Stable Roots in Sino-Tibetan/Tibeto-Burman

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(Herakleitos, fl. ca. 500 B.C.E.)

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1. Basic vs. Stable Roots

In several recent talks, Martha Ratliff (2006a, 2006b) has developed the notion of “lexical stability”, especially with respect to the Hmong-Mien (HM) family, contrasting it with the more familiar concept of “basic vocabulary”. For her, basic words are those that speakers of all languages need to have, thus a universal concept; stable words, on the other hand, are those which “all languages in a particular family share”, i.e. a non-universal subset of the lexicon (2000b: 1). This permits a four-way classification of words:

[-basic, -stable], [-basic, +stable], [+basic, -stable], [+basic, +stable].

In the HM context, Ratliff offers examples of each class (ibid.):

(a) [-basic, -stable] BUTTERFLY; JOKE; OR; THUMB
(b) [-basic, +stable] SILVER; HUNDRED; LIQUOR; TARO
(c) [+basic, -stable] MOUNTAIN; HEAD; GIVE; NOT
(d) [+basic, +stable] FLOWER; DIE; HAIR; FIRE

The first class, [-basic, -stable], is of limited historical interest. The second class, [-basic, +stable], is historically ambiguous: all four examples above are loanwords from Chinese into Proto-HM. The fourth class, [+basic, +stable], is “of greatest value in evaluating competing claims for distant relationship” (ibid.). As we shall see, it is the third class, [+basic, -stable] which is especially useful for establishing isoglosses among subgroups of a language family.

This interesting approach raises a large number of theoretical issues, which I propose to discuss from the ST/TB point of view, although not particularly with respect to competing claims of distant genetic relationship.

2. Theoretical Issues Concerning the Notion of Stability

2.1 Strict vs. Loose Definition of Stability

“All languages in a particular family” is perhaps too strict when applied to Tibeto-Burman, a family with many more languages and much greater time-depth than Hmong-Mien. Even if we use Paul K. Benedict’s concept of the five criterial TB languages (Written Tibetan (WT), Written Burmese (WB), Jingpho (=Kachin), Lushai (=Mizo), and Garo), the extremely pervasive etymon for BLOOD (pTB *s-hyway) would have to be disqualified, because of WT khrag. Absolute stability—i.e., attestation in every single subgroup and isolate in the family—is hard to find. I am here using a looser concept: a continuum of stability, or “stability quotient”.

2.2 Pervasiveness vs. Ultimate Genetic Affiliation

Just because an etymon is attested throughout a particular language family, this does not necessarily guarantee that it ultimately originated in that family (cf. the Hmong-Mien examples of [-basic, +stable] etyma above). With respect to ST, the root *k-læŋ ‘eagle; hawk; vulture; bird of prey’ is attested virtually everywhere in TB, as well as in Chinese, although it seems clearly to be a loan from Mon-Khmer (STC #333 and n. 225; HPTB: 263, 393, 521). Similarly
with *kyan ‘ginger’, ultimately probably from Austronesian, thence into Chinese, then into TB; also *dzyi *gyi ‘ride an animal’ (old loan from Chinese into TB), and many others.8)

2.3 Stability Differences across Semantic Fields
It is a fundamental tenet of glottochronological theory that basic (i.e. universally necessary) vocabulary is the most resistant to replacement through time. This basic vocabulary consists mostly of nominals belonging to a relative handful of semantic fields, especially body parts, numerals, pronouns, animals, and natural objects, and (to a much lesser extent) active and stative verbs/adjectives. The famous 100- and 200-item Swadesh lists were compiled according to this idea; but they have been criticized by many linguists (including me) because of their typological and areal bias in favor of European-type languages.9)

2.4 Stability Differences within the Same Semantic Field
While it is certainly true that basic vocabulary belongs overwhelmingly to the semantic fields just mentioned, there are great differences in stability even within the same “basic” field. Ratliff (2006b: 1) gives several examples from Hmong-Mien:

<table>
<thead>
<tr>
<th>stable</th>
<th>non-stable</th>
<th>stable</th>
<th>non-stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRUIT</td>
<td>TREE</td>
<td>WAIST</td>
<td>NECK</td>
</tr>
<tr>
<td>TAIL</td>
<td>FOOT</td>
<td>CHICKEN</td>
<td>PIG</td>
</tr>
<tr>
<td>BODY LOUSE</td>
<td>HEAD LOUSE</td>
<td>SNAKE</td>
<td>RAT</td>
</tr>
<tr>
<td>WING</td>
<td>ARM</td>
<td>BOY</td>
<td>GIRL</td>
</tr>
<tr>
<td>HAIR</td>
<td>HEAD</td>
<td>RICE</td>
<td>MEAT</td>
</tr>
</tbody>
</table>

It is this unpredictability which motivates Ratliff’s idea that lexical stability is family-specific, and thus of use in evaluating competing claims of remote relationship.

During the discussion period after Ratliff 2006b, the Austronesianist Malcolm Ross observed that the most stable word in Austronesian is NIT (i.e. louse-egg), doubtless because grooming is very important in AN culture.10) By way of contrast, the pTB root *s-row ‘nit’ is relatively sparsely attested, so far identified only in Central and Western Tibetan sro-ma, Jingpho tsi?-rū ‘nit’ (tsi? ‘louse’), as well as in Lushai (Mizo) hrū, and several rGyalrongic forms supplied by J. Sun (Puxi jv₃w, Caodeng ndʐu?, Muerzong sra?).11)

In the pTB lexicon, as in every proto-language, some etyma in a given semantic field are vastly more widespread and stable than others. Thus, among body parts, the root *s-mik *s-myak EYE is attested practically everywhere, without significant competition from other etyma with the same meaning; while a body part like SKIN has more than a dozen competing etyma, many of them quite widespread.12)

There also seem to be family-specific differences in the richness of particular semantic fields. We would expect more words for different kinds of snow and ice in Nootka than in Arabic; and more words for the trappings of a camel in Arabic than in Nootka. The Austronesians, maritime folk and world-class celestial navigators, have highly developed vocabularies for species of fish and stars, neither one of which is a preoccupation of the TB lexicon.
2.5 Semantic Variation and Change
Should we downgrade a root’s stability quotient if it has undergone significant semantic changes in various subgroups, even though its phonological cognacy is not in doubt? In Chin languages the root *m-luŋ is well attested, but there is much vacillation between the meanings of HEART and LIVER, and both of these body parts are extensively used in psycho-collocations.

2.6 Phonological Variation within an Etymon
Some roots show a great deal of allofamic variation, e.g. SUCK / KISS / BREAST (*dz(y)oŋp ≠ *dz(y)aw ≠ *dzup ≠ *dzyuk ≠ *dzyut, etc.); FIRE / WHITE / SHINY (*bWar ≠ *pWar ≠ *hwal ≠ *hwar ≠ *war ≠ *uru, etc.); TONGUE / LICK (*l(y)ə ≠ *lay ≠ *ley ≠ *lyak ≠ lyam); BODY HAIR / FUR / FEATHER (*mil ≠ *mul ≠ *myal, etc.). For our purposes this should not affect stability judgments; i.e., as long ANY allofam of a particular etymon is present in a certain language or subgroup, the etymon as a whole is deemed to be attested there.

2.7 Phonological Disparities among Reflexes of the Same Etymon
Stability judgments, to be valid, presuppose that cognate identifications are correct, which is not always easy to determine by simple eyeballing, especially in the case of obscure and poorly documented languages. Forms in two languages which appear very similar on the surface might well descend from different etyma, or might be loans one from the other, or both might be loans from a common source. On the other hand, forms which look very different can sometimes be shown to be perfectly cognate on the basis of evidence from parallel examples, e.g. Latin duo, Armenian erku ‘two’ < PIE *dwo-; WT bʒi, Lahu 5 ‘four’ < pTB *b-lyə.

The phonological complexity of an etymon does not seem to play a role in its stability. Among the most stable roots in ST/TB we find *ka BITTER, a very simple CV syllable; as well as *s-hyway BLOOD, a complex sesquisyllable.

How similar the various reflexes of a given etymon appear is partly a function of the fact that certain phonemes seem particularly prone to change through time, while others show much greater diachronic conservatism. The reflexes of the Indo-European etymon *mūs- ‘mouse’ are quite similar throughout the family, since nasals and /s/ seem particularly resistant to change in the IE family.

