

How dull can you get?: *buttock* and *heel* in Sino-Tibetan

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As I was deep into the revisions of the “nether regions” of Chapter Four (“The Outer Body”) of Volume I (*Body-part Terminology*) of the *Sino-Tibetan Etymological Dictionary and Thesaurus* (STEDT) recently—i.e., the LOWER BACK / HIPS / BUTTOCKS / LOINS area—the outlines of a new Proto-Tibeto-Burman (PTB) and Proto-Sino-Tibetan (PST) etymon began to emerge. It quickly became apparent that the semantic ramifications of this root extend well beyond the buttocks in the narrow sense. One of the more *interesting* of these associations involves, oxymoronically enough, the concept of *dullness*.

1.0 ***-tun** ✕ ***-tin** BUTTOCK / HEEL / DULL

1.1 BUTTOCK

First, a couple of words for *buttock* in Kamarupan languages:

Meithei **mə̌thun**¹

Abor-Miri **ko-dun**

A highly probable cognate in a Central Loloish language, Lisu, demonstrates that this is a general TB root:

Lisu **khi**²¹ **du**²¹ ‘buttock’

The first syllable here means ‘excrement’ (< PTB ***kləy**: STC #125), though this is no objection to maintaining that the core meaning of the second syllable is ‘buttocks’ and not ‘anus’. The first syllable is merely a metonymic clue to the general anatomical area. (Analogously, the original meaning of the Lahu word **qhê-qhə**, literally “shit-hole”, must obviously have been ‘anus’, but it has long since been generalized to mean ‘buttocks; rear end’, and now even neologistically to refer to the rear of a car or the tail of an airplane.)

¹ In order to avoid cluttering this little paper with references, the sources of most cited forms are not indicated. They are all to be found in the STEDT database.

Jingpho has an obviously related form, but with *-i-* vocalism, and a sibilant prefix (rather than a nasal one as in Meithei):

Jingpho **ṣətɪn** 'buttocks'

This *-u-* ~~ɹ~~ *-i-* alternation is one of the best-attested variational patterns in Tibeto-Burman.²

A cognate immediately suggests itself on the Chinese side: the first syllable of Mandarin **tún-bù** 'buttocks'³:

臀 or **臀** [GSR 429b-c] OC ***d'wən** / MC **d'uən** / [Baxter⁴] OC ***dɔ̃n**

尻 [GSR 429a]⁵ OC ***d'wən** / MC **d'uən** / [Baxter] OC ***dɔ̃n**

Also probably related is this morpheme from the same phonetic series:

殿 [GSR 429d] OC ***tiən** / MC **tien-** / [Baxter] OC ***dɔ̃n**
'rear (of an army)'⁶

If these two Chinese morphemes are indeed allofams, it is interesting to note that Karlgren's reconstructions make it look as if Chinese displays the same back/front (or labialized/palatalized) vowel alternation in this root as does TB; while Baxter, not recognizing prelabialized vowels or a medial **-i-* in Division IV, reconstructs an invariant Old Chinese rhyme for all the characters in this group. Be that as it may, the case for cognacy with the TB forms cited above and below seems strong, both phonologically and semantically.

We have thus set up this root for PTB/PST as STEDT Etymon #3335, with the following pan-allofamic formula (PAF):

² See, e.g. Wolfenden 1929:114-115; Benedict 1972 (STC), pp. 80-84; Matisoff 1978, pp. 41-2.

³ Benedict once suggested to me (p.c., 1977) that this Chinese morpheme was related to PTB ***s-tu** 'vulva' (no doubt with the "collective suffix" ***-n**) [STC, notes 284, 428], though this seems entirely fanciful.

⁴ The notation for reconstructed OC forms used here is slightly different from that of Baxter 1992, reflecting some modifications he made during his visit to the STEDT project (April-May, 1995). The rhyme reconstructed here as ***-ɔ̃n** was ***-ɪn** in Baxter 1992.

⁵ GSR remarks that there are no text examples of this character, but Shuowen defines it as 'buttocks', thus taking it to be the primary form of 429b-c, the character that supplanted it at an early date. The graph seems to have been a drawing of a man sitting on a stool.

