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## The interest of Zhangzhung for comparative Tibeto-Burman

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## I. Introduction

"Zhangzhung" is the old name of Western Tibet, annexed by the Tibetan kingdom as early as 645 A.D, and traditionally regarded as the sacred country whose language was the vehicle for the texts which serve as the basis of the Bon religion. These religious texts were translated into Tibetan from Zhangzhung at about the same time as Buddhist texts were translated from Indian languages, in the 6th to 9th centuries A.D. (Haarh 1968:7; Kvaerne 1971).

Thomas (1926) suggested that the unknown language of a certain manuscript, apparently a medical text, brought back by Sir Aurel Stein "from the hidden library of Ch'ieñ-fo-tung, near Tun-huang in Chinese Kansu", might be an old form of Lepcha. Later, by considering etyma like the numerals, Thomas (1933:408) concluded that the language of this MS actually belonged
> to that group of languages which, by B.H. Hodgson and in Vol. I of the Linguistic Survey of India, is entitled the 'Western Pronominalized Group' [...] A dialect of the 'Western Pronominalized' group about 1,000 years older than the others (as known to us) could not fail to be instructive [...] It appears to resemble Tibetan more than Lepcha; but it certainly must have belonged to the Himalayan region, Western Tibet, Nepal, etc. The only language of this region which is mentioned in Tibetan books is the language of z̀an-ż̀un, which is certainly Guge or its vicinity [...]

Shafer (1937) categorically states that an examination of Thomas (1926) convinced him that Zhangzhung was not only West Himalayish, but "more definitely an archaic form of Almor". ${ }^{1)}$ Among his best examples are the numerals TWO and NINE, where he identified as specifically Almora features the final -s in Zh. ${ }^{2}$ nis 'two' ("only Almora and Thami have final -s"), and the lack of an s- prefix in Zh . gwi 'nine', a lack which is shared by Almora *gvi, Bunan gu, but not by Kanauri (sgui). On the other hand, R.A. Stein (1971:253) points out that with respect to the numeral SEVEN, Zh. snis, snes, snel goes less well with the Western languages like Almora that lose the initial s- (Almora nis, Bunan nyi-ži), and better with eastern languages like Horpa zni, zne, Wassu (Qiang) šnēs, Jyarung šnes, Bodo sni. ${ }^{3}$ ) We may further observe that in SEVEN (unlike in TWO), Zh. snis and Kanauri stish actually agree in both having the sprefix.

One cannot but feel that observations like these, however interesting, are quite inconclusive and superficial; the presence or absence of a particular prefix on a given root in different languages is a very poor indicator of the closeness of genetic relationship of the languages as a whole.

The publication of a Tibetan-Zhangzhung Dictionary in Delhi (Bon-po Association 1965), a bilingual collection of phrases taken from various sacred Bon texts, marked a turning-point in Zhangzhung studies, enabling the Danish scholar Haarh (1968) to extract a nicely arranged vocabulary of several hundred items, along with English translations of the glosses. ${ }^{4}$ ) Haarh confirms Thomas' and Shafer's view that Zh. is West Himalayish. Huffman (1967), using the same data, agrees that it is Himalayish, but points to resemblances with E. Himalayish and TB languages of Nepal. For exploring connections with the modern W. Himalayish languages, Haarh and Hoffman only had the extremely limited vocabularies of Grierson's Linguistic Survey of India to work with.

Most of Stein's long article (1971) is devoted to a discussion of the Zh. philosophic and religious terms to be found in the Delhi Dictionary, most of which are calques on or outright borrowings from Sanskrit or Tibetan. Particularly interesting are cases where a compound contains elements from both donor languages, e.g. Zh. cag-kor 'wheel' < Skt. cakra plus Tib. hkor-lo. ${ }^{5)}$ Leaving aside all this technical and learnèd vocabulary, Stein still feels there remains an authentic component to the lexicon found in the MSS which could go back to the 7th and 8th centuries, and which could indeed be "native Zhangzhung", but which possibly included elements of other TB languages that the Bonpo incorporated over the centuries. At the end of his article (pp. 252-4), he attempts a comparison of some of these words (the numerals and about 20 others) with forms in other TB languages, but is finally not enthusiastic about his results: "C'est tout ce que j'ai pu trouver jusqu'ici. On voit que la récolte est assez maigre."

Some new data on West Himalayish languages may now enable us to enrich this "meager harvest" somewhat. For Kanauri (=Kanawari, Kinnauri), besides Bailey's classic dictionary (1911), we now have the grammar and glossary by D.D. Sharma (1988). Accurate new data on Bunan and Pattani (=Manchad, Manchati) have been made available by S. R. Sharma, in the form of filled-out Questionnaires on bodypart terminology contributed to the STEDT project (1991). Fortunately there are a large number of bodyparts represented in the Tibetan/zañ źuñ Dictionary, since some of the MSS were evidently medical texts!

A few phonological developments may already be traced from PTB to Zh . on the basis of "regular correspondences", though we can hardly speak of "sound laws" at this stage (§II). After listing these, we present over 30 interesting etymologies from miscellaneous semantic areas (§III), followed by a semantically more homogeneous group of over two dozen sets relating to body
parts or functions, where the Zh . form seems to have cognates elsewhere in W . Himalayish or farther afield (§IV). After listing a dozen more bodypart terms where the Zh . form cannot yet be related to anything else ( $\S \mathrm{V}$ ), we attempt a tentative classification of the etymological relationships of Zh . words to forms in other TB languages (§VI, VII).

## II. Sound correspondences

1. Zh. $-\eta$ / other $-\varnothing$

There seem to be at least five cases where a Zh . final velar nasal corresponds to an open syllable elsewhere in TB:
[1] FOUR ${ }^{6)}$
Zh. bing, WT bźi, Kan. pö < PTB *b-ləy (STC \#410)
[2] LUNG
Zh. lung, WT glo-ba < *g-lwa (see [49] below)
[3] VEIN/ROOT Zh. tsang-ri, WT rtsa (see [58] below)
[4] WATER ${ }^{7)}$
Zh. ting; Pat. ti; Chamba Lahuli ti; Tinan and Bunan so-ti; Rangkas, Darmiya, Chaudangsi, Byangsi ti; Kan. (Bailey) rön- $t \overline{\boldsymbol{r}}$ 'gently flowing water', (Sharma) mig-sti, (Bailey) mĭt-ti 'tears' ("eye-water") < PTB *ti(y) (STC \#55)
[5] SOUND/VOICE
Zh. glang $\sim$ klang, Lahu khô < PLB *kran ${ }^{2}$ (see [30] below)

This phenomenon is reminiscent of the Hkauri (Hk.) dialect of Jingpho (see Hanson 1906), which has $-\eta$ in several important words where standard Jingpho (Jg.) has an open syllable:

| HORSE | Jg. gùmrà, Hk. gùmràng |
| :--- | :--- |
| SILVER | Jg. gùmphrò, Hk. gùmphròng |
| PERSON $^{1}$ | Jg. məshà, Hk. məshàng |

In HORSE, the Hkauri nasal seems original (see [24] below), but in SILVER it appears secondary (cf. Insc. Bs. phlu). The wider connections of the word for PERSON are still unknown.

