

The derivation of the Tibetan present prefix *g-* from *h-*

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According to the *communis opinio* whether a Tibetan verb takes the prefix *g-* or *h-* in its present stem is arbitrary (e.g. Coblin 1976, Beyer 1992: 164-177, Hill 2010a: xv-xxi). Implicitly this view suggests the two prefixes have distinct origins, like the Latin perfect for which some verbs continue the inherited aorist whereas other continue the inherited perfect (Weiss 2009: 409-414). For those who subscribe to this conventional understanding of the morphology of the Tibetan present, the task remains to explain the origins of *g-* and *h-*. Here, I pursue an alternative, namely that these two prefixes have the same origin and their distribution is originally phonologically conditioned.¹

Before looking at the distribution of *g-* and *h-* across verb paradigms, it is useful to remind ourselves of the pronunciations that these orthographic representations probably reflect. The pronunciation of *g-* has received little attention, probably because all investigators take for granted that it reflects a velar stop (or possibly fricative JAESCHKE) that assimilates in place of articulation to the following stop (Hill 2010b: PAGES). The pronunciation of *h-* has received considerably more attention. Here the consensus holds that *h* reflects [h] or [χ] before a vowel² and before consonants it reflects a homorganic nasal (Hill 2005: 114-115).³ Although its reality has received acknowledgement at least since Simon (1938: 272), some scholars fail to transliterate a syllable final *-h*, believing

- 1 Michael Radich proposed *g-* < **h-* in a document 'one prefix to rule them all' (4th of January 2005), which he wrote in the context of a first year classical Tibetan class taught by Cameron Warner at Harvard University. The statistics of the distribution of these two prefixes in Tibetan verbs used here come from Michael's paper, which in turn were derived from my then draft Tibetan dictionary, later published as Hill 2010a. I have adjusted Michael's original statistics with reference to Hill 2005a, Jacques 2010, and Hill and Zadoks 2015. Abel Zadoks proposed to me in a conversation from around 2014 that *g-* < **h-* before voiceless fricatives. It was only in 2018 that I brought these two suggestions together and explored this matter in more depth on my own. I hereby extend heartfelt thanks to both Michael and Abel for their insights, without which this paper could not have come into being. I also thank the European Research Council for support via the Synergy Grant ASIA-609823.
- 2 Authors expressing this view include: de Kőrös 1834: 5, Schmidt 1839a: 14, 1839b: 9, Foucaux 1858: 5, Desgodins 1899a: 17, 1899b: 893, de Roerich 1932: 166, Dragunov 1939: 292 n. 1, Miller 1955b: 481, 1968: 162, 1994: 71, Migot 1957: 445, Róna-Tas 1962: 129 n. 142, 1966: 143, 1992: 699, Siklós 1986: 309, Hill 2005b, 2009, Schwieger 2006: 22, Preiswerk 2014: 76, and X. Gong 2016b: 143 n. 16.
- 3 In conservative dialects such as Golok and Kham, as well as in loanwords to Mongour, orthographic cluster initial *h-* appears as the nasal homorganic to the following stop (Róna-Tas 1966: 143-144, Sprigg 1968: 310). Golok has such examples as *hkhör-lo* [ŋkhɔr-] 'watch,' *hgro* [ŋgjo] 'go,' *hcham* [ntʰʂam] 'dance,' *hthuñ* [nthɔŋ] 'drink,' *sku-hdra* [-ndra] 'image,' *hjah* [ndʰʂa] 'rainbow,' *hdod-mo* [ndɔd] 'wish,' *mdah-hben-gyi* [-mphɛŋ] 'of the target,' *hbar* [mbar] 'burn' (Sprigg 1968: 310). Kham has examples such as *hkhöl-* [ŋkʰol-] 'to boil,' *hgul-* [ŋgul-] 'to shake,' *hthag-* [ntʰag-] 'to bind,' *hdod-* [ndɔd-] 'to wish,' *hdzin* [ndzen-] 'to seize,' and *hbab-* [mbab-] 'to fall' (Róna-Tas 1966: 143 n. 264). Examples of Mongour loanwords include *hkhör-lo* [ŋkʰuorlo] 'circle,' *hdu-khañ* [ndɔgɔŋ] 'meeting-house,' *hphul-* [mpʰurla] 'to push,' and *rdo-hbum* [rɛduomɐn] 'heap of stones' (Róna-Tas 1966: 143). In other dialects it occurs as various nasals (Róna-Tas 1966: 144 n. 270). Examples from Derge include *hkhayags* [ʰtʂaʰkʰ] 'cold,' *hgro-* [ʰdʒro-] 'to go,' *hcham-* [ʰtʂom-] 'to agree,' *hjam-* [ʰdzampo-] 'soft,' and *hthag-* [ʰmthɔpa-] 'to bind' (Róna-Tas 1966: 144 n. 270). Even the innovative Lhasa dialect has a nasal within a word, where *h-* has been reanalyzed as the final of the preceding syllable, e.g. *dge-hdun* [gendün] 'clergy' (Siklós 1986: 308-309).

