

Stable Roots in Sino-Tibetan/Tibeto-Burman

著者(英)	James A. Matisoff
journal or publication title	Senri Ethnological Studies
volume	75
page range	291-318
year	2009-09-18
URL	http://doi.org/10.15021/00002570

Stable Roots in Sino-Tibetan/Tibeto-Burman¹⁾

James A. Matisoff

University of California, Berkeley

πάντα ῥεῖ²⁾

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

1. Basic vs. Stable Roots
2. Theoretical Issues Concerning the Notion of Stability
 - 2.1 Strict vs. Loose Definition of Stability
 - 2.2 Pervasiveness vs. Ultimate Genetic Affiliation
 - 2.3 Stability Differences across Semantic Fields
 - 2.4 Stability Differences within the Same Semantic Field
 - 2.5 Semantic Variation and Change
 - 2.6 Phonological Variation within an Etymon
 - 2.7 Phonological Disparities among Reflexes of the Same Etymon
 - 2.8 Morphosemantic Types of Etyma in Sino-Tibetan/Tibeto-Burman
3. Prima Facie Candidates for High Degree of Stability, Sorted by Semantic Area
 - 3.1 Weeding Down the Long List to Get a “Short List”
4. Criterial Languages Used for Stability Judgments
5. Etyma Sets in the Criterial Languages
 - 5.1 Body Parts (10)
 - 5.2 Animals (5)
 - 5.3 Numerals (6)
 - 5.4 Natural Objects and Units of Time (5)
 - 5.5 People and Habitation (6)
 - 5.6 Plants and Ingestibles (2)
 - 5.7 Pronouns (2)
 - 5.8 Verbs (8)
 - 5.9 Abstract (3)
6. Tabulation of Results
7. Interesting Sulung Developments — Side Benefit of This Study
8. Conclusion

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.³ The fourth class, [+basic, +stable], is “of greatest value in evaluating competing claims for distant relationship” (*ibid.*).⁴ 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),⁵ the extremely pervasive etymon for BLOOD (pTB **s-hyway*) would have to be disqualified, because of WT *khrag*.⁶ 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”.⁷

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-laj* ‘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 **kyaŋ* ‘ginger’, ultimately probably from Austronesian, thence into Chinese, then into TB; also **dzyi* \approx **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:

<i>stable</i>	<i>non-stable</i>		<i>stable</i>	<i>non-stable</i>
FRUIT	TREE		WAIST	NECK
TAIL	FOOT		CHICKEN	PIG
BODY LOUSE	HEAD LOUSE		SNAKE	RAT
WING	ARM		BOY	GIRL
HAIR	HEAD		RICE	MEAT

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 *tsiʔ-rü* ‘nit’ (*tsiʔ* ‘louse’), as well as in Lushai (Mizo) *hrū*, and several rGyalrongic forms supplied by J. Sun (Puxi *ʃvəʷ*, Caodeng *ndʒruʔ*, Muerzong *srəʔ*).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* \approx **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?¹³⁾ 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*.¹⁴⁾

2.6 Phonological Variation within an Etymon

Some roots show a great deal of allofamic variation, e.g. SUCK / KISS / BREAST (**dz(y)o:p* \approx **ts(y)o:p* \approx **dz(y)əw* \approx **dzip* \approx **dzup* \approx **dzyuk* \approx **dzyut*, etc.); FIRE / WHITE / SHINY (**b^war* \approx **p^war* \approx **hwal* \approx **hwar* \approx **war* \approx **ʔur*, etc.); TONGUE / LICK (**l(y)a* \approx **lay* \approx **ley* \approx **lyak* \approx *lyam*); BODY HAIR / FUR / FEATHER (**mil* \approx **mul* \approx **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 *bzi*, Lahu *᠑* 'four' < pTB **b-ləy*.

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-hywəy* 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.¹⁵⁾

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.¹⁶⁾

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)¹⁷; 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.