2.8 Morphosemantic Types of Etyma in Sino-Tibetan/Tibeto-Burman
(a) Concepts for which there is an overwhelmingly pervasive single etymon: DIE, DOG, DREAM, EYE, NAME.
(b) Concepts for which there are several apparent roots, none of them very well attested: BAT, CAT, FONTANELLE, SEMEN.
(c) Concepts for which there are several well-attested competing etyma: CHICKEN, FEAR, HEAD, SKIN, WATER. It is roots of this type, roughly equivalent to Ratliff’s [+basic, -stable] category, which are especially useful for establishing isoglosses, and thus for subgrouping.
3. Prima Facie Candidates for High Degree of Stability, Sorted by Semantic Area

A preliminary scan of the Index of Roots reconstructed in *HPTB* (pp. 639–675) suggests a “long list” of 73 roots with the following meanings:

(A) Body parts (16)
- BLOOD; BONE; BREAST/MILK/SUCK; EAR; EYE; GALL; HAIR (body); HAND;
- JOINT; LIVER; NOSE; SNOT; SPLEEN; TAIL; TONGUE; TOOTH

(B) Animals (9)
- ANIMAL; BEAR; CATTLE; DOG; DOVE; FISH; LOUSE; PIG; SNAKE

(C) Numerals (9)
- TWO; THREE; FOUR; FIVE; SIX; SEVEN; EIGHT; NINE; HUNDRED

(D) Natural objects and units of time (7)
- DAY (of 24 hours); FIRE; MOON; SMOKE; SUN/DAY; WIND; YEAR

(E) People and habitation (7)
- CHILD/SON; FATHER; GRANDFATHER; HOUSE; HUSBAND/MALE; HUMAN/
  PERSON; NAME

(F) Plants and ingestibles (5)
- BAMBOO; FRUIT; GARLIC/ONION; MEDICINE; POISON

(G) Pronouns (3)
- 1st PERSON; 2nd PERSON; 3rd PERSON/WHO

(H) Verbs (14)
- BENT/CROOKED; BITTER; DIE; DREAM; EAT; GIVE; ILL; KILL; KNOW; LICK;
- OPEN; POUR/SPILL; STAND; STEAL

(I) Abstract (3)
- COPULA; NEGATIVE; NEGATIVE IMPERATIVE

3.1 Weeding Down the Long List to Get a “Short List”

Which etyma “make the cut”? I must confess I have cheated a bit here! Since I am comparing forms from 12 languages and proto-languages (see Section IV, below), I would like to avoid having to input $73 \times 12 = 976$ forms to do a proper calculation. I will thus “cut to the chase” and select what I guess would be the top 47 etyma. Just as in an academic personnel action, I do feel obliged to explain why the unsuccessful candidates have been dropped from the list:

3.1.1 Body parts (10)

- BLOOD; BONE; EAR; EYE; HAIR (body)/FUR/FEATHER; HAND; NOSE; TAIL;
- TONGUE; TOOTH

*Rejects:*
- BREAST/MILK/SUCK: too complicated; numerous allofams
- GALL: not pervasive enough (henceforth “NPE”)
- JOINT: NPE
- LIVER: much interchange with HEART and verbal roots like BITTER and SOUR.
3.1.2 Animals (5)
ANIMAL; DOG; FISH; PIG; SNAKE

Note that DOG and CAT are totally different in distribution. DOG is one of the most stable roots, but there is no widespread root for CAT at all (many of the forms seem imitative of the sound cats make).

Rejects:
BEAR: NPE
CATTLE: NPE; the principal etymon (*nwa ≠ *ŋwa) is a Wanderwort
DOVE: NPE
LOUSE: there are two competing and phonologically similar roots, *sar and *śrik
PIG: NPE

3.1.3 Numerals (6)
THREE; FOUR; FIVE; SIX; EIGHT; HUNDRED

FOUR is one of the most stable numerals, despite the taboo against FOUR in the Sinosphere, because of its phonological similarity to DIE. The most stable numerals in TB seem in fact to be FOUR and EIGHT. THREE, FIVE, SIX, NINE are also quite stable. In general, numerals are the most stable of all semantic fields (despite the fact that they are sometimes borrowed wholesale, as in Thai and Japanese). However, in order to avoid weighting my calculations too much in this direction, I am not including NINE in the short list.

Rejects:
ONE and TEN: there are several competing roots for each. TEN is actually a classifier in many languages.
SEVEN: this numeral (*s-nis) seems to be a derivative of TWO (*g-nis), pointing perhaps to an ancient quinquegesimal system (found to this day, e.g. in Khmer). WT has an aberrant form bdun.

3.1.4 Natural objects and units of time (5)
DAY (of 24 hours); FIRE; MOON; SMOKE; SUN/DAYTIME

Rejects:
WIND: NPE
YEAR: NPE

3.1.5 People and habitation (6)
CHILD/SON; GRANDFATHER/ELDER BROTHER; HOUSE; HUSBAND/MALE;
MAN/PERSON; NAME

NAME is one of the most stable roots in TB/ST. One’s name is often viewed almost as inti-
mately as the parts of one’s body. 21)

Rejects:
FATHER and MOTHER are rejected on universal grounds: i.e. they tend to be similar in most human languages.

3.1.6 Plants and ingestibles (2)
MEDICINE/JUICE/PAINT; POISON

There is a moderately widespread root *tsay for the concept of “efficacious substance”, which covers a variety of thick substances that produce a dramatic or salutary effect (medicine, paint, ink, dye, cleaning fluid, lubricating oil, etc.). 22)

POISON (*duk ≠ *tuk) may also be considered a kind of ingestible, an “anti-food” as it were. The Lahu reflex tɔ? sometimes means ‘be revolted by food, as a pregnant woman’. 23) I’ve always been interested in the fact that 毒, the Chinese character for POISON, contains the element 母 MOTHER, though this is perhaps a rather late (post-Han) graphic variant. 24)

Rejects:
BAMBOO: NPE
FRUIT: NPE
GARLIC/ONION: NPE

3.1.7 Pronouns (2)
1st PERSON; 2nd PERSON

The roots for 1st (*ŋa-y) and 2nd (*naŋ) person pronouns are very widespread. Note that they both feature nasal phonemes, which are particularly well preserved in ST/TB, as perhaps universally in human languages. 25) In general, 1st and 2nd person pronouns are more conservative than 3rd, because the latter are often originally demonstrative, or mean things like ‘other’. 26) There does exist a quite pervasive root *su, sometimes with the meaning ‘remote 3rd person; others’; when prefixed it often means ‘who’.

3.1.8 Verbs (8)
BITTER; DIE; DREAM; EAT; ILL; KILL; LICK; STEAL

Rejects:
There are excellent PTB/PST etyma meaning BENT/CROOKED, GIVE, KNOW, OPEN, POUR/SPILL, STAND, but they are not sufficiently pervasive to make the cut.

3.1.9 Abstract (3)
COPULA; NEGATIVE; NEGATIVE IMPERATIVE

These concepts are all accepted because of their grammatical importance, although roots with these meanings rank the lowest of all etyma in the short list.
4. Criterial Languages Used for Stability Judgments

Ideally one should use meso-reconstructions for the various well-established subgroups of TB when these are available, plus data from those languages which have not yet been definitely assigned to a subgroup. Yet several well-documented clusters of related languages lack reconstructed meso-languages (e.g. Proto-Rai,27) Proto-rGyalrongic, Proto-Qiangic, Proto-Jingpho-Nungish, Proto-Baic28). A number of languages stand somewhat outside well-established subgroups: Lepcha and Newar(i) in the Himalayas; Meithei, Mikir, and Mru in the Kuki-Chin area and Arakan; Naxi and Jinuo29) in the Lolo-Burmese area; the extinct Xixia (Tangut), now thought to be close to the Qiangic group; and the problematic Tujia and Sulung, spoken on opposite fringes of the vast TB area.

As a practical matter, however, it has seemed best to constrain this study for the moment to a relatively small sample of twelve languages. First of all, I will rely on the five criterial TB languages used in \textit{STC},30) with certain modifications:

1. Written Tibetan (WT)
2. Written Burmese (WB), but including cognates from Lahu (Central Loloish)
3. Jingpho (Jg.)
4. Proto-Kuki-Chin (VanBik 2006), instead of STC’s Lushai (Mizo)
5. Proto-Northern Naga (French 1983), instead of STC’s Garo31)

Three more meso-languages are included:

7. Proto-Tani (J. Sun 1993a, 1993b)
8. Proto-Karenic (Jones 1961; banished by STC from TB proper)

In addition to these, as a sort of control I will use data from three languages/subgroups that have seemed aberrant from the viewpoint of general TB:

9. Baic (largely ignored by STC, where it is referred to as “Minchia”)
10. Tujia (not mentioned in STC; spoken in Hubei, Hunan, Sichuan, Guizhou)32)
11. Sulung (not mentioned in STC; spoken in far NE India and adjacent areas of Tibet)

Finally, in order to give this study a Sino-Tibetan dimension, one must certainly include:

12. Old Chinese33)

5. Etyma Sets in the Criterial Languages34)

5.1 Body Parts (10)
BLOOD; BONE; EAR; EYE; HAIR (body); HAND; NOSE; TAIL; TONGUE; TOOTH
blood

pTB *s-hywə̀y
WT [khrag]
WB swə̀; Lh. ʂi
Jg. ʂai
pKB *thiì
pNN *C-həy
pKar *swiŋ
pTmc *[ŋka:]
pTani *viː
Bai suə(35) khrag
Tuj. [sə5̃]
Sul. hui53
OC *xiivet 血

bone

pTB *s-rə̀n ≈ *m-rə̀n ≈ *g-rə̀n
WT rū̀; Lh. ʏò
Jg. ɲū̀
pKB *rush
pNN [*raŋ]
pKar *xwiŋ (pPwo); xi (pSgaw)
pTmc (Tamang -ru in compounds)
pTani [*loŋ]
Bai kuŋ3ticala(35)
Tuj. lu5gka55; kə21kə21
Sul. a31za55
OC *kwə̀t 骨

ear

pTB *r-na
WT rna-ba
WB nə̀; Lh. nə̀-pə̀
Jg. nə̀
pKB *nə̀, *hna
pNN *nə̀
pKar *nə̀
pTmc *[ŋna; *Anak
pTani *nə̀-ruŋ
Bai mə̄35kə33
Tuj. [tsa21pu]
Sul. *[a31kə53]
OC *niə̀ 耳

eye

pTB *s-mə̀k ≈ *s-myə̀k
WT mig
WB myə̀k; Lh. mə̀ŋ
Jg. myiŋ
pKB *mik
pNN *mek
pKar *meŋ (Pho); *meŋ (Sgaw)
pTmc *ução:
pTani *mik
Bai miŋ42 (D, J)
Tuj. [lo5̃pu55]
Sul. [a31ɡuk55]
OC *mjə̀k 目

hair (body)/fur/feather

pTB *mə̀l ≈ *mə̀l
WT [spu]
WB mwə̀; Lh. mu
Jg. mə̀n
pKB *mə́l, *hμə́l
pNN *mə́l
pKar *[chrə́ŋə́]
pTmc *[bμə́wi
pTani *mə́t
Bai ma21 (D, J), mie21 (B)
Tuj. [sta5̃ka55]
Sul. mun5538
OC *mə̀g 毛 ≈ *mjə̀r 眉 ‘eyebrow’ OC *ɡə̀k 翼 ‘wing’39

hand

pTB *l(y)ə́k ≈ *dyə́k; *[k(r)ut35]
WT lag-pə̀
WB lak; Lh. làŋ
Jg. ɬə̀tə̀
pKB [*kut, *khə́t]
pNN *gə́k
pKar *[cə́u]
pTmc *Apə́ja;
pTani *lə́k
Bai [su33 (D, J), ʂə́33 (B)]
Tuj. [a34də̃55, tə̃35]37
Sul. [ɡi55]
OC *ɡə́k 翼 ‘wing’39
5.2 Animals (5)

ANIMAL; DOG; FISH; PIG; SNAKE

animal/meat/flesh

**pTB**  
*[sy ]-n*

**WT**  
*ša*

**WB**  
*sâ; Lh. šā*

**Jg.**  
*šän ‘meat’*

**pKC**  
*sbāa*

**pNN**  
*[ŋam ‘game’; *mey ‘meat’]*

**pKar**  
*[n áq]*

**pTmc**  
*sbja*

**pTani**  
*[dun ‘meat’]*

**Bai**  
*[ke42 (D), ke21 (J), qa21 (B)]*

**pTB**  
*ka’ay*

**WT**  
*khyi*

**WB**  
*khwè; Lh. phi*

**Jg.**  
*gùi*

**pKC**  
*?uy*

**pNN**  
*kuy*

**pKar**  
*thwìq*

**pTmc**  
*kì:

**pTani**  
*kuá33 (D); khuá33 (J); qhò33 (B)*

**Bai**  
*kuá33 (D); khuá33 (J); qhò33 (B)*

**tail**

**pTB**  
*may ≈ *mey ≈ *mi*

**WT**  
*[rça-ma; mjúg-ma]*

**WB**  
?vamrì; Lh. mē-tu

**Jg.**  
*nàí*

**pKC**  
*may*

**pNN**  
*C-mey*

**pKar**  
*mjé’*

**pTmc**  
*Abme:

**pTani**  
*mjo ~ *me

**Bai**  
*mì22tu38 (D); gv31tʃ55 (J)

**Tuj.**  
*[le31pʃù55; lia31tu55]*

**Sul.**  
*[a31nu33 kuàŋ55]*

**OC**  
*[miwər 尾]*

**tongue**

**pTB**  
*l(y)a ≈ *lay ≈ *ley*

**WT**  
*lè; [ljags]*

**WB**  
*hlya; Lh. ha-tē

**Jg.**  
*šìn-lêt-šìn-lài*

**pKC**  
*lay*

**pNN**  
*C-ley*

**pKar**  
*Pwo phle, Sgaw pale

**pTmc**  
*BBle:

**pTani**  
*ryo

**Bai**  
*tse31phi31 (D), te42 (B)

**Tuj.**  
*zì31la55; dzi31la2141

**Sul.**  
*[a31lye55]

**OC**  
[/see LICK/

**nose**

**pTB**  
*g-na*

**WT**  
*sna; Lh. nā-qhî*

**WB**  
*hsà*

**Jg.**  
*[ladi]*

**pKC**  
*hnaar*

**pNN**  
*na-kuŋ*

**pKar**  
*nà (pP); *nà (pS)

**pTmc**  
*hna-, *hna:

**pTani**  
*ŋa-pum/-buŋ

**Bai**  
*ŋ21-khv³³

**Tuj.**  
*[ku31gi35du35]*

**Sul.**  
*[pauk33vaŋ55]*

**OC**  
*[dzu34 ‘self’]* [42)

**tooth**

**pTB**  
*swa; *džway*

**WT**  
*so

**WB**  
*swå; [WB cway, Lahu ci]

**Jg.**  
*wà

**pKC**  
*haa*

**pNN**  
*swa

**pKar**  
*Bassein Pho òwà

**pTmc**  
*A(w)a

**pTani**  
*fi:

**Bai**  
*ti33pa44 (J); [tsi33pa44 (D, B)]

**Tuj.**  
*sí35sí55; sí33 ta35

**Sul.**  
*[kur31tuŋ]

**OC**  
*[ŋà 牙]*
Tuj.  si\textsuperscript{21}
Sul.  ----- 
OC  *ṣiēn 身 ‘body’

**fish**

pTB *g(y)a
WT nya
WB ना; Lh. ना
Jg. ना
pKC *ŋaa, *ŋaa
pNN *ŋya
pKar jäq (pPho); नात; (pSgaw)
pTmc (Tamang 4\textsuperscript{tar}ga)
pTani *ŋo
Bai नी\textsuperscript{55} (D, J); नु\textsuperscript{55} (J)
Tuj. [so\textsuperscript{55}]
Sul. [ka\textsuperscript{55}ṭuṇ\textsuperscript{53}]
OC *ŋjo 魚

**snake/vermin**

pTB *s-b-ruļ
WT sbrul
WB mrwe; Lh. वी
Jg. lapū
pKC *ruul
pNN *?-baw
pKar *rú’
pTmc (Tamang ruļ ‘gros serpent’)
pTani *buu
Bai khv\textsuperscript{33} (D, J); fv\textsuperscript{33} (B)
Tuj. wo\textsuperscript{55}
Sul. puḥ\textsuperscript{53}
OC [*d’ja 蛇]

5.3 Numerals (6)
THREE; FOUR; FIVE; SIX; EIGHT; HUNDRED

**three**

pTB *g-sum
WT gsum
WB sūm; Lh. ʂēʔ, ʂē
Jg. māsūm
pKC *p-thum
pNN *C-sum

**four**

pTB *b-lay
WT bži
WB lē; Lh. ṭē
Jg. məlī
pKC *p-lii
pNN *bəlai
pKar ən (pPho); ə (pSgaw)  

five

pTB *b-ŋa ∞ *l-ŋa  

pTB *d-k-ruk

six

pTB *b-ŋa ∞ *l-ŋa

pTB *d-k-ruk

eight

pTB *b-r-ŋat ∞ *b-r-ŋat

pTB *b-r-gya

hundred

pTB *b-r-ŋat ∞ *b-r-ŋat

pTB *b-r-gya

DAY (of 24 hours); FIRE; MOON/MONTH; SMOKE; SUN/DAYTIME

day (24 hours)/spend the night  

fire

pTB *r(y)ak  

pTB *mey; [*b-r ∞ *par]

WT žag  

WT me

5.4 Natural Objects and Units of Time (5)

Bai se^55 (D), sũ^55 (B, J) [< Chinese] Bai [ci^44 (D, J), si^44 (B)] < Chinese

Tuj. se^55 Tuj. zie^55

Sul. [yu̯k^55] Sul. vɔ̅í^55

OC *səm 三  

OC *sjad 四 (< *s-lay JAM) 45)

five

pTB *b-ŋa ∞ *l-ŋa  

pTB *d-k-ruk

six

pTB *b-ŋa ∞ *l-ŋa

pTB *d-k-ruk

eight

pTB *b-r-ŋat ∞ *b-r-ŋat

pTB *b-r-gya

hundred

pTB *b-r-ŋat ∞ *b-r-ŋat

pTB *b-r-gya

DAY (of 24 hours); FIRE; MOON/MONTH; SMOKE; SUN/DAYTIME

day (24 hours)/spend the night  

fire

pTB *r(y)ak  

pTB *mey; [*b-r ∞ *par]

WT žag  

WT me
Stable Roots in Sino-Tibetan/Tibeto-Burman

WB  rak; Lh. há
Jg.  yá?
pKC  *riak
pNN  *C-ya ‘night’
pKar  -----
pTmc  -----
pTani  *jo ‘night’ [*lo ‘day’]
Bai  jo^{35} xu^{3} (D) ‘night’
Tuj.  -----  
Sul.  [a^{31} fi^{53} ‘day’; a^{31} jet^{53} ‘night’]
OC  *sjok