## 2. The fate of rhymes with $T B *-k$ in Zhangzhung

Several different correspondences have been observed between general TB rhymes ending in a velar stop and putative Zh . reflexes, though there is still insufficient data to determine whether they all represent valid native Zh . diachronic developments, or whether borrowing might have complicated matters:

2a. Zh. -at / other -ak *-ak > Zh. -at ?
[6] SKIN/FUR
Zh. pad; WT lpags ${ }^{8)}$

Zh. pad is paralleled by several other Himalayish forms with final dental stop (see [56] below), so perhaps the WT form is not cognate at all.

2b. Zh. -ek / other -ak *-ak > Zh. $-e k$
[7] BREATH Zh. seg, seg-ri; Lepcha hak
(Mainwaring / Grünwedel 367);
WB sak, Lahu šá (STC \#485)

This word does not occur in Tibetan. The Delhi Dictionary gives two words for 'breath', sad and seg, but the basic meaning of the former is apparently 'god' rather than 'breath'. See [37] below.
[8] BLOOD Zh. reg-thun, WT khrag
For more on this etymology, see [34] below.
2c. Zh. -up / other -uk $\quad$-uk $>$ Zh. $-u p$
[9] POISON Zh. dub, WT dug

A widespread ST root, PTB *duk $₹$ tuk (STC \#472). For a similar change in position of articulation, cf. Dafla torub 'ant' < PTB *-rwak (STC \#199).
3. $\quad$ *m-> Zh. $n$-, especially before front vowel

Hoffman (cited by Stein, p. 254) ${ }^{9)}$ already observed this phenomenon in a few etyma (PERSON², FIRE, BOUNDARY), to which we may add NAME:

| [10] | PERSON $^{2}$ | Zh. ni, WT mi <br> Cf. also Dafla ny 1, Hruso nī-na 'man'; <br> <PTB *r-mi(y) <br> (STC pp. 107, 119, 158) |
| ---: | :--- | :--- |
| [11] | FIRE | Zh. ne, WT me <br> Cf. Dafla ni, nyi; <br> <PTB *mey (STC \#290) |
| $[12]$ | NAME | Zh. ma-ning, WT ming <br> <PTB *r-min (STC \#83) |
| $[13]$ | BOUNDARY | Zh. nu, WT mu |

In the first three of these examples the initial precedes a front vowel. This palatalization of m - to n - before yod is in fact a fairly widespread phenomenon in TB, e.g. in Loloish (Yi). Thus Proto-Lolo-Burmese ${ }^{*}$ s-myak 'eye' $>$ Lahu mê?, Akha myá?, etc., but also > Ahi nie ${ }^{44}$, Sa. ne ${ }^{44}$, Lisu (Nujiang) nie ${ }^{3}$, Luquan na? ${ }^{22}$, Nasu na ${ }^{32} .{ }^{10)}$ rGyalrong (Qiangic group) has a nice transitional reflex of this etymon, tomnyak. It is interesting to observe that although Zh . does not shift to a dental nasal in this root, it does show a palatalizing tendency here too. Instead of *nig (< PHim. *mik), Zh. has mig, dmig, or yig; the last of these variants clearly points to a development like ${ }^{*}$ mik $>{ }^{* *}$ myik $>{ }^{* *}$ nyik $>$ yik.
4. Vocalic phenomena

A couple of random observations are all that can be made in this area:
4a. Zh. -u- / other -i-
[14] MIND ${ }^{1}$ Zh. tha-yud, da-yud; WT yid;
cf. also Jingpho myìt
(< PTB *m-yet; Matisoff 1978:211)
In this set, Zh. -u- corresponds to WT -i-. Inter- and intra-lingual interplay between these high vowels in closed syllables is one of the most pervasive variational patterns in TB (see STC p. 80, Matisoff 1978:41-3).

4b. Ablaut in verb stems
[15] DIE/DEAD Zh. grog 'die', gyag 'dead'

These Zh . forms seem to display an ablaut similar to that in, e.g. WT gsod 'kill (pres.)' bsad 'kill (past)', though this Zh . root has no obvious cognates.

## 5. Tones in Zhangzhung?

Among the enormous gaps in our knowledge of Zhangzhung is the question of whether it was tonal. The significant number of homophonous morphemes have led several scholars to suspect tonal differences:
"Dans toute langue monosyllabique dont les tons ne sont pas marqués (comme en tibétain), il y a évidemment beaucoup d'homophones." (Stein 1971:247)
"Die oftmals vielfältige Sinnbedeutung homophoner Worte könnte vermuten lassen, dass die źay-źun-Sprache ebenso tonal war wie die der Ch'iang." (Hummel 1974-5:497).

Stein's remark must apply only to modern Tibetan tonal dialects, since it is unjustifiable to assume that tones already existed in Tibetan at the time when the language came to be written, but that the writing system didn't mark them. Hummel's comment assumes that Qiang is a fully tonal language, but actually the Northern Qiang dialects (e.g. Mawo) are not tonal at all, and even in the Southern Qiang dialects (e.g. Taoping) the tone systems are on the rudimentary side. There is in fact no evidence at all that Zhangzhung was tonal.

## III. Interesting etymologies

## [16] The NUMERALS

The Zh . numerals are among the most obvious cognates with other TB languages, and are quite close to the numerals of WT, except for the absence of several prefixes: tig ' 1 ', ni/ne ' 2 ', sum ' 3 ', bing ' 4 ', nga ' 5 ', drug ' 6 ', snis/snes/snel '7', gyad '8', gu-dug '9', cu '10'.