⁶ The meaning 'palace; hall' is post-Han.

*	s-	u	
	t		n
	m-	i	

1.2 HEEL

This is by no means the end of the story, however. A compound in Wancho (Northern Naga) leads to a rather unexpected semantic association with another bodypart:

Wancho **chi-dun** 'heel' (**chi** 'foot').

A moment's reflection shows this to be a totally natural association, based on similarity of shape and relative position.⁷ A heel is to the foot what the buttocks are to the trunk of the body:

HEEL : FOOT :: BUTTOCKS : BODY.⁸

Formations similar to the Wancho compound occur with the meaning 'heel' in several branches of TB, where our etymon #3335 appears almost always with **-u-** vocalism; but the key language Jingpho provides evidence also for the variant in **-i-**.

1.21 Forms for 'heel' with **-u-** vocalism

Naga:

Wancho **chi-dun**

Khözha **šú-dò**

Tujia (unclassified):

Tujia **tçi²¹ tʰũ²¹**

Loloish:

Phunoi⁹ **pi³³tun¹¹**

⁷ See the taxonomy of bodypart metonymies in Matisoff 1978 (VSTB), pp. 179-193.

⁸ Although the English word *heel* is primarily used of our lower extremities, it is also applicable by extension to the fleshy rounded base of the palm, the *heel of the hand*. Cf. the discussion of Lahu **làʔ-mě-cu/cwi** ~ **làʔ-ŋě-cu/cwi** 'elbow' ('hand-tail', below, note 19).

⁹ For the first syllable see BEHIND/HEEL (4.0 below).

West Himalayish:

Pattani ¹⁰	<i>thu-ri</i>
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*Tani:*¹¹

Apatani	<i>lu-du</i>
Miri	<i>lu-du</i>
Bengni ¹²	<i>lu-duk</i>
Padam-Mising	<i>le-du</i>
Bokar	<i>li-tu ~ li-du</i>
Idu	<i>bru-du</i>

1.22 The Jingpho forms with *-i-* vocalism

The Jingpho words **ṣətīn** 'buttock' (above) and **ləthīn** 'heel' stand in an obvious allofamic relationship. Furthermore, for once we can plausibly derive each of these two prefixes from a full morphemic prototype: the **ṣə-** of **ṣətīn** certainly looks like a reduction of PTB ***sya** 'flesh; meat; animal' (i.e. "the fleshy **tīn**"); while the **lə-** of **ləthīn** is clearly a reduced form of PTB ***lak** 'hand', which is frequently prefixed to Jingpho nouns referring to the limbs, or verbs referring to action with the hands or feet (i.e. "the **tīn** of the limb").¹³

Several Himalayish languages have words for 'heel' with first syllables that bear a resemblance to this Jingpho form (Kulung and Thulung **din-di-ri**, Khaling **'dhin-di-ri**) but these are immediately suspect as loans from Nepali because of their virtually identical polysyllabic shapes.¹⁴

¹⁰ This is the only form I have found where the reflex of our etymon is not the last syllable of its compound. It is perhaps a loan from Indo-Aryan (see below 1.22).

¹¹ See J. T.-S. Sun 1993.

¹² Most of these Tani forms seem to reflect Proto-Tani ***du**, though the root is not explicitly reconstructed in Sun 1993. Only the Bengni form suggests an original final consonant, which may have been ***dental** rather than ***velar**, since PTani ***-un** regularly became Bengni **-uŋ** (Sun 1993, Section 2.4.2). If the velarity of this Bengni form is probative (i.e. is taken to reflect a genuine Proto-Tani variant with final velar), it should perhaps be assigned to ***r-tuŋ** (2.0 below). The first element in these compounds is nearly identical to the words for *foot* in the various languages, reconstructed by Sun as Proto-Tani ***lə** or ***le**.