---

moon/month

pTB  *s-la × *g-la
WT  zla-ba
WB  la ‘Lh. ha-pa
Jg.  štā
pKC  *khlaa
pNN  *gla
pKar  *lā’ (pPho); lá (pSgaw)
pTmc  *lhla
pTani  *po-lo
Bai  [mi^{54} nu^{44} (J)]
Tuj.  su^{21} su^{21}; lo^{53} ci^{55} do^{35}
Sul.  [a^{3} ni^{33} bo^{55}]
OC  *[njwat]

---

sun/daytime

pTB  *nay
WT  nyi-ma
WB  ne ‘sun’ × ne ‘day’; Lh. ni ‘day’, mü-ni ‘sun’
Jg.  ni ‘day’, [jān ‘sun’]
pKC  *nii
pNN  *C-ni
pKar  ni’
pTmc  (Tamang *ni-ra)
pTani  *nî ‘sun’
Bai  ni^{44} (D, B)
Tuj.  ni^{55}, ne^{35}
Sul.  kə^{53} ri^{55} ‘sun’
OC  *niét
5.5 People and habitation (6)

CHILD/SON; GRANDFATHER/ELDER BROTHER; HOUSE; HUSBAND/MALE; MAN/PERSON; NAME

<table>
<thead>
<tr>
<th>child/son</th>
<th>grandfather/elder brother</th>
</tr>
</thead>
<tbody>
<tr>
<td>pTB</td>
<td>*tsa vs. *za</td>
</tr>
<tr>
<td>WT</td>
<td>tsha-bo ‘grandchild’</td>
</tr>
<tr>
<td>WB</td>
<td>sâ; Lh. yâ</td>
</tr>
<tr>
<td>Jg.</td>
<td>šà</td>
</tr>
<tr>
<td>pKC</td>
<td>*bâa</td>
</tr>
<tr>
<td>pNN</td>
<td>*C-dza ‘son’</td>
</tr>
<tr>
<td>pKar</td>
<td>phóq-ðâq (pPho; pSgaw)</td>
</tr>
<tr>
<td>pTmc</td>
<td>*A-dza</td>
</tr>
<tr>
<td>pTani</td>
<td>*bîo</td>
</tr>
<tr>
<td>Bai</td>
<td>tsi³42ni²¹ (D), tsi³³ (J), tsi³⁴ (B)</td>
</tr>
<tr>
<td>Tuj.</td>
<td>sa³⁵be²¹; po⁶⁵t²¹</td>
</tr>
<tr>
<td>Sul.</td>
<td>a³⁵dziaŋ⁵⁵</td>
</tr>
<tr>
<td>OC</td>
<td>*tsjaŋ vs. *dzjaŋ 子</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>house</th>
<th>husband/male</th>
</tr>
</thead>
<tbody>
<tr>
<td>pTB</td>
<td>*k-yîm vs. *k-yum</td>
</tr>
<tr>
<td>WT</td>
<td>khîym</td>
</tr>
<tr>
<td>WB</td>
<td>?îm; Lh. yê</td>
</tr>
<tr>
<td>Jg.</td>
<td>[ű-tâ]³¹</td>
</tr>
<tr>
<td>pKC</td>
<td>*?îm</td>
</tr>
<tr>
<td>pNN</td>
<td>*kium</td>
</tr>
<tr>
<td>pKar</td>
<td>*yêqî (pPho)</td>
</tr>
<tr>
<td>pTmc</td>
<td>*A-dim</td>
</tr>
<tr>
<td>pTani</td>
<td>-----</td>
</tr>
<tr>
<td>Bai</td>
<td>xo³¹ (D, B, J)</td>
</tr>
<tr>
<td>Tuj.</td>
<td>tsha³⁵, tsha³³</td>
</tr>
<tr>
<td>Sul.</td>
<td>tcauk³³</td>
</tr>
<tr>
<td>OC</td>
<td>*kjoŋ 宮 ‘palace; temple’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>human/person</th>
<th>name</th>
</tr>
</thead>
<tbody>
<tr>
<td>pTB</td>
<td>*r-mî(y)</td>
</tr>
<tr>
<td>WT</td>
<td>mi</td>
</tr>
<tr>
<td>WB</td>
<td>[lu]</td>
</tr>
<tr>
<td>Jg.</td>
<td>[mašà]</td>
</tr>
<tr>
<td>pKC</td>
<td>*mi</td>
</tr>
<tr>
<td>pNN</td>
<td>*C-may</td>
</tr>
<tr>
<td>pKar</td>
<td>*[p'ya (pSgaw)]</td>
</tr>
<tr>
<td>pTmc</td>
<td>*A-mî(t)</td>
</tr>
<tr>
<td>pTani</td>
<td>*mi</td>
</tr>
</tbody>
</table>
5.6 Plants and Ingestibles (2)
MEDICINE; POISON

<table>
<thead>
<tr>
<th>Language</th>
<th>Medicine/paint/juice</th>
<th>Poison</th>
</tr>
</thead>
<tbody>
<tr>
<td>pTB</td>
<td>*tsay; [*s-man]</td>
<td>*duk ≠ *tuk</td>
</tr>
<tr>
<td>WT</td>
<td>rtsi; [sman]</td>
<td>dug</td>
</tr>
<tr>
<td>WB</td>
<td>chê; Lh. nāʔ-chê</td>
<td>tauk; Lh. tāʔ</td>
</tr>
<tr>
<td>Jg.</td>
<td>tsi ‘medicine’, mātsi ‘yeast’</td>
<td>[tūk, ǹ-tūk, niq-tūk]</td>
</tr>
<tr>
<td>pKC</td>
<td>(Lai sii)</td>
<td>pKC</td>
</tr>
<tr>
<td>pNN</td>
<td>-----</td>
<td>pNN</td>
</tr>
<tr>
<td>pKar</td>
<td>kaθi, təθi (Sgaw)</td>
<td>pKar</td>
</tr>
<tr>
<td>pTmc</td>
<td>[*Ahman]</td>
<td>pTmc</td>
</tr>
<tr>
<td>pTani</td>
<td>-----</td>
<td>pTani</td>
</tr>
<tr>
<td>Bai</td>
<td>[jo44 (&lt; Chinese)]</td>
<td>Bai</td>
</tr>
<tr>
<td>Tuj.</td>
<td>se21; se35</td>
<td>Tuj.</td>
</tr>
<tr>
<td>Sul.</td>
<td>cə33min55</td>
<td>Sul.</td>
</tr>
<tr>
<td>OC</td>
<td>*ts'a[et 漆 ‘varnish’</td>
<td>OC</td>
</tr>
</tbody>
</table>

5.7 Pronouns (2)

### 1st person

<table>
<thead>
<tr>
<th>Language</th>
<th>1st person</th>
<th>2nd person</th>
</tr>
</thead>
<tbody>
<tr>
<td>pTB</td>
<td>*ŋa-y; [*ka-y]</td>
<td>*naŋ ≠ *na</td>
</tr>
<tr>
<td>WT</td>
<td>ŋa; ńed</td>
<td>WT</td>
</tr>
<tr>
<td>WB</td>
<td>ŋa; Lh. ňā</td>
<td>WB</td>
</tr>
<tr>
<td>Jg.</td>
<td>ňāi</td>
<td>Jg.</td>
</tr>
<tr>
<td>pKC</td>
<td>[*kay-ma?]</td>
<td>pKC</td>
</tr>
<tr>
<td>pNN</td>
<td>*ŋa</td>
<td>pNN</td>
</tr>
<tr>
<td>pKar</td>
<td>jā’ (pPho); jaʔ (pSgaw)</td>
<td>pKar</td>
</tr>
<tr>
<td>pTmc</td>
<td>*Abŋa</td>
<td>pTmc</td>
</tr>
<tr>
<td>pTani</td>
<td>*ŋo</td>
<td>pTani</td>
</tr>
<tr>
<td>Bai</td>
<td>ŋo31 (D, J), ŋo42 (B)</td>
<td>Bai</td>
</tr>
<tr>
<td>Tuj.</td>
<td>ňa33; ŋo32</td>
<td>Tuj.</td>
</tr>
<tr>
<td>Sul.</td>
<td>goh55</td>
<td>Sul.</td>
</tr>
<tr>
<td>OC</td>
<td>*ŋā 我 ≠ *ŋo 吾</td>
<td>OC</td>
</tr>
</tbody>
</table>