More interesting than the forms of the numerals themselves is a peculiar sort of arithmetical system, whereby a number is designated by a compound consisting of itself and the next higher numeral. ${ }^{11)}$ These are often, but not always ordinal:

```
ne-sum 'second; two' ("two-three")
sum-pi 'third; three' ("three-four")
bing-nga 'fourth; four' ("four-five")
drug-snis 'sixth; six' ("six-seven")
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The problem is that in other texts the numerical value of such compounds seems to be the opposite, i.e. it is the higher of the two consecutive numbers that expresses the real numerical value. Thus mDzod-phug (p.3) has nga-drug 'six' ("five-six"), but in other texts and contexts the same compound apparently means 'five'. Sometimes ne-sum means 'three' instead of 'two', etc. Hummel attributes all this confusion to the fact that Zh . is a "historical mixed bag because of its relationship with Sum-pa, Minyag, and Si-Hia, Ch'iang, and Na-khi, but also with Old Chinese and especially with Tibetan".

BARLEY
Zh. zad, Pat. thəy-gzəd
This seems to be a new root, W.Him. ${ }^{*} g$-zat. It is distinct from the Loloish etymon represented by Lahu y $\hat{\mathbf{i}}$ 'grass' ( $<$ PLB *zəy²) and $\mathbf{y} \ddagger$ 'wheat, oats, unfamiliar cereal'.

BIRD Zh. du

This Zh . form does not seem to have relatives in Himalayish, but might well be cognate to forms reconstructed as PTB *daw or *dow (STC p. 149) on the basis of data from Bodo-Garo and Karen: Garo do, Dimasa dau; Pho and Sgaw tho. This etymon is further related to Chinese 鳥 (OC *tiog > Mand. niǎo, with initial nasal unexplained) < PST *tow $\approx *$ dow (SC, p. 192), and perhaps to a Kuki-Naga root *m-tow 'fly' (n.). ${ }^{12)}$

WT bya and Kan. pyā are from a distinct root *bya $\approx$ *bra that means 'bee' in Lolo-Burmese (STC \#177). (There is a similar avian/apian association in another root, *kwa:y, STC \#157.)

BURN/SHINE
Zh. ar, bar, 'bar 'burn'; WT 'bar-ba;
Kan. bar-mig 'burn wood'.
These forms are from a complex word-family ${ }^{*} \mathbf{p}^{\mathbf{w}} \mathrm{ar} \gtrless^{*} \mathbf{b}^{\mathbf{w}} \mathrm{ar}$, some of whose reflexes have labial stops, while others have $w$ - or zero-initial. (See STC \#220; Matisoff 1997:44-46; Matisoff 1998:7-9.) Of the Zh. doublets, it looks as if the form with zero-initial, ar, is genuinely cognate to WT and Kanauri, while the form with labial stop appears to be a loan from WT.

ENEMY/WAR
Zh. gyi-gran;
WT bgran-pa 'fight' $₹$
ral-gri 'sword' ("war-knife")

This is one of two roots (including WORM) where Tibetan has $-\mathrm{n} æ-1$ variation, or -n where other evidence points to PTB *-1 (ALL, MOUNTAIN GOAT, BODY HAIR; see STC p.15, n. 53). The etymon is reconstructed as *ran $=$ * (g-)ra:l (STC pp. 15, 71, 113, 155, 173, 178, 191), on the basis of forms like WB ran 'quarrel', Lushai ra:I 'war against, warrior', Tiddim ga:I 'battle, war, enemy', Angami te-hro 'war'. There is also a likely Chinese cognate 戰 (Mand. zhàn).

## [21] FISH <br> Zh. tsa

The general TB root *rya (STC \#189) is not represented in Zh., where the form tsa looks vaguely like Pattani moch, Kanauri motshī, and Sunwar mā:cā -- but these latter are certainly loans from Indo-Aryan (cf. Nepali māchā). The Zh . form is perhaps also an IA loanword; on the other hand it might go with a group of Qiangic forms (Mawo bze, Pumi Lanping d3ə ${ }^{55}$, Ergong кајu); it is also remotely possible that it might be related to the second syllable of two

[22] FOOT/HAND/MIND ${ }^{2}$ (?)
Zh. khri 1. 'mind, thought'
2. 'corner, tip'
khri-tse $=$ khri-rtse

1. 'hand' 2. 'fruit, result'
khri-tog 'ritual hand gesture, mudra'
(WT phyag-rgya)
These Zh. forms are puzzling. Is the meaning 'hand' an outgrowth of 'mind, thought'? WT seems to have no cognate with the meaning 'mind'. Or is there an enantiodromic confusion with khri 'foot'? WT khri, apparently cognate with WB khre 'foot', means rather 'seat; frame'; cf. *krəy (STC \#38). ${ }^{13)}$ Although the second syllable -tse of Zh. khri-tse is sometimes plausibly interpreted as a diminutive morpheme (see BELLY [33] and EAR [38]), it seems unlikely that a language would refer to a hand as a "little foot"; the hand/foot homophony is probably entirely accidental.
[23] GOLD/YELLOW/BUTTER
Zh. mar 'gold', mar-sang,
ma-sang 'yellow',
mar-tsa 'goldfish' (Haarh p. 14);
WT mar 'butter';
Kan. măr 'ghee'
For the semantic connection between 'yellow' and 'butter', cf. Mandarin huángyóu 'butter' ("yellow oil"). This etymon appears with the meaning
'gold' throughout the Tamang-Gurung-Thakali-Manang group, and is reconstructed as ${ }^{*} \mathrm{mar}^{4}$ in Proto-Tamang.

Both Zh. and WT derive their word for 'yellow' from their respective words for 'gold': WT gser (< Persian: Jäschke 590) 'gold', WT ser-po 'yellow'. Kanauri zaN 'gold' might possibly go with the second syllable of Zh . mar-sang.

HORSE

Zh. hrang; Pat. Hray;<br>Chamba Lahuli rhang;<br>Rangkas rhang; Bun. śrays;<br>Kanauri rang;<br>Darmiya, Chaudangsi, Byangsi rang<br>Old Tibetan (Tun-Huang MSS) rman<br>(Beyer 1992); ${ }^{14)}$<br>PLB *mran ${ }^{2}$ ( $>$ WB mrây, Lahu í-mû );<br>Jingpho (Hkauri dial.) gùmràg<br>(see II.1, above)

Both the *s- and the *m- prefixes are well attested in this root: PTB $*_{\text {s-ran }} ₹ *_{\text {m-ran ( }}$ (STC \#145). Benedict (n.139) tentatively suggests a semantic connection with the root for HIGH (PTB *m-ran).

| [25] IRON | Zh. zans; Rangkas chyang; |
| :--- | :--- |