SNOT: too much like NOSE
 SPLEEN: NPE

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** ꜜ ***ɲwa**) is a Wanderwort

DOVE: NPE

LOUSE: there are two competing and phonologically similar roots, ***sar** and ***ʃrik**

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,¹⁸⁾ 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.¹⁹⁾

Rejects:

ONE and TEN: there are several competing roots for each. TEN is actually a classifier in many languages.²⁰⁾

SEVEN: this numeral (***s-nis**) seems to be a derivative of TWO (***g-nis**), pointing perhaps to an ancient quinquagesimal 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 **tsəy* 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* ꜜ **tuk*) may also be considered a kind of ingestible, an “anti-food” as it were. The Lahu reflex *tɔʔ* 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 *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:

- (6) *Proto-Tamangic (Tamang-Gurung-Thakali-Manang) (Mazaudon 1993–94)*
- (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-hywəy
WT	[khrag]
WB	swtj; Lh. šī
Jg.	sài
pKC	*thii
pNN	*C-hə:y
pKar	*swiq
pTmc	[* ^B kar]
pTani	*vi:
Bai	sua ⁴⁴ (D, B, J) ³⁵⁾
Tuj.	[mie ⁵³]
Sul.	hui ⁵³
OC	*xiwet 血

ear

pTB	*r-na
WT	rna-ba
WB	nâ; Lh. nā-pə
Jg.	nā
pKC	*na, *hna
pNN	*na:
pKar	*náʹ
pTmc	* ^A na; * ^A nak
pTani	*ñā-ruŋ
Bai	ny ³³ to ⁴²
Tuj.	[tsā ²¹ po]
Sul.	[a ³¹ kui ⁵³]
OC	*ñiəŋ 耳

hair (body)/fur/feather

pTB	*mil ≈ *mul
WT	[spu]
WB	mwê; Lh. mu
Jg.	mūn
pKC	*mul, *hmul
pNN	*muil
pKar	[*chrónq]
pTmc	* ^{Bh} mwi
pTani	*muut
Bai	ma ²¹ (D, J), mie ²¹ (B)
Tuj.	[si ³⁵ ka ⁵⁵]
Sul.	mun ^{55 38)}
OC	*mog 毛 ≈ *mjər 眉 ‘eyebrow’

bone

pTB	*s-rus ≈ *m-rus ≈ *g-rus
WT	rus-pa
WB	rûi; Lh. yô
Jg.	nrút
pKC	*ruʔ
pNN	[*ra:ŋ]
pKar	*xwiq (pPwo); xí (pSgaw)
pTmc	(Tamang -ru in compounds)
pTani	[*loŋ]
Bai	kuq ³³ tiə ⁴² (J)
Tuj.	lu ⁵⁵ ka ⁵⁵ ; k ^h a ²¹ ku ²¹
Sul.	a ³¹ zai ⁵⁵
OC	*kwət 骨

eye

pTB	*s-mik ≈ *s-myak
WT	mig
WB	myak; Lh. mēʔ
Jg.	myiʔ
pKC	*mik
pNN	*me:k
pKar	*meʔ (Pho); *mēʔ (Sgaw)
pTmc	* ^{Bh} mi:
pTani	*mik
Bai	mī ⁴² (D, J)
Tuj.	[lo ⁵⁵ pu ⁵⁵]
Sul.	[a ³¹ guk ⁵⁵]
OC	*mjək 目

hand

pTB	*l(y)ak ≈ *dyak; [*k(r)ut ³⁶⁾]
WT	lag-pa
WB	lak; Lh. làʔ
Jg.	lətáʔ
pKC	[*kut, *khut]
pNN	*glək
pKar	[*cùh]
pTmc	* ^{Ah} ja:
pTani	*lak
Bai	[suu ³³ (D, J), ŋei ³³ (B)]
Tuj.	[a ²¹ dze ⁵⁵ ; tɛe ³⁵ ³⁷⁾]
Sul.	[git ⁵⁵]
OC	*gjak 翼 ‘wing’ ³⁹⁾