¹³ See Matisoff 1969:187; and STC:106-107, and note 308 (p. 110). Note the Jingpho generalization of HAND to LIMB in general. The Jg. word for 'foot; leg' itself (**ləgō**) has this prefix. (A fuller expression for 'heel' is **ləgō ləthīn**, literally "foot-heel"). Among many other examples that could be cited are **ləphà** 'palm', **ləthék** 'pluck; flick with a finger', **ləphūt** 'knee', **ləkhāt** 'kick', etc.

¹⁴ Boyd Michailovsky (p.c. July 1995) feels that the Khaling voiced aspirate is not necessarily a proof of Indo-Aryan origin, since such articulations freely creep into native TB lexical items in

1.3 DULL

Further reflection on the commonalities between buttocks and heels reveals that they share a faceless, blunt, and rounded nature. They are in fact among our dumbest bodyparts, in every sense of the word. That suggests that we examine the Chinese word for *dull*. Sure enough, though it belongs graphically in a different *xiesheng* series from *buttock*, the ordinary Mandarin word for *dull* (**dùn**) has exactly the same reconstruction (except for tone) in OC/MC:

'dull'	鈍	[GSR 427i]	OC *d'wən / MC d'uən- Mandarin dùn
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Both English and Chinese have metaphorically transferred the concept of DULL from the physical realm ("not sharp, as a knife") to the mental ("dull-witted"). Nowadays the notion of BUTT END is itself directly connected to the mental realm in English slang expressions like *butthead*, i.e. "stupid fool". Our word *buttock* is from the same word-family as *butt* (dull end; the larger or thicker end of something):

PIE ***bhau-** 'strike' > PGmc ***bautan** (> Eng. *beat*) ≠ ***būtaz** (> Old Norse **būtr** 'cut-off tree stump, log, block of wood'; > Old English diminutive form **buttuc** 'end, strip of land'¹⁵ > *buttock*).

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In the next two sections (§2.0 and §3.0) we briefly consider two other groups of forms that bear a *prima facie* phonosemantic resemblance to the ***-tin** ≠ ***-tun** etymon, but which for the moment we must consider to be etymologically distinct. Then we discuss two other etyma that figure in compounds for 'heel', one of which seems basically to mean *behind* (§4.0), and the other *tail* (§5.0), before offering some concluding remarks (§6.0).

Nepal. The Pattani form cited above (**thu-ri**), with similar final syllable, may also be a loan from Indo-Aryan. Another Nepali word for 'heel', **kukrucco**, has been borrowed into many Himalayish languages (e.g. Tamang **kurpotco**, Chantyal **karkucca**, Jirel **kurkucāq**, Kham **kurkuca**, Magari and Sunwari **kurkucā**, Thakali **pahle kurkuca**, Yaka **laŋ ku: rku: ca**).

¹⁵ Cf. French *cul* 'butt, rear end, ass' and *cul de sac* 'dead-end road'.

2.0 HEEL/SWELLING

***r-tiŋ** \approx ***r-tuŋ** ?X? ***-tun** \approx ***-tin**

Before the ***-tin** \approx ***-tun** etymon had ever come into focus, I had set up a root for 'heel' of the shape ***r-tiŋ/n** (STEDT Etymon #394), on the basis of Written Tibetan **rtiñ-pa**, **phyi-rtiñ** and Jingpho **lathin** (cited above 1.22). It now seems preferable to take the difference in the positions of articulation of the final consonants more seriously, and to keep the forms in **-n** separate from those in **-ŋ**, especially in view of a possible Chinese cognate to the latter (below 2.23).

There also appears to be a difference in the semantic center of gravity: ***-tun** \approx ***-tin** seems basically to mean 'buttock', and 'heel' only in compounds; whereas the forms with final velars never mean 'buttock', but only 'heel' (perhaps also 'swell; swollen' if we admit the Chinese forms cited below as cognate).

Even among reflexes with final velar nasals, some groups of forms have front vowels, while others have non-front ones, perhaps justifying the positing of **-u-** \approx **-i-** variation here also, yielding a reconstruction like ***r-tiŋ** \approx ***r-tuŋ**.