|  | Almora najang; Darmiya nijang; |
|  | Chaudangsi najang; Byangsi najag |

This root seems to be confined to West Himalayish, though WT lcags looks rather similar. ${ }^{15)}$
[26] MOON
Zh. zla-ri; Hoffman compares the
Zh. Suffix to Toto (N. Bengal) tā-ri
and Dhimal (Assam) ta-li;
WT zla-ba; WB la '; Lahu ha-pa
A general TB root, *s-(g)la (STC \#144). Stein (p.254) adds the unnecessary note "Mais cf. Murmi et Magar tārā 'étoile'". But this latter form is an obvious Indic loanword (cf. Thai daaraa 'star', Sanskrit tārā).
[27] MOUNTAIN
Zh. rang, Kanauri ray-tsō
Many other TB languages of Nepal and NE India have cognates with liquid initials, most with 1-: Chepang syā-lung, Mikir ing-long, Khoirao a-long,

Rongmei long-kau, Liangmei lwang-ku; but one Kamarupan language has r: Maram rawong.

Sulong ${ }^{16)}$ and Lushai (Mizo) both provide evidence for a velar prefix: Sulong gran, Lushai tlâng (Lu. tl- regularly < *gl-, thl- < *kl-). We may reconstruct PTB $* \mathrm{~g}-1 / \mathrm{r}(\mathrm{w}) \mathrm{ag}$, or in vertical allofamic display:

| 1 | (w) ay |
| :--- | :--- | :--- |

[28] SEVEN Zh. sni; Kan. tish, stish;
rGyalrong kěsněs;
Jingpho sanit
The Zh. form reflects the general TB root ${ }^{*}$ s-nis (STC \#5). The WT bdun is unique to the Bodic languages. ${ }^{17)}$ Kan. st- is the regular reflex of PTB *sn- (see HEART [45], NOSE [53]).

## [29] SKY Zh. mu 'sky', dmu-zhag <br> 'the sky-soaring one, i.e. Garuda'

STC considers the WT reflex of PTB $*_{r}$-maw 'sky' to be $\boldsymbol{r m u} \boldsymbol{u}$-ba 'fog' (\#488). But more than one root may be involved here: cf. Lahu mò 'cloud' vs. mû 'sky'. Another group of forms points to a variant with final velar stop (cf. STC n. 236, as well as WT rmugs-pa, smug-pa 'dense fog'). ${ }^{18)}$ Apparently the Zh . form has nothing to do with 'fog', having the range of meanings "heaven, sky; area, place, region; space, sphere, universe".

The Zh. form with prefixed d- (dmu-zhag) is paralleled by Old Tibetan mu and dmu 'sky divinities' (Stein, p.247), and in fact looks like a loan from Tibetan. Jäschke (p.423) cites $\mathbf{d m u}, \mathbf{r m u}$ 'a kind of evil demon, rarely mentioned'; rmu-rgod 'wild, angry, passionate'. Stein (p. 254) further mentions Tosu (Qiangic) dme' 'sky' (Stein 254). These forms with prefixed d- justify us in revising the PTB reconstruction to something like $*_{\mathrm{r}} / \mathrm{d}$-mow-k.

SOUND/VOICE Zh. glang ~klang; Lahu (Loloish) khô

I had been unsure of the etymology of this Lahu word, and entertained the possibility that it was a loan from Tai (cf. Shan khoo [Cushing 1881:128]), but also cited the apparent Akha cognate d̀̀-khò (cf. the Lahu compound tô-khô; Matisoff 1988:380). This Zh . form seems to settle the matter in favor of setting up a general PTB root.

Lahu front velars descend from earlier clusters of $*$ velar-plus-r (i.e. Lahu kh- < PLB *kr-, Lahu k- < PLB *gr-), and the usual Akha reflex of *kr- is also a plain velar stop (parallel examples include SIX, CROSSBOW, FOOT). ${ }^{\text {¹ }}$ ) The proto-rhyme ${ }^{*}$-aŋ is regularly reflected as -0 in both Lahu and Akha. We may therefore reconstruct PLB *kraŋ ${ }^{2}$.

However, Zh . distinguishes $\mathbf{k l}$ - and $\mathbf{k r}$-, so perhaps the $\mathbf{- 1 -}$ is more original in TB as a whole. On the other hand, *velar-plus-laterals seem to have developed into palatal affricates in Lahu: 'fall' PTB *gla-y > Lh. ce; 'boil' PTB *glak $æ^{*}$ s-glak > PLB *?glak > Lh. cá. We may therefore posit two allofams, one with -1 - and one with -r-. This seems to be confirmed by WT sgra (if indeed this is cognate to the Zh . form; cf. the other examples of $\mathrm{Zh} .-\mathrm{g}$ / other $-\emptyset$, above II.1). In this case we would have to say that the final nasal was original, and that WT innovated by losing it.

This would leave us with a word-family of the shape:


There is another, unrelated root for 'speech/language', PTB *ka (STC \#9) $>$ WT bka, etc. ${ }^{20)}$
[31] TIGER
Zh. la-ram
The first syllable of the Zh . form looks remarkably like PLB ${ }^{*} \mathrm{k}-\mathrm{la}^{2}$ (cf. WB kyâ, Insc. Bs. klah, Lahu lâ) ultimately a loan from Mon-Khmer, exhibiting the celebrated "velar animal-prefix" (see STC p. 107, n. 301; Matisoff 1969), possibly borrowed into Chinese as well (虎 OC $\chi 0<{ }^{*} \chi l o<*$ khlo; STC p. 178). WT stag is unrelated.

WIND Zh. li, WT rdzi; rlung
It is likely that the Zh . form is cognate to WT rdzi, ult. < PTB *g-lay (STC \#454), since there are several parallel examples (much discussed in the literature $)^{21)}$ of prefixed lateral initials developing before high front vowels into WT fricates (e.g. 'four' WT bźi, WB lê).

That this fricativization is a secondary development within Tibetan is demonstrated by the fact that Zh . agrees better with the rest of TB by preserving the lateral initial.

## IV. Zhangzhung cognates to body-part words,

 in Himalayish and elsewhere[33] BELLY ${ }^{1} \quad$ Zh. khog-tse 'belly, stomach'; WT khog-pa 'trunk of body', Bun. khog 'belly/abdomen'

These forms belong to a complex and widespread TB word-family, with semantic connections to 'hole; hollow object', and including an allofam with final homorganic nasal (cf. WT khon 'inside'): *kok $\nless$ koy. For the second syllable -tse see also FOOT/HAND/MIND [22]-and EAR [38].

A separate Himalayish root underlies Bun. don 'belly' and Pat. gyab-don-je 'stomach'.
[34] BLOOD
Zh. reg-thun, WT khrag ${ }^{22)}$