that it represents an orthographic device of no phonetic meaning (e.g. Matisoff 2003: 50, 486 et passim, Jacques 2012: 92). The work of these researchers makes clear that the evidence for the phonetic reality of syllable final *-h* merits repeating. The dialect evidence suggests that an orthographic final *-h* reflects a long vowel. These long vowels were subsequently lost in most Tibetan varieties, but are sporadically reported across the Tibetan linguistic area. Bell writes concerning Central Tibetan that as a final “*ཨ* [-h] is not itself pronounced but lengthens the sound of the vowel preceding it” (1905: 7). De Roerich also describes this phenomenon in two Tibetan languages: for Central Tibetan he offers the four examples *bkaḥ* /kā/ 'order', *nam mkhaḥ* /nam-kʰā/ 'sky' (1931: 299), *dgaḥ* /gā/ 'delight', and *dmaḥ* /mā/ 'low' (1933: 17); for Lahul he cites the three examples *nam mkhaḥ* /nam-kʰā/ 'sky', *dgaḥ* /gā/ 'delight', and *dmaḥ* /mā/ 'low' (1933: 17). Migot draws attention to the same correspondence between a written final *-h* and a spoken long vowel in dialects of Khams (1957: 455). Sedláček discusses the complicated effects of original final *-h* on tone in Lhasa dialect, and separates this discussion clearly from his treatment of original open syllables (1959: 216-219). Sedláček additionally implies that final *-h* has a segmental realization which he symbolizes in his phonetic transcriptions as [ː], for example *mṅaḥ* 'might, power' [ṅaː ṽ55] (1959: 219). Jin confirms the existence of long vowels in Lhasa Tibetan citing the word *mdaḥ* [daː³] 'arrow' (1958: 12). As a final piece of evidence in favor of its reality, final *-h* has a correspondence in Old Chinese which is distinct from open syllables (CITATION).

Since in Old Tibetan, this letter reflects a velar fricative in other syllable positions and its reflex in Common Tibetan as a syllable final is vowel length, it is reasonable to explain that the loss of the velar fricative in syllable final position led to compensatory lengthening of the preceding vowel (Hill 2009).

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. The hypothesis that <ḥ> represented [ɣ] in all three positions in Old Tibetan, is able to explain all three reflexes reconstructible on the basis of the modern varieties.

but by the time of Common Tibetan /h/ [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 proceeding 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 remainder of this paper will take as given that <g> represents /g/ and <ḥ> represents /ɣ/.

