizu Yuwen*: 29-36.
- Jäschke, Heinrich August. 1881. *Tibetan-English dictionary*. London: Unger Brothers.
- Jäschke, Heinrich August. 1883. *Tibetan grammar*. London: London, Trübner & co.
- Jin Peng 金鵬. 1958. 藏語拉薩日喀則昌都話的比較研究 *Zangyu Lasa, Rikeze, Changdu hua di bijiao yanjiu*. [Tibetan language, A comparative study of the Lhasa, G'zis-ka-rtse, and Chab-mdo dialects.] Beijing: 科学出版社 Kexue chubanshe.
- Kara, G. 1984. A Sbra-nag glossary in Grum-Gržimajlo's Travels. *Tibetan and Buddhist studies commemorating the 200th anniversary of the birth of Alexander Csoma de Kőrös*. Ed. Louis Ligeti. Budapest: Akadémiai Kiadó: 321-362.
- von Klaproth, Julius. 1823. *Asia polyglotta*. Paris: A. Schubart, 1823; reprinted: Paris: Heideloff & Campe, 1831.
- de Kőrös, Alexander Csoma. 1834. *A grammar of the Tibetan language*. Calcutta: at the Baptist mission press; reprinted Budapest: Akadémia Kiadó, 1984.
- Kretschmar, Monika. 1995. *Erzählungen und Dialekt aus Südmustang*. (Beiträge zur tibetischen Erzählforschung 12). Bonn: VGH Wissenschaftsverlag.
- Ladefoged, Peter and Ian Maddieson. 1996. *The sounds of the world's languages*. Oxford: Blackwell.
- Lalou, Marcelle. 1950. *Manuel élémentaire de Tibétain Classique*. Paris: Imprimerie Nationale.
- Ligeti, Louis. 1961. Trois notes sur l'écriture 'phags-pa. *Acta Orientalia Scientificarum Hungaricae* 13: 201-237.
- Maddieson, Ian. 1984. *Patterns of sounds*. Cambridge: Cambridge University Press.
- Mann, Stuart E. 1963. *Armenian and Indo-European. Historical phonology*. London: Luzac and Co. Ltd.

- Matisoff, James. 1975. Rhinoglottophilia: the mysterious connection between nasality and glottality. *Nasálfest: Papers from a symposium on nasals and nasalization*. Eds. Charles A. Ferguson et al., 265-287. Stanford: Language Universals Project, Department of Linguistics, Stanford University.
- Michailovsky, Boyd. 1975. A case of Rhinoglottophilia in Hayu. *LTBA* 2.2: 29.
- Migot, A. (1957). Recherches sur les dialectes tibétains du Si-k'ang. Province de Khams). *Bulletin de l'École Française d'Extrême Orient* 48: 417-562.
- Miller, Roy Andrew. 1955a. Studies in Spoken Tibetan I: Phonemics. *Journal of the American Oriental Society* 75.1: 46-51.
- Miller, Roy Andrew. 1955b. Review of チベット語古典文法学 / *Chibettogo koten bunpōgaku*. [Classical Tibetan language grammatical studies.]. 昭和 Shōwa 29.) by Inaba Shōju 稲葉正就. Kyoto: 法藏館 Hōzōkan, 1954. *Language* 31. 481-482.
- Miller, Roy Andrew. 1968. Review of Róna-Tas 1966. *Language* 44.1: 147-168.
- Miller, Roy Andrew. 1976. *Studies in the Grammatical tradition in Tibet*. Amsterdam: John Benjamins B. V.
- Miller, Roy Andrew. 1994. A new grammar of Written Tibetan. Review of Beyer 1992. *Journal of the American Oriental Society* 114.1. 67-76.
- Nakano, Miyoko. 1971. *A phonological study on the 'Phags-pa script and the Meng-ku Tzu-yün*. Canberra: Faculty of Asian Studies in association with Australian National University Press.
- Nagano Yasuhiko. 1980. *Amdo Sherpa dialect: A material for Tibetan dialectology (Monumenta serindica 7)*. Tokyo: Institute for the Study of Languages and Cultures of Asian and Africa.