The general PTB root is *s-hwəy (STC \#222), as represented by Bun. šù, syu; Pat. šuì; Kan. syui, śui.

The Zh. and WT forms, apparently cognate to each other, are virtually isolated in terms of TB as a whole. It has been suggested ${ }^{23)}$ that WT khrag is cognate to Chinese 赤 (Mand. chì 'red'.

If the Zh . and WT forms are truly cognate -- and they look different enough to preclude borrowing -- we must assume that the velar stop was treated as a separable prefix, $<* \mathrm{k}$-rak. This set would also be an important example of a sound correspondence suggested in [8] above.
[35] BORN Zh. srung, WT bkhrung
There are also reflexes of this root (PTB *kruy) in Bodo-Garo (STC \#382).
[36] BODY Zh. rko, rko-dza, rko-phung; WT sku
The Zh . and WT forms are definitely cognate, with the difference in prefix by no means unusual. This is a general TB root (cf. WB kui), with a probable Chinese cognate 驅 (Mand. qū; STC p. 184).
[37] BREATH
Zh. seg, Bun. ša wan-ca (v.),
Pat. sàg lèp-tsi (v.),
Kan. sa-səŋ, sā-söŋ, rin-sā

These forms all apparently derive from PTB *sak (STC \#485); cf. PLB *C-sak (Matisoff 1972, \#123). The Zh. form shows the same development of PTB *-ak to -eg as in BLOOD [34]. The Zh. sad is also glossed 'breath' (Haarh p.42), though a homophonous word, which may or may not represent the same etymon, is glossed 'god'. (See [7] above.)

EAR
Zh. ra-tse, Bun. re-tsi, Pat. rhe-tşa, Kan. roc (Sharma)

Stein (p. 253) cites Lahul re-ţā, re-tsi and Almora rach (the latter very like the Kanauri form, with apocopated second syllable). Haarh (p.26) cites Manchati rhe-tra, Tinan re-tra, Rangkas rach, Darmiya racho, Chaudangsi and Byangsi (Almora) rach. ${ }^{24)}$ All the above are perhaps related via "prefix preemption" to the general PTB root *g/r-na (STC \#453) > WT rna-ba. The second syllables of the West Himalayish compounds seems to represent a common derivational suffix in Zh ., perhaps with diminutive value. ${ }^{25)}$ (See also khri-tse 'hand', khog-tse 'stomach'.) Kan. kānöŋ (Bailey), kanəŋ̣ (Sharma) represents a separate etymon.
[39] EYE
Zh. mig, dmig, yig; WT mig;
Bun. mig; Pat. mik-tsam 'eyebrow', mik-ti 'tears' [but Ti-ra 'eye'];
Kan. mig
A general ST/TB root, with two proto-allofams *(s)-mik $\not \approx *(s)$-myak (STC \#402); these Himalayish forms descend from the former. See the discussion after [13] above.
[40] FAT/OMENTUM
Zh. tshas 'fat';
Bun. tshos 'omentum';
Pat. tshòi 'fat', tsho-so 'omentum';
Kan. tshŏs 'fat, oil, grease'
The Pattani form for 'omentum' (i.e. the fat around the intestines) is dissyllabic; the second syllable -so is the apparent source of the final sibilant in Bunan, Kanauri, and Zhangzhung. These forms with final -s would then stand revealed as secondarily suffixed variants of *tsow (STC \#277). (Cf. also Chepang ?on?-chew? 'omentum', where the final creaky phonation is the likely reflex of earlier *-s.)

An alternative explanation would be that the final vowel in -so merely echoes the vowel of the root, à la Bodo-Garo. In our very limited data, Pattani -so does not recur in other compounds.

There are two other unrelated fricate-initialed roots in this semantic area:

- *tsil (STC, pp. 16, 168-9, 173) > WT tshil 'fat', cognate to the second syllable of Ergong ryja ${ }^{33}{ }^{\circ}{ }^{\circ}$ ts $^{h}{ }^{5}{ }^{53}$ 'omentum';
-*sa:w (STC \#272) 'nice and fat; oily and savory'


## [41] FINGER

Zh. sran
This Zh . form seems to be quite isolated in TB, with the possible exception of the second syllable of Dulong $u I^{55} x_{1 a m}^{53}$ ( $\mathbf{u s}^{55}$ 'hand').

Pat. brem-za ~ bren-za goes with Darang Deng $\mathbf{a}^{31}$ brump $^{55}$, as well as with a number of forms in TB languages of Nepal with homorganic final stop: Khaling, Sunwar, Thulung brep-co.

Neither WT sor nor Bun. bot-si has yet been related to anything else.
FLESH
Zh. mang-thun
Haarh (p. 14) thinks that the first syllable of the Zh. form means 'red', while the second, which he identifies with WT rten, means 'basis', citing several parallel-looking compounds: reg-thun 'blood', she-thun 'mind; heart', shin-tun 'liver'. I would claim rather that the first syllable of Zh . mang-thun descends from a widespread PTB root *s-maŋ 'body; corpse' (not in STC), with cognates throughout the family (but not in WT!), e.g. Padam-Mising shi-mang 'corpse'; Ao and Chang Naga te-maŋ 'body'; Garo mang 'id.'; Newari mha, mho 'corpse'; Chepang hman? 'id.'; Jg. māŋ 'id.'; Qiang rmu 'id.' Thus the Zh. word for 'flesh' would plausibly mean 'body-basis'.

Reflexes of the general PTB root *ša (STC \#181), with the range of meanings 'flesh; meat; animal', abound in other Himalayish languages (e.g. WT sha; Bun. ša; Pat. ša; Kan. ša), but does not seem to be attested in Zh.

## [43] GALL-BLADDER Zh. kha-bad

The first syllable of the Zh . form reflects a widespread PTB root *ka 'bitter' (STC \#8), with a solid Chinese cognate 苦 (Mand. kǔ). Via a semantic association with 'bile/gall', this same root in suffixed form, *ka-n, underlies the Chinese word for 'liver' 肝 (Mand. gān). (STC p. 196).

WT mkhris-pa and Bun. thiks-pa are from a quite separate root, PTB *m-kri-t-s 'gall' (STC \#412).

HEAD

Zh. pu, pur-lang; WT dbu;<br>Bun. pu-ša; Pat. pun-za

These forms are actually from a widespread TB root *d-bu (see STC, p. 117), though the obvious WT cognate dbu was not cited by either Haarh or Stein. The -r in Zh . and -n in Pattani are unexplained combining forms. Other Himalayish forms, cited in Stein (254), include Lahul pu-śa, pun-z, pun-dza; Almora pu-se; Toto pu-dāng.