Now that a phonetic interpretation of *g-* and *ḥ-* are in mind, we may return to their phonotactic distribution in present tense verbs. Table 1, based on the verb stems reported in indigenous lexicographical works, gives the number of occurrences of present stems of various root onsets with both prefixes. The pattern that emerges strongly suggests that *ḥ-* is the original initial, which fortified to *g-* before voiceless acute initials.⁴ The major

4 Table 1 excludes verbs of invariant onset and vowel across their inflection; in these verbs the *g-* or *ḥ-* may

exception to the pattern is the prevalence of the prefix *h-* with verbs of root initial *ts-*. If we assume that *h-* regularly changed to *g-* before voiceless acute initials, this gives us 26 cases⁵ of *h-* before voiceless acutes and nine cases of *g-* before other initials that are in need of explanation. Three examples, one each with root initial *d-*, *p-*, and *b-*, can be dismissed, since a look at the complete inflection shows that *g-* (*d-* before labials) is in fact here not a present prefix but part of the root.

gdañ, gdañs, gdañ, gdoñs 'open'

dpog dpags dpag dpogs 'measure, asses'

dbrol, dbral, dbral, dbrol 'puncture, tear'

I have no explanation for the remaining six examples of the *g-* where it is not expected. Greater philological exploration of the stems as they occur in context is clearly called for.

dgar, bkar, dgar, khor 'separate'

dgod, bgad, bgad, dgod 'laugh'

dgroñ, bkroñs, dgroñ, dgroñs 'kill'

gżar, bżar, gżar, gżor 'shave'

gżu, bżus, gżu, gżus 'strike, beat'

gzab, bzabs, gzab, gzobs 'strive, exert one's self'

Here are the 28 unexpected examples of *h-*.

hthag, btags, btag, hthog 'weave'

hthu, btus, btu, thus 'gather'

hthuñ, btuñs, btuñ, hthuñs 'drink'

hthog, btogs, btog, hthogs 'pick, pluck'

hchag, bcags, gcag, chogs 'walk'

hchañ, bcañs, bcañ, choñs 'hold'

hchab, bcabs, bcab, hchobs 'conceal, hide'

hchiñ, bciñs, bciñ, chiñs 'bind, tie'

hchib, bcibs, bcib, chibs 'ride a horse'

hchir, bcir, bcir, chir 'press, squeeze'

hchu, bcus, bcu, chus 'draw water'

be part of the root. Before *-n-* only *g-* occurs, but there is only one example *gnon mnan mnan non* 'suppress, defeat'. The root initials appearing in Table 1 are orthographic transcriptions (modulo aspiration according to Shafer's rule, see Hill 2007 and Hill 2011: 441-442), except in the case of */l/*, which I understand as the root initial in the verbs *klog* 'read' and *klub* 'bedeck' (de Jong's rule, see Hill 2011: 441). Note that before *ś, ź, z, r,* and *l* the prefixation of *h* induces dental epenthesis, i.e. **hś > hch-*, **hź > hj-*, **hz > hdz-*, **hr > hdr-*, **hl > ld-* (Conrady's law, see Hill 2011: 446-447). For the phonetic term 'acute' see Jacobsen 1990: 260.

5 Both *gso* and *htsho* compete as the present of 'nurture', so the 100% statistic for roots in *s-* is not quite true.

Root initial		Verbs with prefix ḥ-	Verbs with prefix g-	Percentage with prefix g-
Voiceless acutes				
	s	0	8	100%
	ʃ	0	2	100%
	ś-	5	7	58%
	t-	4	5	55.5%
	c-	9	5	35.6%
	ts-	10	1	9.1%
Other initials				
	ž-	3	2	40%
	z-	4	1	20%
	g-	15	3	16.6%
	p-	7	1	12.5%
	b-	12	1	7.7%
	d-	10	1	9.1%
	j	6	0	0%
	k	4	0	0%
	dz	3	0	0%
	r	3	0	0%
	l	4	0	0%

Table 1: occurrences of verbs with the present prefixes prefixes ḥ- and g-

ḥchol, bcol, bcol, chol 'entrust, charge with'

ḥchos, bcos, bco, chos 'make ready, prepare'

ḥchags, bśags, bśag, śog(s) 'confess'

ḥchad, bśad, bśad, śod 'tell'

ḥchi, śi, ḥchi 'die'

ḥchar, śar, ḥchar 'rise'

ḥchor, śor, śor 'escape, be lost'

ḥtshag, btsags, btsag, tshogs 'strain, filter'

ḥtshañ, btsañs, btsañ, tshoñs 'press, squeeze'