	<i>tail</i>
pTB	*may ≈ *mey ≈ *mi
WT	[rŋa-ma; mjug-ma]
WB	ʔəmri; Lh. mē-tu
Jg.	ñmài
pKC	*may
pNN	*C-mey
pKar	*mjéʔ
pTmc	* ^{Ah} me:
pTani	*mjo ~ *me
Bai	<i>mi</i> ⁴² tu ³⁵ (D); <i>ɣv</i> ³³ tṽ ⁵⁵ (J)
Tuj.	[le ²¹ p ^h ũ ³⁵ ; lia ³⁵ tu ⁵⁵]
Sul.	a ³¹ niu ³³ kuaŋ ⁵⁵
OC	*mjwər 尾

	<i>nose</i>
pTB	*g-na
WT	sna; Lh. nā-qhō
WB	hna
Jg.	[lədɪ]
pKC	*hnaar
pNN	*na-ku:ŋ
pKar	*nà (pP); *ná (pS)
pTmc	* ^{Ah} na:, ^B hna:
pTani	*ñā-pum/-buŋ
Bai	<i>ɣ</i> ²¹ -khv ³³
Tuj.	[ko ¹³ te ⁱ 55do ³⁵]
Sul.	[pauk ³³ vəŋ ⁵⁵]
OC	[*dzʔjəŋ 自 ‘self’] ⁴²

5.2 Animals (5)

ANIMAL; DOG; FISH; PIG; SNAKE

	<i>animal/meat/flesh</i>
pTB	*sya-n
WT	ša
WB	sâ; Lh. šā
Jg.	šàn ‘meat’
pKC	*s ^h aa
pNN	[*ŋam ‘game’; *mey ‘meat’]
pKar	[*ŋjáq]
pTmc	* ^A sja
pTani	[*duun ‘meat’]
Bai	[kɛ ²¹ (D), kɛ ²¹ (J), qɑ ²¹ (B)]

	<i>tongue</i> ⁴⁰
pTB	*l(y)a ≈ *lay ≈ *ley
WT	lèc; [ljags]
WB	hlya; Lh. ha-tē
Jg.	šŋ-lèt-šŋ-lài
pKC	*lay
pNN	*C-ley
pKar	Pwo phle, Sgaw pəle
pTmc	* ^{Bh} le:
pTani	*ryo
Bai	<i>tse</i> ⁴² phi ³¹ (D, J), tɛ ⁴² (B)
Tuj.	zi ³⁵ la ⁵⁵ ; dzi ²¹ la ^{21 41}
Sul.	a ³¹ lye ⁵⁵
OC	/see LICK/

	<i>tooth</i>
pTB	*swa; [*džway]
WT	so
WB	swâ; [WB cway, Lahu cì]
Jg.	wā
pKC	*haa
pNN	*swa
pKar	Bassein Pho θwà
pTmc	* ^A s(w)a
pTani	*fi:
Bai	<i>tɛo</i> ³³ pa ⁴⁴ (J); [tsi ³³ pa ⁴⁴ (D, B)]
Tuj.	si ⁵⁵ si ⁵⁵ ; si ³³ ta ³⁵
Sul.	[ku ³¹ tuaŋ]
OC	[*ŋâ 牙]

	<i>dog</i>
pTB	*k ^w əy
WT	khyi
WB	khwê; Lh. phî
Jg.	gùì
pKC	*ʔuy
pNN	*kuəy
pKar	*thwíq
pTmc	(Tamang ¹ nak ^h i)
pTani	ki:
Bai	khua ³³ (D); khuã ³³ (J); qhō ³³ (B)

Tuj. **si**²¹
 Sul. -----
 OC ***šjēn** 身 ‘body’

fish

pTB ***ŋ(y)a**
 WT **nya**
 WB **ŋâ; Lh.ŋâ**
 Jg. **ŋá**
 pKC ***ŋaa, *hŋaa**
 pNN ***ŋya**
 pKar **jáq** (pPho); **ñáʔ** (pSgaw)
 pTmc (Tamang ²**tarya**)
 pTani ***ŋo**
 Bai **ŋv**⁵⁵ (D, J), **ŋu**⁵⁵ (J)
 Tuj. [**soŋ**³⁵]
 Sul. [**ka**³³**fuaŋ**⁵³]
 OC ***ŋjo** 魚

snake/vermin

pTB ***s-b-ru:l**
 WT **sbrul**
 WB **mrwe; Lh. vî**
 Jg. **löpū**
 pKC ***ruul**
 pNN ***ʔ-bəw**
 pKar ***rúʔ**
 pTmc (Tamang **ru:l** ‘gros serpent’)
 pTani ***bu**
 Bai **khv**³³ (D, J); **fv**³³ (B)
 Tuj. **wo**⁵⁵
 Sul. **puh**⁵³
 OC [***dʔja** 蛇]