Some uncertainty therefore remains. This is a classic dilemma when working in a language family where the details of phonological evolution are still poorly understood -- do we lump or do we split? It is often the better part of valor to have recourse to STEDT's "is-it-an-allofam?" symbol "~~?~~":

A ~~?~~ B "is A allofamically related to B?"

2.1 With front vowel

Written Tibetan **rtiñ-pa**, **phyi-rtiñ**

The semantic core of these compounds is **rtiñ** (**-pa** is a meaningless suffix; for **phyi** see 4.0 below). The liquid prefix makes the comparison with Jingpho **lathin** attractive (above 2.0). However, although the Tibetan words for 'hand' (**lag-pa**) and 'foot' (**rkang-pa**) both begin with liquids, neither prefixal **l-** nor **r-** seems to be particularly associated with the limbs in WT (unlike Jingpho, 1.22 above). The prefixes in the two languages could thus have developed independently.

Other Himalayish languages have cognates with similar vocalism:

Tsangla (C. Monpa)	bi-<i>ting</i>-pa
Hayu	kō:-<i>teŋ</i>
Gurung	tŕ-jyuq

2.2 With non-front vowel

It remains to be seen whether the following groups of forms are allofamically related to the above Himalayish set:

2.21 Lolo-Burmese

Hpun	pǎ-<i>t(h)àŋ</i>
Bisu	pǎ-<i>tɔŋ tsíŋ</i>
Ugong	phɔʔ-<i>thýŋ</i>

2.22 Kamarupan forms with affricate initials and velar finals

Miji	lai-<i>cun</i>-k^hu
Geman Deng	pla⁵⁵ <i>dʒoŋ</i>⁵⁵
Darang Deng	grō-ti; <i>gɔŋ</i>⁵³
Ao	nok-la-<i>chang</i>
Garó	ja'-kin-<i>chok</i>

2.23 Chinese *HEEL*/SWOLLEN

There is a Chinese word for 'heel' that has been perfectly homophonous since the Old Chinese period with a lexeme that means 'tumor; swell; swollen'. Both belong to the same *xiesheng* series [GSR #1188]:

踵 [GSR 1188f] 'heel' OC **tʃʷung*/MC **tʃʷjwong*-/Mand. **zhǒng**¹⁶

腫 [GSR 1188e] 'tumor; swell; swollen' OC id./MC. id./Mand. id.

Semantically the connection is highly plausible -- the heel is the fleshy, rounded, "swollen" part of the foot. Phonologically, the OC reconstructed form, with its palatalized initial plus back vowel, incorporates both front and non-front elements, similar to the front- and non-front vowelised allofams suggested for its putative TB cognates.

3.0 HEEL **tsu* ?X? **-tun*

A number of forms in various subgroups of TB seem to reflect an etymon for 'heel' with affricate initial and *-u* vocalism, with little evidence of any final consonant. This morpheme almost always occurs as the last constituent in compounds

Kamarupan:

Angami	phi-<i>tsu</i>
Sema	a-pi-<i>tsɰ̃</i>
Sangtam	<i>thstɰ-za</i> ¹⁷
Milang	bya-<i>jyu</i>
Rongmei	phai-<i>cum</i>
Zeme	mi-pi-me-<i>sui</i>

Himalayish:

Gurung	tĩ-<i>jyuq</i>
Tamang (Risiangku?)	chju:

¹⁶ The OC reconstructions of these morphemes are very similar in the systems of Li Fang Kuei (**tʃʷung*) and Baxter (**tʃʷong*).

¹⁷ *-za* is perhaps a diminutive morpheme from PTB **(d)za* 'child'. For a general discussion of ST diminutive suffixes, see Matisoff 1995.

Loloish:

Lahu

khɿ-mē-cu ~ khɿ-ŋē-cu¹⁸
'heel'

lâʔ-mē-cu ~ lâʔ-ŋē-cu
'elbow'

Yi (Xide)

ɕɿ³³ndzi⁵⁵bɿ²¹-zu³³

Despite the similarity of these forms to the root set up as ***-tun** (above §1) -- and the ease with which one could concoct a pan-allofamic formula like ***t(s)u-N** -- it seems wiser for now to adopt a more conservative course, and set up a separate root ***tsu**. Yet the final nasal in the Rongmei form **phai-cum** causes a final twinge of doubt!