- Norman, Rebecca. 2001. *Getting started in Ladakhi*. Leh: Melong Publications of Ladakh.
- Poppe, Nicholas. 1957. *The Mongolian monuments in ᠬᠢᠮᠤᠩᠭᠤᠯᠠᠩ script*. Wiesbaden: Otto Harrassowitz.
- Prins, A. A. 1972. *A History of English phonemes: from Indo-European to present-day English*. Leiden: Leiden University Press.
- Prževal'skij, N. / Пржевальский, Н. 1875. *Монголия страна Тангутовъ: трехлѣтнее путешествие въ восточной нагорной азии / Mongolija strana Tangutov: trekhletnee putešestvie v vostočnoj nagornoj azii*. Vol. 1. Saint Petersburg: Издание Императорскаго Русскаго Общества / Izdanie Imperatorskago Russkago Obščestva.
- Qu Aitang 瞿靄堂 and 譚剋讓 Tang Kerang. 1983. 阿裏藏語 *Ali Zangyu* [M□a□-ris Tibetan]. Beijing: 中國社會科學出版社 Zhongguo shehuikexue chubanshe.
- Read, A. R. C. 1934. *Balti grammar (James G. Forlong Fund 15)*. London: Royal Asiatic Society.
- Rockhill, William Woodville. 1891. *The land of the lamas: Notes on a journey through China, Mongolia and Tibet*. New York: The Century Co.

- de Roerich, George. 1931. Modern Tibetan phonology: with special reference to the dialects of Central Tibet. *Journal of the Asiatic Society of Bengal* 27: 285-312.
- de Roerich, George. 1932. Review of Jäschke 1881. *Journal of Urusvati* 2: 165-169.
- de Roerich, George. 1933. *Dialects of Tibet: The Tibetan dialect of Lahul (Tibetica I)*. New York: Urusvati Himalayan Research Institute of Roerich Museum.
- de Roerich, George. 1958. *Le parler de l'Amdo: Étude d'un dialecte archaïque du Tibet*. (Serie Orientale Roma 18). Rome: Istituto Italiano per il Medio ed Estremo Oriente.
- de Roerich, George N. and Tse-Trung Lopsang Phuntshok. 1957). *Textbook of colloquial Tibetan: dialect of central Tibet*. Calcutta: Govt. of West Bengal, Education Dept., Education Bureau.
- Róna-Tas András. 1962. [review of: Ю. Н. Рерих / Ju. N. Rerich, *Тибетский Язык / Tibetskij jazyk*. Языки зарубежного Востока и Африки / Jazyki zarubezhnogo Vostoka i Afriki. Moscow: Издательство Восточной Литературы / Izdatel'stvo Vostochnoj Literatury. 1961).] *Acta Orientalia Scientificarum Hungaricae* 14: 338-340.
- Róna-Tas András. 1966. *Tibeto-Mongolica: The loanwords of Mongour and the development of the Archaic Tibetan dialects (Indo-Iranian Monographs 7)*. The Hague: Mouton.
- Róna-Tas András. 1985. *Wiener Vorlesungen zur Sprach- und Kulturgeschichte Tibets*. (Wiener Studien zur Tibetologie und Buddhismuskunde Heft 13). Vienna: Arbeitskreis für Tibetische und Buddhistische Studien.
- Róna-Tas András. 1992. Reconstructing Old Tibetan. *Tibetan studies: Proceedings of the 5th Seminar of the International Association for Tibetan Studies, Narita 1989*. Ihara Shōren and Yamaguchi Zuihō, eds. Narita: Naritasan Shinshoji: 697-703.
- Sandberg, Graham. 1894. *Hand-book of colloquial Tibetan. A practical guide to the language of Central Tibet*. Calcutta: Thacker, Spink and co.
- Schafer, Robert. 1940. The vocalism of Sino-Tibetan. *Journal of the American Oriental Society* 60.3: 302-337.
- Schmidt, Isaak Jakob / Шмидт, Исаак Якоб. 1839a. *Грамматика Тибетского Языка / Grammatika Tibetskogo Jazyka*. St. Petersburg: Изданная Императорской Академией Наук / Izdannaja Imperatorekoj Akademiej Nauk.