5.8 Verbs (8)
BITTER; DIE; DREAM; EAT; ILL; KILL; LICK; STEAL
<table>
<thead>
<tr>
<th>Word</th>
<th>pTB</th>
<th>WT</th>
<th>WB</th>
<th>Jg.</th>
<th>pKC</th>
<th>pNN</th>
<th>pKar</th>
<th>pTmc</th>
<th>pTani</th>
<th>Bai</th>
<th>Tuj.</th>
<th>Sul.</th>
<th>OC</th>
</tr>
</thead>
<tbody>
<tr>
<td>bitter</td>
<td>*ka-n</td>
<td>kha-ba</td>
<td>khā; Lh. qhā</td>
<td>khā</td>
<td>*khaa</td>
<td>*C-kha</td>
<td>*khāq</td>
<td>*kam</td>
<td>*ka-</td>
<td>[ku33 (D, J), qhū43 (B)]</td>
<td>kē45; kē45tsi45tsi45</td>
<td>[a3dziu43]</td>
<td>*k'o- ‘bitter’</td>
</tr>
<tr>
<td>die</td>
<td>*say</td>
<td>šī-ba</td>
<td>se; Lh. ʂī</td>
<td>sī</td>
<td>*thii</td>
<td>*səy</td>
<td>*sīh</td>
<td>*sì</td>
<td>*sí</td>
<td>ēi45 (D, B, J)</td>
<td>se45; se45</td>
<td>ji45</td>
<td>-</td>
</tr>
<tr>
<td>dream</td>
<td>*dzya</td>
<td>za-ba</td>
<td>cā; Lh. cā</td>
<td>šá</td>
<td>*dza</td>
<td>[?]ämq</td>
<td>*Atsa(</td>
<td>[*do]</td>
<td>梯</td>
<td>jiu44 (D, J), ji55 (B)</td>
<td>yē45; [ka45]</td>
<td>tēih53</td>
<td>*muiŋ 夢</td>
</tr>
<tr>
<td>ill</td>
<td>*g-sat</td>
<td>gsod-pa, bsad</td>
<td>sat</td>
<td>sàt</td>
<td>*that</td>
<td>*ʔ-sot</td>
<td>maṭi (Pho); màṭi (PSgaw)</td>
<td>*Asat</td>
<td>梯</td>
<td>*man</td>
<td>梯</td>
<td>tēih53</td>
<td>OC</td>
</tr>
<tr>
<td>kill</td>
<td>*na ≈ *nan ≈ *nat</td>
<td>na-ba; nad-pa</td>
<td>na, ʔana; Lh. nà</td>
<td>ʔnà</td>
<td>*naa; *nat</td>
<td>[*C-daik; *dzat]</td>
<td>[*chāh]</td>
<td>*na, *Anak, *A/bna(</td>
<td>*ki</td>
<td>[pea (D), sō31 (J), sō42 (B)]</td>
<td>[pə44] (&lt; Chinese)</td>
<td>wapt</td>
<td>梯</td>
</tr>
<tr>
<td>eat</td>
<td>*r-maŋ</td>
<td>rmaŋ-lam; rmi-lam</td>
<td>rmaŋ-māŋ</td>
<td>(Lu. fa?)</td>
<td>*ma?</td>
<td>*maŋ, ʔmaŋ</td>
<td>*jup-maŋ</td>
<td>mu53 (D), mu42 (B); mu31 (J)</td>
<td>Bai</td>
<td>Tuj.</td>
<td>Sul.</td>
<td>OC</td>
<td>梯</td>
</tr>
<tr>
<td>eat</td>
<td>*naa</td>
<td>na-ba; nad-pa</td>
<td>na, ʔana; Lh. nà</td>
<td>ʔnà</td>
<td>*naa; *nat</td>
<td>[*C-daik; *dzat]</td>
<td>[*chāh]</td>
<td>*na, *Anak, *A/bna(</td>
<td>*ki</td>
<td>[pea (D), sō31 (J), sō42 (B)]</td>
<td>[pə44] (&lt; Chinese)</td>
<td>wapt</td>
<td>梯</td>
</tr>
<tr>
<td>ill</td>
<td>*g-sat</td>
<td>gsod-pa, bsad</td>
<td>sat</td>
<td>sàt</td>
<td>*that</td>
<td>*ʔ-sot</td>
<td>maṭi (Pho); màṭi (PSgaw)</td>
<td>*Asat</td>
<td>梯</td>
<td>*man</td>
<td>梯</td>
<td>tēih53</td>
<td>OC</td>
</tr>
</tbody>
</table>
lick/tongue

\( \text{pTB} \quad *m\-lyak; \quad *s\-lyam \quad \text{pTB} \quad *r\-kəw \)

\( \text{WT} \quad ldag-pa \quad \text{‘lick’}, \quad ljags \quad \text{‘tongue’} \quad \text{WT} \quad \text{rku-ba} \)

\( \text{WB} \quad \text{lyak; Lh. lēʔ, lē} \quad \text{WB} \quad \text{lāgū (v.); lāgūt ‘thief’} \)

\( \text{Jg.} \quad \text{mətāʔ} \quad \text{Jg.} \quad (\text{Lai fîir-\text{khūu} ‘thief’})^{61} \)

\( \text{pKC} \quad *liak \quad \text{pKC} \quad (\text{Lai fîir-khûu ‘thief’})^{61} \)

\( \text{pNN} \quad *C\-glay \quad \text{pNN} \quad *C\-kəw \)

\( \text{pKar} \quad léʔ (\text{pSgaw}); \quad lēnq (\text{pPho}) \quad \text{pKar} \quad *\-yûq (\text{pPho}); \quad *\-yûʔ (\text{pSgaw}) \)

\( \text{pTmc} \quad *\-lem \quad \text{pTmc} \quad *\-kə; \quad *\-bək \- u; \quad *\-kəp \- u; \quad *\-kəut \)

\( \text{pTani} \quad *\-ryak \quad \text{pTani} \quad [*\-pjəŋ] \)

\( \text{Bai} \quad t\text{sì}^{33} (\text{D, J}), \text{dzē}^{33} jî^{55} (\text{B}) \quad \text{Bai} \quad [\text{t}^{31} (\text{D, J}), \text{die}^{42} (\text{B})] \)

\( \text{Tuj.} \quad \text{lo}^{31}; \quad \text{la}^{55} \quad \text{Tuj.} \quad \text{ya}^{35}; \quad \text{ʔe}^{55} \)

\( \text{Sul.} \quad \text{via}^{55}; \text{lau}^{55} \quad \text{Sul.} \quad \text{yah}^{55} \)

\( \text{OC} \quad *\text{d}\text{jat} \quad \text{舌 (< g’ljak)} \quad \supset *\text{g’}j\text{ak} \quad \text{‘tongue’} \quad \text{OC} \quad *\text{k’u} \quad \text{寇} \)

5.9 Abstract (3)
COPULA; NEGATIVE; NEGATIVE IMPERATIVE

copula^{62)}

\( \text{pTB} \quad *\text{way} \equiv *\text{ray} \quad \text{pTB} \quad *\text{ma} \)

\( \text{WT} \quad \text{red-pa, re-pa} \quad \text{WT} \quad \text{ma, mi} \)

\( \text{WB} \quad \text{kai} \equiv \text{rai}; \quad \text{Lh. ve} \equiv \text{yì} \quad \text{WB} \quad \text{ma; Lh. mā} \)

\( \text{Jg.} \quad ?\text{ai}; \quad \text{rái} \quad \text{Jg.} \quad ñ- \)

\( \text{pKC} \quad (\text{Lu. e ~ ve}) \quad \text{pKC} \quad [*\text{law}] \)

\( \text{pNN} \quad *\text{ley} \quad \text{pNN} \quad ----- \)

\( \text{pKar} \quad ?\-q (\text{pPho}); \quad *\-dāʔ (\text{pSgaw}) \quad 63) \quad \text{pKar} \quad [*\-cēʔ(\text{pPho});\quad *\-tāʔ-\text{bāʔ} (\text{pSgaw})] \)

\( \text{pTmc} \quad [\text{Tamang ‘mu; ‘hin}] \quad \text{pTmc} \quad (\text{Tamang ‘a}) \)

\( \text{pTani} \quad ----- \quad \text{pTani} \quad ----- \)

\( \text{Bai} \quad [\text{tso}^{33} (\text{D}), \text{tsu}^{33} (\text{J}), \text{dō}^{33} (\text{B})] \quad \text{Bai} \quad \text{mu}^{33} (\text{D}); \text{ju}^{35}, \text{a}^{21} (\text{J}), \text{a}^{42} (\text{B}) \)

\( \text{Tuj.} \quad \text{siu}^{58}; \text{si}^{13} \quad [\text{< Chinese}] \quad \text{Tuj.} \quad \text{ma}^{55} \)

\( \text{Sul.} \quad \text{wi}^{58} \quad \text{Sul.} \quad \text{ba}^{31} \)

\( \text{OC} \quad *\text{djwər}^{64}) \quad \text{惟維唯隹} \quad \text{OC} \quad *\text{mjwə}, \text{etc.}^{65} \)

negative imperative

\( \text{pTB} \quad *\text{ta} \equiv *\text{da}^{66}) \quad \text{pTmc} \quad (\text{Tamang ‘ta}) \)

\( \text{WT} \quad [\text{ma} + \text{Vimp/Prt}] \quad \text{pTani} \quad ----- \quad \text{pTani} \quad ----- \)

\( \text{WB} \quad (\text{Lahu tā}) \quad \text{Bai} \quad [\text{ŋəu}^{44} \text{pu}^{31} (\text{D}), \text{miu}^{44} (\text{J}), \text{a}^{42} \text{nu}^{44} (\text{B})] \)

\( \text{Jg.} \quad [\text{khûm}] \quad \text{Tuj.} \quad \text{tha}^{55}; \text{ta}^{21} \)

\( \text{pKC} \quad ----- \quad \text{Sul.} \quad [\text{ba}^{31} \ldots \text{bo}^{33}]^{67} \)

\( \text{pNN} \quad ----- \quad \text{OC} /\text{see note 65}/ \)

\( \text{pKar} \quad ----- \quad \text{OC} /\text{see note 65}/ \)
6. Tabulation of Results

My original goal was to come up with two lists: a “short list” of the 10 most stable ST/TB roots, and a “long list” of the top 20. Yet there are serious methodological problems which make any such effort rather futile:

(a) According to my scoring system, a root gets one point for each language or language-group where it has a reflex, unless the form seems like a loan from a related language. Yet the 12 sources of data I have used are quite incommensurate, comprising six reconstructed proto-languages (pKC, pNN, pKar, pTmc, pTani, OC), 3 well-attested individual TB languages (WT, WB, Jg.), and 3 other TB languages that have seemed atypical and on which the data is much less abundant.