It is unlikely that the Lahu syllable **cu** derives from a prototype with ***u**-plus-final-nasal, since such rhymes give Lahu mid vowels (PLB ***-um** > Lh. **-ɛ**; ***-uŋ** > Lh. **ɔ**; ***-un** > Lh. **ə**).¹⁹ Note that the Lahu formations for 'heel' and 'elbow' are exactly parallel;²⁰ there is also a compound **qhɔ-cu** 'hill; peak', with what looks like the same final element. This suggests that in Lahu at any rate, this lexeme is functioning as a frozen formative in a few compounds that have to do with "rounded objects that come to a sort of point".

4.0 BEHIND/HEEL (***pəy**) and FOOT (***pey**)

Many compounds for 'heel' in TB languages contain a first element with labial stop initial and front vowel, which look at first glance as if they are all related. A closer look reveals that two quite separate etyma are involved: (a) one (provisionally reconstructed as PTB ***pəy**) meaning 'behind; hindpart', as exemplified in Tibetan and other Himalayish languages; (b) the other meaning

¹⁸ For the second syllables, see below §5.0. Each of these forms has a variant with the diminutive palatal suffix **khɿ-mē-cwi ~ khɿ-ŋē-cwi**, **lâʔ-mē-cwi ~ lâʔ-ŋē-cwi**. For an extensive discussion of this diminutive element, see Matisoff 1995. The last syllable of the Zeme form just cited may reflect a similar **-i** suffix.

¹⁹ The Proto-Loloish rhyme ***-un** was quite rare in any case; the only good Lahu cognate of a WB form in **-un** is 'powder': WB **(h)mun** 'be small, minute', **ə(h)mun** 'powder', **əhmun** 'fine dust' / Lahu **mɔ ~ mɔ̃** 'powder'.

²⁰ This seems a bit strange to English speakers, for whom, I would venture to say, the part of the leg that is analogous to the elbow is the *knee*, since they are both joints that articulate the large proximal and distal segments of their respective limbs. It seems that in TB the *knee* is felt rather to be parallel to the *shoulder*.

'foot/leg' (PTB ***pey**), and found principally in Kamarupan (perhaps also in Lolo-Burmese).

4.1 BEHIND/HEEL (PTB ***pəy**)

There is no doubt that the first syllable of one of the Written Tibetan compounds for 'heel' mentioned above (2.0), **phyi-rtiñ**, means 'behind; after; outside' (Jäschke:348-350). An analogous formation is WT **phyi-sder** 'spur of birds' (alongside **sder(-mo)** 'claw; talon'), which literally means "rear claw", not ***"foot-claw"**.²¹ A couple of other Himalayish forms for 'heel' evidently contain the same morpheme:

Tsangla **bi-ting-pa**²²

Tamang (Sahu) **'pai-ta-la** / ' is a tonemark/

4.2 FOOT (***pey**)

An etymon of similar shape meaning 'foot/leg' is attested mostly in Kamarupan (***pey**; STEDT Etymon #343), where it also occurs as the first root element in compounds for 'heel':

	FOOT	HEEL
Angami	phi-zhe	phi-tsu
Zeme	mi-pi-dei	mi-pi-me-sui ²³
Liangmei	cha-phi-ba	phie-uih
Rongmei	phai-pa	phai-cum
Rengma	mpha	pha-ja
Tangkhul	phei	phei-məcha ²⁴

²¹ For a similar association between 'heel' and 'backside', cf. Mandarin **jiǎo-hòu-gēn** 'heel' (**hòu** 'back').

²² This form seems to combine all the morphemes in the two WT compounds **phyi-rtiñ** and **rtiñ-pa**. To my knowledge there does not exist a WT trisyllabic compound ***phyi-rtiñ-pa**.

²³ **mi-** is a prefix which occurs with Zeme (and Mzieme) bodypart terms.

²⁴ Note the similarity between the last elements in the Rengma and Tangkhul forms.