ḥtsham, btsams, btsam, tshoms 'abuse, mistreat'

ḥtshal, btsal, btsal, ḥtshol 'greet, prostrate'

ḥtshir, btsir, btsir, tshir 'wring out'

ḥtshem, btsems, btsem, tshems 'sew'

ḥtshog, btsogs, btsog, ḥtshogs 'cudgel'

ḥtshoñ, btsoñs, btsoñ, tshoñs 'sell'

ḥtshod, btsos, btso, tshos 'cook'

ḥtshol, btsol, btsol, tshol 'search for'

Joanna Bialek (2018: 317-9) points out that originally the present stem of 'die' was *śi* and not *ḥchi*. She draws attention to three pieces of evidence. First, the Old Tibetan compound *skye-śi* 'transmigration' combines the present stem *skye* 'be born' with the presumably present stem *śi* 'die'. Second, in the phrase *myi myi śi ḥi yul* "a land of men who do not die" (PT 1134, l. 43) the negation marker *myi*, which can only precede the present and future but not the past, is used with *śi*. Third, in the phrase *ñā-la myi bstan-na śir ḥgro* 'If [you] will not explain [it] to me, I am going to die.' (PT 1287, ll. 31-32), because the verb *ḥgro* selects only for the present and future in infinitive constructions (Garrett et al. 2013: 37), *śi* must not be past. Thus, the verb *ḥchi, śi, ḥchi* 'die' need not be seen as a true exception to the generalization that the prefix *g-* rather than *ḥ-* occurs before the voiceless acute root initials.

The verbs *ḥthu, ḥthag, ḥthog, ḥchu, ḥchib, and ḥchos* are potentially denominative, respectively from *thu* 'hem', *thags* 'garment', *thog* 'tip', *chu* 'water', *chibs* 'horse', and *chos* 'dharma'.⁶ They are analogical creations postdating the change of *ḥ-* to *g-*. I am not aware of any obvious denominal verbs that take the prefix *g-* in their present. If these denominative derivations for *ḥth-* and *ḥch-* are accepted, there remain 19 examples unexplained; of these ten have root initial *ts-*, seven have root initial *c-*, and two root initial *ś-*. It is likely that at least *ḥchir* 'press, squeeze' and *ḥtshir* 'wring out' are onomatopoeic.

An alternative explanation for the phonetic conditioning of *ḥ-* > *g-* is to restrict the conditioning environment to only voiceless fricatives. Under this alternative proposal, the 17 examples of *ḥ-* before *ts-* and *c-* become regular, but the 11 examples of *g-* before *t-*, *c-*, and *ts-* become irregular and the 5 examples of *ḥ-* before *ś-* remain irregular. It does not seem judicious at the moment to choose between these two alternative hypotheses, but instead to simply conclude that it is likely that prefix *g-* derives from *ḥ-* and that further philological work (of the type discussed for 'die') is required to add clarity to the situation. When we recall that *ḥ-* represents [ɣ], the change *ḥ-* > *g-* before voiceless fricatives is

6 Militating against *ḥthag* 'weave' as denominative is the pair of Chinese cognates 織 *tək 'weave' and 織 *təks 'textile', which suggest that the relationship between verb and noun in this case, as well as the morpheme *-s may be very old (Schuessler 2007: 615). A reviewer proposes that *chos* is a deverbal noun from the imperative *chos*, noting that otherwise it is difficult to account for the loss of -s in the future stem *bco*. Note however that the *Bod rgya tshig mdzod chen mo* gives the future as *bcos* and that *bco* could be analogical, along the lines *bsams : bsam :: bcos : X = bco*. An alternative explanation is to propose that the present *ḥchos* is itself analogical on the model of the denominatives and that the inherited present had the voiced version of the root seen in *bzo* 'make' (< *bdzo, according to Schiefner's law, see Hill 2014). If we pursue the latter possibility, the inherited paradigm would have been *gzo, *chos, bzo, chos*, but a relationship with *gzo* 'show gratitude' is unlikely.

straightforward dissimulationary fortition.

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