(b) Cognate identifications are not always certain, especially in the case of the latter three languages, but also as far as Chinese/TB comparisons are concerned.

(c) Roots may overlap and conflate with each other. In the present data-set, TONGUE and LICK are intertwined in a complex way that makes it preferable to treat the two items as one, perhaps inflating its/their ranking a bit.

However, as long as it is taken with a grain of salt, there seems no harm in listing the etyma which seem to have scored the highest:

CHILD/SON *tsa ≠ *za
DIE *say NAME *pʷa
DOG *kʷay SIX *d-k-ruk
DREAM *r-maŋ SNAKE *s-b-rul
EIGHT *b-r-gyat TONGUE/LICK *l(y)a ≠ *lay ≠ *ley ≠ *m-lyak
FIVE *b/l-ŋa YOU *naŋ

The most widespread etyma of the above twelve, attested solidly in all of our criterial languages, are DIE, DREAM, and NAME. Perhaps contributing to the stability of DREAM and NAME is the fact that they both contain two nasals, a class of sounds that are typically conservative through time.

Yet it is hard to see what cultural conclusions can be drawn from all this, since about 25 of the other items on the long list have nearly identical scores with this group of twelve!

Even though a precise ranking of the most stable ST/TB roots seems to be a quixotic enterprise, there is no doubt that if most of the approximately 50 roots treated in this paper are found to have plausible reflexes in a given language, that language is certain to belong to the ST family.

7. Interesting Sulung Developments — Side Benefit of This Study

An examination of the Sulung data in Li Daqin (2004) has revealed some interesting facts:
(1) Denasalization: In 6 out of 9 cases so far noted, pTB *nasals > Sulung voiced stops.68)

<table>
<thead>
<tr>
<th>pTB</th>
<th>Sulung</th>
</tr>
</thead>
<tbody>
<tr>
<td>'fire'</td>
<td>*mey bæ55</td>
</tr>
<tr>
<td>'person'</td>
<td>*r-mi(y) bi55</td>
</tr>
<tr>
<td>'son-in-law'</td>
<td>*s-mak a31bua53</td>
</tr>
<tr>
<td>'dream'</td>
<td>*r-maŋ (PLB *s-mak) maŋ3bək</td>
</tr>
<tr>
<td>'negative'</td>
<td>*ma ba31</td>
</tr>
<tr>
<td>'1st person'</td>
<td>*ṇa goh55</td>
</tr>
</tbody>
</table>

Exceptions:
- ‘corpse’ | *s-maŋ çaŋ55muaŋ55 |
- ‘smell’ | *m/s-nam naŋ55 |
- ‘cooked/ripe’ | *s-min a31min55 |

Note that in these exceptional cases, the root ends with a nasal as well as beginning with one. It is perhaps this extra nasal element which has blocked the denasalization of the initial. The Sulung form for DREAM evidently descends from the stop-final allofam that is also found in Lolo-Burmese (e.g., WB ?ip-mak, Lahu yìʔ-mâʔ).

(2) Brightening

Sulung seems to show “brightening” of PTB *-a > -i, as is characteristic of the Qiangic languages, e.g., ‘eat’ Sul. têh53 < *dzya, though this is perhaps due to the influence of the medial palatal.69)

(3) Degree of “aberrancy”

Due to the fact that several Sulung numerals (especially çun55 ‘one’, ūuk55 ‘three’, lie55 ‘seven’, ḅuŋ3ja53 ‘nine’) seem quite bizarre from the general TB viewpoint, I had previously viewed Sulung as a more aberrant language than it really is. In fact, in spite of Sulung’s relatively poor score with respect to the “stable” vocabulary presented above, there are many clear Sulung reflexes of well-established TB roots, of all degrees of “basicness”. It is perhaps worthwhile to list these as an Appendix, below.

8. Conclusion

Stable roots may have their uses for certain purposes, but you’ve got to look at entire vocabularies for nuanced judgments of linguistic relationships.
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN</td>
<td>Austronesian</td>
</tr>
<tr>
<td>B.</td>
<td>Bijiang dialect of Bai</td>
</tr>
<tr>
<td>CALMSEA</td>
<td>Culturally Appropriate Lexicostatistical Model for Southeast Asia (VSTB 283–296)</td>
</tr>
<tr>
<td>Ch.</td>
<td>Chinese</td>
</tr>
<tr>
<td>D.</td>
<td>Dali dialect of Bai</td>
</tr>
<tr>
<td>GSR</td>
<td>Karlgren (1957)</td>
</tr>
<tr>
<td>HM</td>
<td>Hmong-Mien (=Miao-Yao)</td>
</tr>
<tr>
<td>HPTB</td>
<td>Matisoff (2003)</td>
</tr>
<tr>
<td>ICSTLL</td>
<td>International Conference on Sino-Tibetan Languages and Linguistics</td>
</tr>
<tr>
<td>IE</td>
<td>Indo-European</td>
</tr>
<tr>
<td>J.</td>
<td>Jianchuan dialect of Bai</td>
</tr>
<tr>
<td>Jg.</td>
<td>Jingpho (=Kachin)</td>
</tr>
<tr>
<td>LB</td>
<td>Lolo-Burmese</td>
</tr>
<tr>
<td>Lh.</td>
<td>Lahu</td>
</tr>
<tr>
<td>LTBA</td>
<td><em>Linguistics of the Tibeto-Burman Area</em></td>
</tr>
<tr>
<td>NPE</td>
<td>not pervasive enough</td>
</tr>
<tr>
<td>OC</td>
<td>Old Chinese (=Karlgren's Archaic Chinese)</td>
</tr>
<tr>
<td>pHM</td>
<td>Proto-Hmong-Mien</td>
</tr>
<tr>
<td>PIE</td>
<td>Proto-Indo-European</td>
</tr>
<tr>
<td>pKar</td>
<td>Proto-Karen (Jones 1961)</td>
</tr>
<tr>
<td>PKB</td>
<td>Paul K. Benedict</td>
</tr>
<tr>
<td>pKC</td>
<td>Proto-Kuki-Chin (VanBik 2006)</td>
</tr>
<tr>
<td>pNN</td>
<td>Proto-Northern Naga (French 1983)</td>
</tr>
<tr>
<td>pPho</td>
<td>Proto-Pho Karen (Jones 1961)</td>
</tr>
<tr>
<td>pSgaw</td>
<td>Proto-Sgaw Karen (Jones 1961)</td>
</tr>
<tr>
<td>pTani</td>
<td>Proto-Tani (J. T. Sun 1993)</td>
</tr>
<tr>
<td>pTmc</td>
<td>Proto-Tamangic (Mazaudon 1993–94)</td>
</tr>
<tr>
<td>pTB</td>
<td>Proto-Tibeto-Burman</td>
</tr>
<tr>
<td>RTQ</td>
<td>replacement tolerance quotient (VSTB 95ff.)</td>
</tr>
<tr>
<td>SAE</td>
<td>Standard Average European (Whorf 1956)</td>
</tr>
<tr>
<td>ST</td>
<td>Sino-Tibetan</td>
</tr>
<tr>
<td>STC</td>
<td>Benedict 1972</td>
</tr>
<tr>
<td>Sul.</td>
<td>Sulung</td>
</tr>
<tr>
<td>TB</td>
<td>Tibeto-Burman</td>
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<tr>
<td>TBL</td>
<td>Dai <em>et al.</em> (1992)</td>
</tr>
<tr>
<td>Tmc</td>
<td>Tamangic</td>
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<tr>
<td>Tuj.</td>
<td>Tujia</td>
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<tr>
<td>VSTB</td>
<td>Matisoff (1978)</td>
</tr>
<tr>
<td>WB</td>
<td>Written Burmese</td>
</tr>
<tr>
<td>WT</td>
<td>Written Tibetan</td>
</tr>
<tr>
<td>YL</td>
<td>Yellow Lahu</td>
</tr>
</tbody>
</table>
## Appendix: More Sulung Reflexes of Well-established PTB Roots