Tuj. **xa**⁵⁵**lie**²²; **tshe**⁵⁵
 Sul. **boh**⁵³; **bui**^{55 43)}
 OC ***kʔiwən** 犬 ≠ ***ku** 狗

pig

pTB ***pʷak**
 WT **phag**
 WB **wak; Lh. vâʔ**
 Jg. **wâʔ**
 pKC ***wok**
 pNN ***wak**
 pKar ***tháuʔ; *thoʔ**
 pTmc ***Bdwa**
 pTani ***rjek**
 Bai [**te**⁴² (D, J, B)]
 Tuj. [**tsi**⁵⁵; **dzi**¹³]
 Sul. [**mə**³¹**du**⁵⁵]
 OC ***gʔiwag** 虞 ‘kind of boar’⁴⁴⁾

5.3 Numerals (6)

THREE; FOUR; FIVE; SIX; EIGHT; HUNDRED

three
 pTB ***g-sum**
 WT **gsum**
 WB **sūm; Lh. šêʔ, šē**
 Jg. **məsūm**
 pKC ***p-thum**
 pNN ***C-sum**

four
 pTB ***b-ləy**
 WT **bzi**
 WB **lê; Lh. ô**
 Jg. **məli**
 pKC ***p-lii**
 pNN ***bələy**

pKar	θàn (pPho); θó (pSgaw)	pKar	*lwíT
pTmc	*Bsom	pTmc	*Bbli
pTani	*fhum	pTani	*pri
Bai	sa⁵⁵ (D), sǎ⁵⁵ (B, J) [< Chinese]	Bai	[ɕi⁴⁴ (D, J), si⁴⁴ (B)] < Chinese
Tuj.	so⁵⁵	Tuj.	zie⁵⁵
Sul.	[yuk⁵⁵]	Sul.	və⁴⁵i⁵⁵
OC	*səm 三	OC	*sjəd 四 (< *s-ləy JAM) ⁴⁵⁾
	<i>five</i>		<i>six</i>
pTB	*b-ŋa ≈ *l-ŋa	pTB	*d-k-ruk
WT	lŋa	WT	drug
WB	ŋâ; Lh. ŋâ	WB	khrauk; Lh. khò?
Jg.	məŋā	Jg.	krú?
pKC	*ŋaa	pKC	*p-ruk
pNN	*C-ŋa	pNN	*d-ruk
pKar	*ŋáT	pKar	*xù (pPho); xý (pSgaw)
pTmc	*^Aŋa(t), *^Bŋa:	pTmc	*^Bɖu(t), *^Bɖuk
pTani	*ŋo	pTani	*krə
Bai	ŋv³³ (B, J), ŋo³³ (TBL)	Bai	fv⁴⁴ (D, B, J)
Tuj.	ŋi³³; oŋ⁵⁵	Tuj.	wo²¹; u³⁵
Sul.	wu⁵⁵ (< Chinese)	Sul.	ŋə[?]55
OC	*ŋo 五	OC	*ljòk 六
	<i>eight</i>		<i>hundred</i>
pTB	*b-r-gyat ≈ *b-g-ryat	pTB	*b-r-gya
WT	brgyad	WT	brgya
WB	hrac; Lh. hí	WB	ra; Lh. ha
Jg.	mətsát	Jg.	lətsā
pKC	*p-riat	pKC	*yaa
pNN	*C-gyat	pNN	*C-khya
pKar	*xò? (pPho); xò? (pSgaw)	pKar	*rjà'
pTmc	*Bbrat	pTmc	*Bbra
pTani	pri-ñi	pTani	[*lunŋ]
Bai	tɕuə⁴⁴ (B)	Bai	[a³¹pe⁴⁴ (D), a³¹pe⁴⁴ (J), pa⁴⁴ (B)]
Tuj.	jie²¹; je²¹	Tuj.	tha⁵⁵; zi²¹
Sul.	la⁵⁵	Sul.	[təŋ⁵⁵]
OC	*pwăt 八	OC	*pǎk 百 (< *bǎgrya PKB)