This is one of the many roots that shows ${ }^{*} \mathrm{p}-\not \approx \mathrm{w}$ - variation in TB (cf. WB ?û 'head'); see Matisoff 1998.
[45] HEART Zh. she, Bun. šo-ša, Pat. šu-ja, Kan. zŭĭă

These forms all appear cognate, though their reconstruction is uncertain. They are unrelated to the general PTB root *s-nin > WT snying, Kan. stiy. (The Kanauri reflex st- of *sn- is regular. Cf. SEVEN [28], NOSE [53].)
[46] INTESTINES
Zh. hri-tsum, Pat. tsi-ri 'small intestine'
The voiceless sonorant in Zh . implies an *s- prefix at an earlier stage. There is a TB root *rey 'cane; thread; cord; string' (STC \#478), which could conceivably be related. There is also a group of Kamarupan forms reconstructable as *ril (not in STC): Lushai ril, Tangkhul ā-kha-ri, ā-ri-rā, Meithei thi-bon-thi-rin, Mru ria.

The Zh. cluster sr- (cf. FINGER [41]) may plausibly be interpreted as reflecting PTB root-initial *s- followed by a rhotic glide; whereas the Zh . voiceless sonorant hr- (see also HORSE, [24] above) seems rather to be the reflex of prefixal $\mathbf{s}$ - before root-initial ${ }^{*}$ r-

Quite a separate root is represented by WT rgyu-ma, Bun. gyu-ma, Kan. gi-ma.
[47] KIDNEY
Zh. rka, rka-dur;
WT mkhal-ma 'kidney',
WT sgal-pa 'small of the back';
Bun. khal-ma; Pat. bu-ka

These forms descend from a general PTB etymon *m-kal 'kidney' $\approx$ *s-gal 'back, loins, groin' (STC \#12). STC (n. 66) speculates that two distinct etyma are involved here, since there is a Tiddim Chin doublet xa:l 'groin' / kal 'kidney'; but I feel this does not exclude the possibility that both forms descend from a single root that took more than one prefix, with concomitant difference in meaning. WB khâ 'loins' lacks the final -1 , as expected (cf. 'frog' PTB *sbal > WB phâ); but since Zh . does have the rhyme -al, the absence of -1 in rka is a problem.

Zh. shin-tun, shin-ni;
WT mchin-pa; Bun. chin-pa;
Pat. tin-ña; Kan. šin
These forms are all straightforward descendants of PTB *m-sin (STC \#234). The Zh. is closest to the Kanauri, for whatever that's worth. (D.D. Sharma records a curious Kanauri form thap, very like Siamese tàp.)

LUNG

Zh. lung, ${ }^{26)}$ Pat. lun-ña;<br>WT glo-ba, Bun. gro-a,<br>E. Wassu (Qiangic) ślu (Stein p.254);<br>Kan. thrub

It is possible that the Zh . and Pat. forms are from a nasal-final variant of the same etymon that underlies the open-syllable allofam represented by the WT, Bunan, and Wassu forms, perhaps $<{ }^{*} \mathrm{~g}-\mathrm{lwa} \mathrm{-} \mathrm{y}$. (For other examples of Zh . $-\mathrm{\eta}$ corresponding to open syllables elsewhere, see above II.1.) ${ }^{27)}$

Kanauri thrub looks related to a large number of TB forms that reconstruct with final *-p, including Lushai tśywap and Garo kasop (STC \#239), as well as to Chinese 肺 (Mand. fèi), with secondary -t in Old Chinese. For extended discussion of this etymology, see Matisoff 1978:113-23.

MOUTH ${ }^{1}$

Zh. khag; WT kha; Kan. (Bailey) kha-köy, (Sharma) kha-kəŋ, khang, kha-khaŋ

It looks as if several interrelated roots are represented here. The Zh . form seems closest to PTB *ka:k (STC \#327) 'fork; something separated'. The open-syllable forms certainly go back to one of the three roots reconstructed as *m-ka $x^{*} \mathrm{~s}-\mathrm{ka}$ (STC \#468, \#469, \#470), with a wide range of meanings extending from 'open; divaricate; spread' to 'opening; mouth; door' to 'jaw; chin'. The nasal-final syllables are perhaps to be related to PTB *kon $¥^{*}$ kok 'hole; hollow' (see BELLY, [33] above).

## [51] MOUTH ${ }^{2}$

Zh. ag-sho; Bun. ag, a?; Pat. ǎ;
Lahul (Stein p. 254) ag
Several additional forms are cited under PTB *ak 'crack; mouth' (STC \#106): WT Rag-tshom 'beard of chin' ("mouth-hair"), Lepcha ók 'to open (as door, mouth)', WB ?ak 'crack open', ? $2-$ Pak 'opening, gap'. This interesting root has so far only been attested in Himalayish and Burmese.

NECK
Zh. khang, Bun. khã-gul
The Zh . and Bun. forms are closely related. There are apparent cognates in many other TB languages, including Ao (Chungli) te-kong 'neck', Sherpa ol-gong 'throat', WT lha-gon 'larynx', Tujia khonstiss 'neck', Sangkong $\mathrm{an}^{33} k h o \eta^{31}$ 'throat', etc., as well as a good Chinese comparandum, OC *kâng (GSR 698a) 'neck; throat'.
[53] NOSE Zh. Igyum-zhi, Bun. gyum-pug, Lahul (Stein, p. 254) gyum

Again there is close cognacy between Zh . and Bunan, but this root is very rare in the context of TB as a whole, and seems confined to W. Himalayish. For the moment we may reconstruct it as $* 1$-gyum.

The general TB root is *s-na (STC \#101) > WT sna, Pat. ña, Kan. sta-kuc. As mentioned above, Kanauri st- < *sn- is regular; cf. SEVEN [28], HEART [45].
[54] RIB

Zh. hrib, WT rtsib-ma, Bun. şib:<br>Pat. rìš-pa, Kan. rib

Although this is hardly to be considered a "basic" bodypart, it is represented by this remarkably stable Himalayish root, which we may reconstruct as *s-rip (not in STC). Pattani shows an apparent dissimilation of the final -p before the labial-initial suffix -pa. ${ }^{28)}$

SCAPULA
Zh. tsog; WT sog, sog-pa
Zh. tsog looks suspiciously like the WT form, and might well be a loan from Tibetan.
[56] SKIN/FUR Zh. pad, bad;
Bun. bat-si; Kan. bod, bod

This is still another example of a root well-attested in West Himalayish (*bat), but so far not elsewhere. (One possible cognate is the second syllable of Muya (Qiangic) $z_{2} \mathrm{ur}^{35} \mathrm{mbe}^{53}$.) It is doubtful whether WT lpags, pags-pa is to be related to this etymon. (See [6] above.)