<table>
<thead>
<tr>
<th>PTB</th>
<th>Sulung</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>'arrows'</td>
<td>*m-da</td>
<td>mi³³taʔ⁵⁵</td>
</tr>
<tr>
<td>'axe'</td>
<td>*pʰa</td>
<td>ba³³</td>
</tr>
<tr>
<td>'bee'</td>
<td>*kwɔy + gwɔy</td>
<td>ku⁴⁴nuai⁵⁵</td>
</tr>
<tr>
<td>'bent/crooked'</td>
<td>*guk + kuk</td>
<td>a⁴⁴gok⁵⁵</td>
</tr>
<tr>
<td>'bird'</td>
<td>*daw + dow</td>
<td>pu⁴⁴tu⁵⁵</td>
</tr>
<tr>
<td>'bow'</td>
<td>*d-lay</td>
<td>lei⁵⁵</td>
</tr>
<tr>
<td>'buy'</td>
<td>*ywar</td>
<td>ve⁴⁴⁵</td>
</tr>
<tr>
<td>'cattle/livestock'</td>
<td>*dzay</td>
<td>či⁵⁵</td>
</tr>
</tbody>
</table>

/HPTB: 209–211/

| 'chew'       | *m-ŋɡya        | we⁵⁵          | Lisu gua³³, Lh. bê, Naxi ngu³³     |
| 'child/nephew/descendant' | *m-du + *m-tu | a³³du⁵⁵    | Lh. dû, WB tu, Nung phadu             |
| 'cloud'      | *dim           | kə³³tu⁴⁴      | WB tim                           |
| 'corpse'     | *s-smaŋ         | çə³³muŋ⁵⁵      | Chepang hmaŋ, Newar si-mha, Jg. māŋ       |
| 'fart'       | *woy            | væ⁴⁴³           | rGyalrong wu, Lh. vī, Hakai Lái vīl            |

/HPTB: 229/

| 'fly'        | *byam           | ple⁵⁵          | Jg. pyën, WB pyam, Lh. pō                  |
| 'go/come/walk' | *s-wa         | wu⁵⁵          | WB swā ‘go’, Newari wa ‘come’             |
| 'good/well/property' | *m-di(y)ak + *lyakŋ    | tak       | Lh. dāʔ, WT legs-pa + legs-pa       |
| 'head'       | *m/s-gaw        | a³³kau⁵⁵      | WT mgo, Dimasa saku                 |
| 'heart'      | *m-luŋ          | a³³luŋ⁵⁵      | Tangkhul muŋŋ, Mizo luŋ             |

/This root shows final nasal/stop variation; cf. ‘roast’./

| 'heavy'      | *s-lay          | a³³lei⁵⁵       | WT lṭisi-ba, WB lēe, Lh. hū              |
| 'knife-edge/sharpen/whetstone' | *wi   | tche³³⁵          | Lh. ā-thā-vī                  |

/Not in STC or HPTB./

| 'laugh'      | *r(y)a(y)       | yue⁵⁵          | WB ray, Lh. ṭī                          |
| 'leech'      | *k-ri-wat       | ku³³va⁵⁵      | WB krwat, Lh. vē                         |
| 'marrow'     | *r-kliŋ         | a³³huŋ⁵³       | Mikir ar-klēŋ, Mizo thliŋ             |
| 'medicine'   | *s-man          | či³³min⁵⁵     | WT sman, Pumi ŋû                      |

/The Suluŋ form may be a loan from Tibetan./

| 'mortar'     | *(t)s(u)m       | aŋ⁵⁵dzə³¹       | Jg. thūm, WB chum, Lh. čh             |
| 'mountain'   | *g(r)aŋ         | graŋ³³      | WT sgaŋ, Lh. qhɔ, OC *kánŋ 閩    |

/The medial -r- is not yet attested elsewhere./

| 'navel'      | *laj + *s-tay   | a³³luŋ⁵⁵       | Mizo lāi, WT lṭe-ba, Jg. ṣoɗái        |
| 'near'       | *naj + *s-ney   | a³³nei³³⁵⁵    | WT nye-ba, WB nî, Mizo hnaɪ             |
| 'otter'      | *sram + *ram    | kua³³ba³³raŋ⁵⁵ | WT sram, Lh. yī-šo-lo                   |

/Suluŋ kua⁵⁵ and Lahu yī mean ‘water’./

| 'outer covering' | *kok + *kwɔik | (a¹³)ka³³⁵⁵⁸⁸ | Lh. qū, PB khauk                           |
| 'bark of tree'   | hren³³⁵³ka³¹   | Lh. ŋī-ŋû          |
| 'eggshell'       | mua¹³li³²⁵³⁸⁸⁸ | Lh. u-ŋû                |
| 'rind of fruit'  | a³³vai³³⁵⁵ka³³ | Lh. i-ŋû                  |

/'owl/bird of prey' | *g-laj | mu³³³¹laŋ⁵³ 'owl' | Jg. golaŋ, WB lāŋ-ta’, Garo do-req       |
This etymon is an old loan from Mon-Khmer into ST/TB; its original meaning seems to have been 'eagle; vulture; bird of prey'. The first Sulung syllable muu\(^3\) might be related to PKC *(h)muu 'hawk; bird of prey'.

- **pigeon/dove**
  - *m-krəw*  
  - *m-krəw*  
  - *m-krəw*
  - *m-krəw*
  - *m-krəw*

- **pine**
  - *raw \(\times\)*  
  - *row*
  - *raw \(\times\)*  
  - *row*
  - *row*

- **prefix**
  - *ʔə-
  - *ʔə-
  - *ʔə-
  - *ʔə-
  - *ʔə-

- **moon**
  - *ʔə\(^3\)bo\(^5\)

- **wind**
  - *ʔə\(^3\)*x\(^5\)

- **See HPTB: 522.**

- **ripe/cooked**
  - *s-min*
  - *s-min\(^6\)*
  - *s-min\(^6\)*

- **roast**
  - *gə\(^n\)*  
  - *gə\(^n\)*  
  - *gə\(^n\)*  
  - *gə\(^n\)*  
  - *gə\(^n\)*

- **sew**
  - *krəw(y)*
  - *krəw(y)*
  - *krəw(y)*
  - *krəw(y)*

- **sharp**
  - *tək*
  - *tək*
  - *tək*

- **short**
  - *g-d\(ə\)n*
  - *g-d\(ə\)n*
  - *g-d\(ə\)n*
  - *g-d\(ə\)n*

- **sit**
  - *duŋ/k \(\times\)*
  - *tuŋ/k*
  - *duŋ/k \(\times\)*
  - *tuŋ/k*
  - *duŋ/k \(\times\)*

- **sky**
  - *r-\(m\)aw*
  - *r-\(m\)aw*
  - *r-\(m\)aw*

- **slowly**
  - *zya-zya*
  - *zya-zya*
  - *zya-zya*

- **smell**
  - *m/s-nam*
  - *m/s-nam*
  - *m/s-nam*

- **son-in-law**
  - *s-mak*
  - *s-mak*

- **spider/spin/spindle**
  - *p\(w\)əg*
  - *p\(w\)əg*
  - *p\(w\)əg*

- **See HPTB: 288, where the Sulung form is cited.**

- **spleen**
  - *pay*
  - *pay*
  - *pay*

- **squirrel/rodent**
  - *re\(y\) \(\times\)*
  - *re\(y\) \(\times\)*

- **strength**
  - *ra*

- **sweat**
  - *gr\(ə\)\(w\)oy*

- **strength**
  - *ra*
  - *ra*

- **sweat**
  - *gr\(ə\)\(w\)oy*
  - *gr\(ə\)\(w\)oy*

- **strength**
  - *ra*
  - *ra*

- **sweat**
  - *gr\(ə\)\(w\)oy*
  - *gr\(ə\)\(w\)oy*
Stable Roots in Sino-Tibetan/Tibeto-Burman

/See HPTB: 82, 102, 129, 195, 414./

ʻurineʼ  
*ts(y)i × *zay eyai55  
WT gtši-ba, Jg. tši, WB chî × sê; Lh. jì  
/See HPTB: 187./

ʻvaginaʼ  
*s-tu aətui55  
WT stu, rGyalrong tṣetu, Meitheli thû, Lisu tu55 bi51

ʻweaveʼ  
*rak × *(r)ak yua53  
WT ḷṭḥag-pa, Jg. dâʔ, WB rak, Lh. ḷâʔ, OC *ṭiāk 齡

ʻwinnowʼ  
*ʔ-ra (PLB) jaʔ51  
Lh. ha, Akha zá

Notes

1) A previous version of this paper was presented at the 39th International Conference on Sino-Tibetan Languages and Linguistics, University of Washington (Sept. 2006).

2) “Everything is in flux.”

3) According to Ratliff, at least 50% of the words in any modern HM language are loans from Chinese.

4) Yet even this [+basic, +stable] class of words may include items shared with other language families. Thus the pHM roots for SUN/DAY, MOON/MONTH, SIX, SEVEN seem to be of Tibeto-Burman (TB) origin. FISH looks like the Proto-Tai-Kadai (= Proto-Kra) form. THREE resembles the Proto-Mon-Khmer etymon. FRUIT, MAGGOT, FLOWER look like Proto-Austronesian. BIRD, DIE/KILL, EYE are shared by both Tai-Kadai and Austronesian, constituting some of the best examples supporting the “Austro-Tai-HM hypothesis” (Benedict 1975).

5) See Benedict (1972).

6) Bodman long ago convincingly suggested a relationship between this WT form and Chinese 赤 ‘red’ (OC *ṭiāk).

7) Cf. the “replacement tolerance quotient” (RTQ) discussed in Matisoff (1978) (VSTB: 95ff).