5.4 Natural Objects and Units of Time (5)

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

	<i>day (24 hours)/spend the night</i>		<i>fire</i>
pTB	*r(y)ak	pTB	*mey; [*bar ≈ *par]
WT	zág	WT	me

WB **rak**; Lh. **há**
 Jg. **yáʔ**
 pKC ***riak**
 pNN ***C-ya** ‘night’
 pKar -----
 pTmc -----
 pTani ***jo** ‘night’ [***lo** ‘day’]
 Bai **jo⁵³xu³** (D) ‘night’
 Tuj. -----
 Sul. [**a³¹hi⁵³** ‘day’; **a³¹jet⁵³** ‘night’]
 OC ***sjok** 宿

moon/month

pTB ***s-la** ≈ ***g-la**
 WT **zla-ba**
 WB **laʔ**; Lh. **ha-pa**
 Jg. **šōtā**
 pKC ***khlaa**
 pNN ***gla**
 pKar ***lāʔ** (pPho); **lá** (pSgaw)
 pTmc ***Bhla**
 pTani ***po-lo**
 Bai [**mi⁵⁵ŋuɑ⁴⁴** (J)]
 Tuj. **su²¹su²¹**; **lo³⁵ci⁵⁵du³⁵**
 Sul. [**aŋ³³bo⁵⁵**]
 OC [**ŋjwat** 月]

sun/daytime

pTB ***nəy**
 WT **nyi-ma**
 WB **ne** ‘sun’ ≈ **neʔ** ‘day’; Lh. **ni** ‘day’, **mû-ni** ‘sun’
 Jg. **ní** ‘day’, [**jān** ‘sun’]
 pKC ***nii**
 pNN ***C-ni**
 pKar **niʔ**
 pTmc (Tamang ***ni-ra**)
 pTani ***ñi¹** ‘sun’
 Bai **ni⁴⁴** (D, B)
 Tuj. **nie⁵⁵**, **ne³⁵**
 Sul. **kət³¹ri⁵⁵** ‘sun’
 OC ***ñjēt** 日

WB **mî**; Lh. **à-mī**
 Jg. **myiʔ-phrəp⁴⁶⁾**; [**?wàn**]
 pKC ***may**
 pNN [***?-war**]
 pKar ***míK**
 pTmc ***A^hmje**
 pTani ***mə**
 Bai [**xui³³** (D, J), **fi³³** (B)] < Ch.
 Tuj. **mi⁵⁵**
 Sul. **bæ⁵⁵**
 OC [**xwâr** 火]⁴⁷⁾

smoke

pTB ***kəw** ≈ ***kun** ≈ ***kut**
 WT [**du-ba**, **dud-pa**]⁴⁸⁾
 WB **khûi**; Lh. **mû-ghō**
 Jg. **khú** (v.); **?wàn-khút** (n.)
 pKC ***may-khuu**
 pNN ***khəw**
 pKar ***khúq**
 pTmc (Tamang ***mjuku**)
 pTani ***muu-kuu**
 Bai [**-je⁵⁵** (D), **-çẽ⁵⁵** (J), **-je⁵⁵** (B)]⁴⁹⁾
 Tuj. **khue³⁵** **kha²¹**; **kie⁵⁵sa²¹**
 Sul. **bæ⁵⁵ku⁵⁵**; [**du³³wa⁵³**]
 OC ***xjwən** 熏 ‘be smoky’⁵⁰⁾