Lakher **phei** **phe-nga-va hmao-thy**

Cf. also Kezhama **phe**, Khoirao **phai**, Chokri **phe³¹ ka³⁵**, Mao **o-phi** (all meaning 'foot'); Khözha **phe-žū** 'foot', **'e-phe** 'leg'; and Sema **a-pi-tsū**, Milang **bya-ju** 'heel'.

4.3 Lolo-Burmese forms

Also possibly reflecting this root for 'foot' are morphemes in the compounds of a couple of LB words for 'heel':

Phunoi **pi³³ tun¹¹** 'heel'

Yi (Xide) **ɕ³³ndzi⁵⁵ bɿ²¹-zu³³** 'heel'

(Cf. also Lisu **hpi⁴-syē⁴** 'leg'.)

This morpheme also possibly underlies the unstressed syllables in these LB compounds for 'heel':

Written Burmese **phə-hnoŋ'** and **phə-kraŋ'**²⁵

Hpun **pǎ-t(h)àŋ**

Bisu **pǎ-təŋ tsɿŋ**

Ugong **phəʔ-thɿŋ**

The conundrums posed here by the existence of two phonologically similar roots in the same general semantic area well illustrate how tricky it is to compare etyma across subgroups of the vast Tibeto-Burman family.

5.0 HEEL and TAIL

Finally, a number of compounds for 'heel' in Loloish, Tujia, and Qiangic languages contain a morpheme which looks allofamically related to the well-

²⁵ WB **hnoŋ'** already means 'back side', so the prefix might well mean FOOT here.

established but vocally irregular PST etymon for 'tail', set up as PTB ***r-may** (STC #282).

Loloish: Proto-Loloish ***ʔmya²** ≈ ***ʔɲya²**

Lahu **khɿ-mē-cu²⁶** ~ **khɿ-ɲē-cu**

Lolopho **tɕhi³³ mæ⁵⁵**

Nasu **ŋhɿ⁵⁵ mi³³**

Nesu **gɿ²¹ ɲɿ³³ me³³**

Tujia: **a²¹ dzi²¹ mwe⁵⁵ k^hwe²¹**

/**a²¹ dzi²¹** means 'foot' /

Qiangic:

Ergong **mɛ³³ səm⁵³** ²⁷

Shixing **kho⁵⁵-mi³³-ɕi³³**

Qiang (Mawo) **rmia -si**

Gyarong **ta-mə-q^ho, ta-mE-k^hu**

Daofu **ma lɬue**

²⁶ The italicized syllable is perfectly homophonous with the root of the Lahu word for 'tail', Lahu **mē-tu**, but this root presents many difficulties in Lolo-Burmese (see GSTC #72). In addition, there is the problem of the variant **-ɲē-**, as well as the fact that the Lahu word for ELBOW is an identical formation, with **lāʔ** 'hand' instead of **khɿ** 'foot': **lāʔ-mē-cu/cwi** ~ **lāʔ-ɲē-cu/cwi** (see note 18). Of course the elbow could be conceived of as the "arm-tail", or the elbow compounds could have been formed by analogy with the heel ones.

²⁷ The last syllables of the Ergong, Shixing, and Mawo forms perhaps derive from another new etymon ***(t)sam**, reflected also by: E. Gyarong **səm-səm** [which syllable is cognate?]; Muya **mo³³so⁵⁵**, Dimasa **ya-sing-so**. Cf. also a couple of forms with stop initials: Chang **yo-tam**, Limbu **lāŋko ki tham-bā**.

Maybe also these Kamarupan syllables:

Tangkhuł	phei m̥-cha
Zeme	mi-pi-me-sui ²⁸

6.0 Summary and semantic flowcharts

This little paper has certainly not covered even the relatively narrow semantic field of buttocks and heels in anything like exhaustive fashion. Several promising new roots have not been mentioned at all, e.g. Proto-Kamarupan ***N-kon̥** 'heel': Lotha *n-khong*, Kom Rem *ke mək^hon̥* (*ke* 'foot'), Moyon *khi-błkhòŋ* (*khi* 'foot').²⁹

Even so, we have discussed a number of new PTB etyma in this area, several of which have solid Chinese cognates, including basic lexemes for *buttock*, *dull*, and *heel*. These etymologies illustrate the importance of discovering valid patterns of semantic associations in ST compounds and word families, as well as the crucial importance of TB data for the proper interpretation of the Chinese lexicon. The problem, as always, is knowing where and when to stop in positing allofamic relationships -- there are so many traps along the way, and so many gaps in the present state of our knowledge!