8) For many examples of Southeast Asian “Wanderwörter”, see Benedict (1975: 35–133).

9) What Benjamin Lee Whorf (1956) referred to as “SAE” (Standard Average European) languages. An attempt to modify these lists to make them more suitable for languages of the East and Southeast Asian linguistic area was made in Matisoff (1978: 283–296), which contains an appendix called the “CALMSEA 200-word list” (an acronym for “Culturally Appropriate Lexicostatistical Model for Southeast Asia”), including words like MONKEY and BANANA, but excluding words like AT and SNOW. Some special problems that arise in attempting to apply the glottochronological approach to TB languages were discussed in Matisoff (2000).

10) Gérard Diffl oth once mentioned to me that the roots for the extremely non-basic concepts for SCURF/DANDRUFF and SMEGMA were among the best attested of all words referring to the human body in the Aslian subgroup of Mon-Khmer.

11) See STC #278, where only the WT and Jg. forms are cited.

12) This is no doubt partly because the concept of SKIN impinges on other semantic fields, e.g. the outer coverings of objects like the bark of trees, peels of fruit, husks of maize. A graduate seminar I organized at Berkeley in the spring semester of 2007–08, called “Epidermal etymologies”, was devoted to this very topic.

13) There is an extended discussion of this point in Matisoff (1978: 141ff).

14) See Matisoff (1986), VanBik (1998). Japanese has fewer psycho-colloquiations than Chin languages,
although they certainly exist, e.g. kimo ga chiisai ‘be timid’ (“liver is small”).

15) See the remark under Pronouns, below.

16) Cf. Burling’s “SAL languages” (1983), a suggested genetic grouping of Jingpho, Bodo-Garo, and Northern Naga, on the basis of shared idiosyncratic etyma, especially the root *sal SUN.

17) Reflexes of this etymon often have the verbal meaning of ‘spend the night’.

18) It is important to avoid serving food items in groups of four, in favor of groups of three or five.

19) Probably for this same reason, the numerals from SIX to TEN are not included in the standard Swadesh lists.

20) See Matisoff (1997, sections 3.1–3.54).

21) I have heard that in some Amerindian languages which distinguish between alienable and inalienable possession, NAME is treated just as inalienably as body-parts.

22) See the definition of Lahu nâ?-chî, the second syllable of which is a reflex of this etymon (Matisoff 1988: 754).

23) The Lahu noun ṃ-tâ?-ma ‘poison’ adds a prefix and a suffix to this root.

24) See Cook (2003, p. 526 {ajy}, p. 1556 {niv}).

25) Greenberg’s vast chimerical construct “Amerind” also predominantly has nasals in 1st and 2nd person morphemes, but one position of articulation further front than in TB/ST, with n- characteristic of the 1st person, and m- of the 2nd. See Matisoff (1990), and the sets for NAME and DREAM, below.

26) E.g., French il ‘he’ < Latin ille ‘that’; Mandarin tā 他 ‘3rd person pronoun’, originally ‘other’ (cf. Japanese hoko ‘other’, usually written with the same character).

27) Boyd Michailovsky has produced a valuable draft of such a study, still unpublished.


29) Actually Jinuo is not such an atypical LB language as I had thought, as demonstrated by Hayashi (2008), who has solved such problems as Jinuo tonal developments.

30) Starostin and Peiros (1996) use four out of these five TB languages, omitting Garo.

31) We still lack compendious dictionaries of Barish languages, although R. Burling has been working on comparative Bodo-Garo since the late 1950’s. See Burling (1959, 2004).

32) The autonym of this large group is pištsi55kha21. Although they number about 3 million (est. 1982), most of them now use Chinese as their dominant language; some even use Chinese characters to write Tujia. See Tian Desheng et al. (1986) and He Tianzhen (1987, 1994). The latter scholar believes Tujia to be close to the Qiangic group.

33) For present purposes I see no problem in using Karlgren’s OC reconstructions. The numerous revisions to his system made by subsequent scholars will not significantly affect cognacy judgments for the very common roots in question.

34) In the following sets, forms in square brackets [ ] are deemed not to descend from the etymon in question, e.g., WT ‘blood’, Sulung ‘tooth’, Jingpho ‘sun’. Words in parentheses ( ) are from individual languages rather than reconstructed proto-forms, e.g., Tamang ‘dog’, Yellow Lahu ‘husband/male’, Tamang ‘smoke’.

35) These initials stand for the three Bai dialects for which copious data are available: D = Dali, B = Bijiang, J = Jianchuan. See Xu and Zhao (1984).

36) This root, which seems to underlie the pKC and Sulung forms, is reconstructed in Matisoff (1985b: 431–432) and in HPTB: 365.

37) Curiously, the Tujia form for LEG is aʰla3⁵, which looks like it might descend from *lak.
38) This morpheme occurs in a\(^1\)mun\(^{35}\) ‘beard’, guk\(^{33}\)mun\(^{35}\) ‘eyelash’, and pauk\(^{33}\)a\(^1\)mun\(^{35}\) ‘nose hair’.
39) Benedict revised the GSR reconstruction to *djak because the character 鼻 ‘sound of marching’ occurs in the same phonetic series, and is reconstructed as *tj’ak; but this is really immaterial, since a velar prefix is also attested in TB.
40) See LICK, below.
41) It is not clear which syllable of these Tujia forms are reflexes of our etymon.
42) The cognacy of this Chinese form to PTB *g-na is doubtful. It was posited by Benedict largely on the basis of the graphic element 自 in the character 鼻 ‘nose’ (STC p. 177, n. 471). Shuo Wen does define 自 as 鼻 (see Cook 2003, p. 780 {dpn}, p. 782 {dpz}). It is true that some E. Asians point to their nose when they mean ‘myself’!
43) It is possible that Sulong b- is a reflex of PTB *kweed- (cf. Lahu phi).
44) Other putative allofams of this root include *kå 豨 ‘male pig, boar’; *g’wân 豨 ‘kind of pig’, and *på 豨 ‘sow, pig’.
45) STC derives the OC form from *p-sye (n. 436, p. 162), though this seems less plausible.
46) This form means ‘lightning-flash’.
47) STC (pp. 164, 180) makes a rather tortured attempt to relate Chinese 灶 *pien to PTB *mey.
48) Jäschke (1958: 253) cites a Persian comparandum (in Arabic script) for these Tibetan words. Sulung du\(^3\)wa\(^3\) seems clearly to be a borrowing from Tibetan.
49) These forms (< Chinese) are the 2nd syllables of compounds whose first constituent is FIRE [q.v.].
50) A nasal-final allofam is attested not only in OC, but in forms like Sunwar kun, Newari k-.
51) This word is derived from the Jg. verb tà ‘to build a house’.
52) This is not a respectful term. The Risiangku form is glossed as ‘partenaire sexuel mâle d’un animal; mari’ (Mazaudon 1994, Vol. II: 115).
53) This root is set up in STC (n. 99, p. 31) to accommodate Rawang biŋ, Trung aŋ-prəŋ, Lepcha brəŋ; the Sulong form may now be added to these. This root does not appear as such in HPTB; but I have suggested long ago that it is connected to *braŋ ‘give birth’ (see STC, ibid.).
54) Cf. WB lu ‘person’.
55) These Jg. forms are undoubtedly borrowings from Burmese, since PTB *k regularly > Jg. -k (STC n. 50, p. 14).
56) These forms are probably from Chinese.
57) These forms look like loans from Chinese.
58) The first syllables of the Lolo-Burmese, Jingpho, and pTani forms mean SLEEP.
59) This form means ‘feed with the mouth’.
60) Other allofams of this etymon include *dzəŋ 饕 ‘feed, give food to’ and *ts’än 餐 ‘food, meal, eat’.
61) pKC *ruu/ruuk probably descends from a separate root (see STC p. 144, HPTB: 80).
62) For the multifarious reflexes of this etymon, see Matisoff (1985a).
63) Cf. also Karen -w- ‘reported speech’.
64) PKB revised this reconstruction to *sgjwar. Allofamically related is *g’iwəd 惠. See Matisoff (1985a: 58 et seq.), and the Appendix by Richard Kunst (pp. 66–69).
65) There is a long list of Chinese characters with negative meanings and labial initials: *piwat 不 ‘not’; *pwat 不 ‘id.’; *piug 否 ‘id.’; *piwar 非 ‘it is not’; *miwar 未 ‘not yet’; *miwat 勿 ‘negative
imperative'; *mjwo 无 ‘not have; not, no; neg. impv.;’ *mjwo 無 ‘not have, not’; *mjwo 毋 ‘do not, not’, etc. See Matisoff (1985a, n. 98).

66) Cf. also Meche (Bodo-Garo group) da.


68) A similar phenomenon has been noted for Bisu (S. Loloish group). See HPTB: 38–39. However, the conditioning for the denasalization is subtly different in the two languages. In Bisu it is not the combination of an initial and a final nasal that blocks the change, but rather the nature of the nasal at the pLB level: if the nasal is simple, it gets denasalized in Bisu; if it is complex (aspirated or preglottalized), the Bisu reflex remains a nasal. See Matisoff (1979).

69) See Matisoff (2004b). For that matter, something similar seems to be characteristic of Tujia, e.g., ‘animal’ *sya > Tuj. si²¹.

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