| [57] TONGUE | Zh. lke-ri, rkyel, skyel; |
| :--- | :--- |
|  | WT lce; Bun. le; Pat. lhe; |
| Kan. le: |  |

As the internal variation within Zh . demonstrates, this is a complicated
 though so far no language besides Zh . has been found to have reflexes with final -1. These roots have semantic associations with LICK and FLAME.

VEIN/ROOT Zh. tsang-ri;
WT rtsa(-ba) ; Bun. tà

These forms reflect PTB *r-sa (STC \#442), with widespread cognates including Lepcha so, Jingpho lasa, Bodo roda $\sim$ rota, Dimasa rada, Chang hau, Lushai tha, Ao teza, Mikir artho.

This set looks like another good example of $\mathrm{Zh} .-\mathrm{\eta}$ corresponding to open syllables in other languages. (See [3] above.) The second syllable -ri is perhaps from *rey 'cane; thread; cord; string' (see [46] above). On the other hand, several other Zh. compounds, including the words for SUN and MOON, have -ri as their second element. (Cf. also seg-ri 'breath'.)

| [59] VESSEL | Zh. snu; |
| :--- | :--- |
|  | WT snod 'vessel', bu-snod 'womb' |

This etymon (< PTB *s-not) means MOUTH or WOMB in other TB languages (STC pp. 144, 145, 150); cf. WB hnut 'mouth; womb', Pwo and Sgaw Karen no? 'mouth'.
V. Where two or more unrelated roots are represented, or where none are cognate to the Zhangzhung form
[60] ARM/HAND Bun. khyut-si; Pat.gù-Rə;
Kan. khyuč (all 'arm');
Hayu go(t) 'hand', Kan. gud 'id.'
These forms reflect STEDT etymon $\sqrt{7} 12 * \mathrm{k} / \mathrm{g}$-(r)ut.

| [61] | BELLY ${ }^{2}$ | Zh. thal, gso-byed; <br> [WT dpyi] [WT grod-pa] |
| :--- | :--- | :--- |
| [62] | CHEEK | Zh. bud; <br> [WT khur-ba] [Pat. car-ni] [Kan. pīn] |

There is a well-attested cognate set (not in STC) in this semantic area, represented by WT hgram-pa; Bun. grom-pa; Ergong nfjam ${ }^{33}$ pa $^{33}$; Muya $n d \varepsilon^{2} e^{33} \mathrm{mbe}^{55}$; Qiang (Mawo) $\gamma d \boldsymbol{z} \boldsymbol{x}$ huŋg 'beard' < PTB *s-gram.

CHEST
Zh. pring-rgyud; [WT brang]
[Bun. kyuk-ţon]; [Pat. kà] [Kan. sţug]
The Zh . form is also glossed as 'group of demons' (WT yi-dwags), a puzzling semantic connection. It is possible that the Zh . first syllable pring- is related to WT brang < PTB *b-raŋ.
[64] CUBIT
Zh. rtsa; [Kan. rin]
A newly recognized Himalayish root is represented by WT khru, Bun. khrui, Pat. krù.

DEAD/DIE
Zh. gyag 'dead', grog 'die'
The general ST/TB root *səy (STC \#232) is reflected by WT shi 'dead', behi 'die'; Bun. ši-ca; Pat. si; Kan. ši, ši-sed, etc. No putative cognates to the Zh. forms have yet been identified.
[66] FINGER, RING Zh. rtsal-gsum;
[WT srin-lag, srin-mdzub]
[Bun. mar bot-si]
The Zh . form looks as if it means "triple power", and the Bunan compound might mean "golden finger" (see [23] above). Since the ring finger is the most awkward digit of the hand, it seems to have received various compensatory honorific appellations in the TB languages, e.g. Lahu là?-no-dà? (lit. "good finger"), Meithei kutning-thau (thau pehaps means "nice and fat" < *sa:w; see [40] above). WT srin-, on the other hand, seems to have pejorative connotations, since it resembles both 'demon' (srin-po) and 'insect' (srin-bu).

FOOT/LEG
Zh. nyung-zug, tshas-phru;
[Pat. kon-za]

The Zh . and Pat. forms have no known cognates. Separate roots are represented by WT rkang-pa, Bun. kaŋ 'leg' < PTB *r-kaŋ; and by Bun. baŋ 'foot', Kan. bay 'foot/leg' < PTB *baŋ.
[68] GULLET/THROAT Zh. sbyib; [WT mid-pa]
[Bun. kog-ma] [Pat. ta:Ru, šây-war]
[Kan. go-laŋ, gŏlön]

None of these forms are relatable to each other, or so far to anything else.
[69] LIP Zh. rma 'upper lip', rme 'lower lip'; [Kan. tunön]

There are no obvious cognates to the Zh . form except perhaps Pattani $\mathrm{a}-\mathrm{mu}, ~ \partial \mathrm{mu}$.

WT mchu 'lip', ya-mchu 'upper lip', ma-mchu 'lower lip' has a number of putative cognates, including Bun. ju 'lip'.
[70] SHOULDER/
UPPER ARM
Zh. dar; [WT dpung-pa]
[Bun. pum-pa]
[Pat. kamar; cf. Nepali kamar 'waist']
None of these forms are cognate to each other.
[71] THIGH
[72] TOOTH Zh. skod; [Kan. gər, gar]

Both the Zh . and Kan. forms seem to be isolated in TB.
A general TB root (*s-wa, STC \#437) is exemplified by WT so : Bun. suà; Pat. tshoa, tsuă; Thebor soa.

## VI. Summary: types of relationships between Zhangzhung forms and TB etyma

We may roughly sort the above sets of forms into five categories, according to the nature of the relationship between the Zh . form and those in other TB languages:
(1) Where the Zh.form reflects a widespread TB root, attested not only in Himalayish

All the numerals are in this category, as well as the following:
BELLY ${ }^{1}$; BORN; BREATH; BURN/SHINE;
ENEMY/WAR; EYE; FIRE; FLESH;
GALL BLADDER; HORSE; KIDNEY; LIVER;
MIND ${ }^{\prime}$; MOON; MOUNTAIN; MOUTH ${ }^{\prime}$;
NAME; PERSON; POISON; SKY; TONGUE;
VEIN/ROOT; VESSEL; WATER; WIND
(2) Where the Zh.form seems isolated in Himalayish, but is cognate to an etymon found elsewhere in TB

BIRD; TIGER; SOUND/VOICE
(3) Where Zh. has Tibetan (and sometimes also other Himalayish) cognates

BLOOD; BODY; BOUNDARY;
GOLD/YELLOW/BUTTER; HEAD;
LUNG; MOUTH ${ }^{2}$; RIB; SCAPULA
(4) Where Zh. has only West Himalayish (but not Tibetan) cognates, or where the Zh. form appears particularly close to W. Himalayish

BARLEY; EAR; FAT/OMENTUM;
HEART; INTESTINE; IRON; NECK;
NOSE; SKIN/FUR
(5) Where the Zh. form has no certain cognates

This includes all the sets from [60] to [72], as well as the following:
FINGER; FISH; FOOT/HAND/MIND ${ }^{2}$