This whole discussion may be viewed as a preview of the sort of food for thought that will be provided once Volume I of *STEDT* has appeared. New etymological discoveries are being made all the time, but it sometimes seems as if every "solution" carries within it the seeds of new problems. As the proverb says, *Oyf itlixn terets ken men gefinen a naye kashe* ("For every answer one can find a new question").

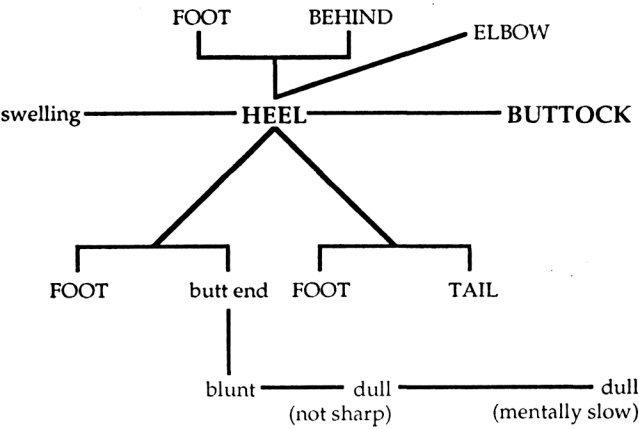
The following "metastatic flowchart" summarizes the semantic interrelationships touched on in this paper.³⁰

²⁸ As noted above (n. 21), the first syllable of the Zeme form is a general body-part prefix, ultimately derived from ***mi-n** 'person'. Cf. the similar prefix in Magari, and STC, p. 119.

²⁹ Perhaps Bunan (West Himalayish) *kon-tsi* also belongs in this set.

³⁰ The conventions for interpreting these charts are explained in Matisoff 1978, *passim*. In principle it should be possible eventually to map all of semantic space. Such an enterprise might be called the Human Semome Project.

Figure 1. Metastatic Flowchart



REFERENCES

- Baxter, William H. *A Handbook of Old Chinese Phonology*. Trends in Linguistics, Studies and Monographs #64. Berlin and New York: Mouton de Gruyter.
- Benedict, Paul K. 1972. *Sino-Tibetan: a Conspectus*. Contributing Editor, James A. Matisoff. Cambridge: University Press. ("STC")
- Jäschke, H.A. 1881. *A Tibetan-English Dictionary*. Reprinted 1958. London: Routledge and Kegan Paul Ltd.
- Karlgren, Bernhard. 1957. *Grammata Serica Recensa*. Bulletin of the Museum of Far Eastern Antiquities #29. Stockholm. ("GSR")
- Matisoff, James A. 1978. *Variational Semantics in Tibeto-Burman: the "organic" approach to linguistic comparison*. Philadelphia: Institute for the Study of Human Issues. ("VSTB")
- _____. 1985. "God and the Sino-Tibetan copula, with some good news concerning selected Tibeto-Burman rhymes." *Journal of Asian and African Studies* (Tokyo), No. 29, pp. 1-81. ("GSTC")
- _____. 1995. "Sino-Tibetan palatal suffixes revisited." In Yoshio Nishi, James A. Matisoff, and Yasuhiko Nagano, eds., *New Horizons in Tibeto-Burman Morphosyntax*, pp. 35-91. Osaka: Senri Ethnological Studies #39.
- Sun, Jackson Tianshin. 1993. *An Historical-Comparative Study of the Tani (Mirish) Branch of Tibeto-Burman*. U.C. Berkeley dissertation.
- Wolfenden, Stuart N. 1929. *Outlines of Tibeto-Burman Linguistic Morphology*. London.