- Schmidt, Isaak Jakob. 1839b. *Grammatik der tibetischen Sprache*. St. Petersburg: Kaiserlichen Akademie der Wissenschaften.
- Schwieger, Peter. 1989. *Tibetisches Erzählgut aus Brag-g.yab*. (Beiträge zur tibetische Erzählforschung 10). Bonn: VGH Wissenschaftsverlag.
- Schwieger, Peter. 2006. *Handbuch zur Grammatik der klassischen tibetischen Schriftsprache*. Halle: International Institute for Tibetan and Buddhist Studies, 2006.

- Sedláček, Kamil. 1959. The tonal system of Tibetan. Lhasa dialect. *T'oung Pao* 47: 181-250.
- Siklós, Bulcsu. 1986. The Tibetan verb: Tense and nonsense. *Bulletin of the School of Oriental and African Studies* 49.2: 304-320.
- Simmons, Richard V. 1999. *Chinese dialect classification: A comparative approach to Harngjou, Old Jintarn, and Common Northern Wu (Current Issues in Linguistic Theory 188)*. Amsterdam and Philadelphia: John Benjamins Publishing Co.
- Sprigg, Richard Keith. 1987. 'Rhinoglottophilia' revisited: observations on 'the mysterious connection between nasality and glottality.' *LTBA* 10.1: 44-62.
- Sprigg, Richard Keith. 2002. *Balti-English English-Balti dictionary*. Richmond: RoutledgeCurzon.
- Stein, Rolf. 1955. Review of Gō 1954. *Journal Asiatique* 243: 387-389.
- Sun, Jackson T. S. 1986. *Aspects of the phonology of Amdo Tibetan: Ndzorge Sæme Xɿ ra dialect (Monumenta Serindica 16)*. Tokyo: Institute for Languages and Cultures of Asia and Africa.
- Sun, Jackson T. S. 2003. Phonological profile of Zhongu: A new Tibetan dialect of Northern Sichuan. *Language & Linguistics* 4.4: 769-836.
- Sun, Jackson T. S. 2006. Special linguistic features of gSerpa Tibetan. *LTBA* 29.1: 107-126.
- Svantesson, Jan-Olof et al. 2005. *The phonology of Mongolian*. Oxford: Oxford University Press.
- Széchenyi, Béla. 1897. *Keletázsiai utjának tudományos Eredménye, 1877-1880*. Budapest: K.F.E.K. Bizományában. [as cited in Uray 1955]
- Széchenyi, Béla. 1898. *Die wissenschaftlichen Ergebnisse der Reise des Grafen Béla Széchenyi in Ostasien 1877-1880*. Vol. 3. Vienna: in Commission der Verlagsbuchhandlung von E. Hölzel. [Translation of Széchenyi 1897.]
- Terjék, J. 1969. Fragments of the Tibetan sutra of "The Wise and the Fool" from Tun-Huang. *Acta Orientalia Academiae Scientiarum Hungaricae* 22.3: 289-334.
- Tournadre, Nicolas and Sangda Dorje. 2003. *Manuel de Tibétain Standard: langue et civilization*. Paris: Mondes et Langue, L'asiathèque.
- Uray Géza. 1955. On the Tibetan letters *ba* and *wa*: Contribution to the origin and history of the Tibetan alphabet. *Acta Orientalia Academiae Scientiarum Hungaricae* 5.1: 101-121.
- Vigne, Godfrey Thomas. 1842. *Travels in Kashmir, Ladak, Iskardo, the countries adjoining the mountain-course of the Indus and the Himalaya, north of the Panjab*. London: Henry Colburn.
- Wu Dibben. 1982. Phonology of the Amchog dialect of the Tibetan language: A synchronic and diachronic study. M. A. Thesis, Fu Jen University. Taipei.
- Zhang Jichuan 張繼川. 1996. 古代藏語方音差別與正字法 Gudai Zangyu fangyin chabie yu zhengzifa [Old Tibetan dialectal differences and Tibetan orthography]. 民族語文 *Mizu Yuwen* 3: 22-24.