## VII. Conclusion

The very existence of a category like (4) above leads me to agree with all previous students of the question, that Zhangzhung belonged to the West Himalayish branch of TB. Further progress must await more copious data from modern W. Him. languages, but perhaps the basis for a more precise discussion has now been laid.

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## Notes

1) "...the Almora group is quite well defined in the larger W. Him. group, and has many features which form connecting links between Bhotish and W. Himalayish, features which other W. Him. subgroups do not possess" (Shafer 1937: 296).
2) Abbreviations: Bun. Bunan, Him. Himalayish, Kan. Kanauri, Pat. Pattani (Manchati), PLB Proto-Lolo-Burmese, ST SinoTibetan, STC Benedict 1972,TB Tibeto-Burman, $W B$ Written Burmese, WT Written Tibetan, Zh. Zhangzhung.
3) Stein included Classical Newari hnas as an example of a form which (like Almora and Bunan) lacked the s-prefix; but of course the voiceless nasal is an unambiguous reflection of an earlier s- prefix in Newari as well.
4) This was then supplemented by the publication (1966) of one of the texts on which this Dictionary was based, the mDzod-phug and its commentary, which has long parallel passages in Zhangzhung and Tibetan. Stein (1971:214) calls this work a "sorte du manuel du bon organisé".
5) This is rather like the many Yiddish compounds with both Germanic and Hebrew/Slavic elements; or English mixed Greek-and-Latin compounds like tele- + vision; or Japanese jü-bako-yomi compounds, where one of the elements has a Sino-Japanese reading while the other has a kun reading.
6) Stein (p. 253) compares Zh. bing to Pahri pingi and Magar banga, pointing out that these latter look like they should mean FIVE rather than FOUR. He rejects the idea that this might be a confusion related to the Zh. "consecutive-numeral compounds" (see [16] below), since he (implausibly) thinks the consecutive-numeral compounds were "artificial", and based on a misinterpretation of "dissyllabic" (actually sesquisyllabic) forms like those of Pahri and Magar. For a discussion of transvaluation of numerals, see Matisoff 1995:176-8.
7) Stein (p.236) observes that Zh. ting usually means 'blue', and suggests that the Zh . form is borrowed from or related to Tib. hehiy, mchin 'lapis lazuli', mthin 'blue dye; indigo', and that the meaning 'water' is secondary. (He also relates it to Chinese 青 (Mand. qīng) 'blue-green'.) But the fact that there are several parallel examples of $\mathrm{Zh} .-\eta$ / other - $\emptyset$ is against this. WT bchin-bu is glossed as 'a spurious, glass jewel' in Jäschke 169.
8) In Zhangzhung, as in WT and the transcription of other Himalayish languages, the final (voiceless) unreleased stops are conventionally written with the voiced symbols " $-\mathrm{b},-\mathrm{d},-\mathrm{g}$ ". There is never a real contrast in voicing of stops in final position.
9) Stein makes an unfortunate lapsus calami in his discussion of this point, saying that $\mathrm{Zh} . \mathrm{m}$ - corresponds to Tib. n -, instead of vice versa.
10) Forms from Matisoff 1972, \# 145.
11) See Haarh (1968:18, 25), Hoffman (1967:378-9), Stein (1971:253), and Hummel (1974-5:496-7, 517-8; 1981-83:305-6).
12) In view of all these putative cognates, the STC indexes (pp. 200, 211) should not claim that this root is restricted to Bodo-Garo.
13) The WT for 'foot' is rkang-pa (see [67] below).
14) Contra my notes in STC (nn. 102 and 139), the usual WT word rta is quite unrelated to this etymon.
15) See Chang Kun 1972, who sets up a ST root *qhleks that is supposedly cognate to similar etyma in Proto-Tai and Proto-Hmong-Mien.
16) This is a highly aberrant TB language of Arunachal Pradesh. For some discussion of Sulong's relationship to other languages of the region, see J. Sun 1993.
17) See Matisoff 1995, $\S 4.228$ (pp. 201-2).
18) These genuine forms with final velar do NOT include the WB form mûigh, where the "gh" is a spurious product of etymologizing grammarians, influenced by Sanskrit megha 'cloud'.
19) Simple velar initials become postvelar stops in Lahu and velar fricatives in Akha: PLB *k-> Lh. qh-, Ak. x-; PLB *g-> Lh. q-, Ak. $\mathbf{\gamma}-$.
20) The resemblance of this root to German Klang 'sound' is amusing, but entirely fortuitous!
21) Including BOW, FOUR, HEAVY, PENIS. Two more etyma in this group (BOAT, GRANDCHILD) lack WT cognates, but have parallel developments elsewhere. See Matisoff 1969.
22) The Delhi Dictionary also contains a semantically mysterious compound glossed 'blood head' (Zh. reg-pu / WT khrag-mgo). See [44] below.
23) Originally, I believe, by Nicholas C. Bodman.
24) On p. 40, Haarh mistakenly glosses Zhangzhung ra-tse and TB rna-ba as NOSE, a careless error.
25) Haarh (pp. 16-17) distinguishes five different semantic values for tse, tsa, or -tsu in Zh. compounds, one of which appears to be diminutive, and suggests that this might be related to its use in bodypart terms.
26) The resemblance of the Zh . and Pat. forms to English lung is yet another example of the whimsical role that chance plays in linguistic comparison; see also RIB (below [54]).
27) Haarh (p.19) cites an actual Zh . sentence that illustrates four of the "interesting etyma" thus far discussed:
gran - gyi lung ni ne-rud ar
'A heap of fire [11] burns [19] the enemy's [20] lungs [49].'
enemy GEN lung PRT fire heap burn
28) This root is still another curious example of accidental resemblance to English!

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