5.5 People and habitation (6)

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

	<i>child/son</i>		<i>grandfather/elder brother</i>
pTB	*tsa ꞵ *za	pTB	*bəw ꞵ *pəw
WT	tsha-bo ‘grandchild’	WT	phu-bo ‘elder brother’
WB	sâ; Lh. yâ	WB	?əphûi; Lh. ð-pū ‘grandfather’
Jg.	šà	Jg.	phû ‘elder brother’
pKC	*θaa	pKC	*puu
pNN	*C-dza ‘son’	pNN	*pəw
pKar	phóq-θàq (pPho; pSgaw)	pKar	*phùh
pTmc	* ^A dza	pTmc	[Tamang 'akhe]
pTani	*fio	pTani	[*to]
Bai	tsi ⁴⁴ ŋi ²¹ (D), tsi ³³ (J), tsi ⁴⁴ (B)]	Bai	ɑ ⁵⁵ pu ⁵⁵
Tuj.	sa ³⁵ be ²¹ ; po ⁵⁵ li ²¹	Tuj.	pha ²¹ phu ⁵⁵
Sul.	a ³¹ dziaŋ ⁵⁵	Sul.	[toŋ ³³ mat ⁵³]
OC	*tsjəg ꞵ *dzjəg 子	OC	----
	<i>house</i>		<i>husband/male</i>
pTB	*k-yim ꞵ *k-yum	pTB	*p ^{Wa} a
WT	khyim	WT	pho
WB	?im; Lh. yê	WB	(YL và ‘man; person’)
Jg.	[ń-tâ] ⁵¹	Jg.	wā
pKC	*?im	pKC	*waa
pNN	*kium	pNN	[*la]
pKar	*Yénq (pPho)	pKar	*khwàh
pTmc	* ^B dim	pTmc	* ^A p ^{ha} , ⁵² [* ^B pjuŋ; * ^A p ^h op]
pTani	----	pTani	----
Bai	xo ³¹ (D, B, J)	Bai	po ³⁵ ŋi ²¹ (D), pu ³³ (J)
Tuj.	tsho ⁵⁵ ; tsha ³³	Tuj.	[no ⁵⁵ pa ⁵⁵ ; zu ⁵⁵ ŋ ²¹]
Sul.	təauk ⁵³	Sul.	a ³¹ fo ⁵³ ‘male’; a ³¹ vei ⁵⁵ ‘husband’
OC	*kiôŋ 宮 ‘palace; temple’	OC	*p ⁱ wo 夫
	<i>human/person</i>		<i>name</i>
pTB	*r-mi(y)	pTB	*r-miŋ; [*s-brəŋ] ⁵³
WT	mi	WT	miŋ
WB	[lu]	WB	mañ, hmañ; Lh. mē
Jg.	[məšà]	Jg.	myīŋ
pKC	*mii	pKC	*(h)min, *(h)miŋ
pNN	*C-məy	pNN	*min
pKar	[*pɣa (pSgaw)]	pKar	*mèn’
pTmc	* ^A mi(ɜ)	pTmc	* ^{Ah} min
pTani	*mi	pTani	*muun

Bai *ni²¹ke³⁵* (D), *ni²¹qo⁵⁵* (B)
 Tuj. [lo⁵³; no⁵⁵] ⁵⁴
 Sul. b⁵⁵
 OC *mj̥en 民

Bai me³⁵ (D); no⁵⁵ (B); miε⁵⁵ (J)
 Tuj. *niv³⁵ bo¹²*; [min²¹tsi²¹ < Ch.]
 Sul. [a³¹braŋ⁵³ ~ a³¹ba¹ŋ⁵¹]³
 OC *mj̥əŋ 名

5.6 Plants and Ingestibles (2)

MEDICINE; POISON

medicine/paint/juice
 pTB *tsəy; [*s-man]
 WT rtsi; [sman]
 WB chê; Lh. nâ?-chî
 Jg. tsi ‘medicine’, mət̥si ‘yeast’
 pKC (Lai sii)
 pNN -----
 pKar kəθi, təθi (Sgaw)
 pTmc [*^{Ah}man]
 pTani -----
 Bai [jo⁴⁴ (< Chinese)]
 Tuj. se²¹; se³⁵
 Sul. ɕi³³min⁵⁵
 OC *ts’jet 漆 ‘varnish’

poison
 pTB *duk ≈ *tuk
 WT dug
 WB tauk; Lh. t̥ɔʔ
 Jg. [túk, ñ-túk, niŋ-túk]⁵⁵
 pKC [*tuur; *ruu]
 pNN -----
 pKar *cýq
 pTmc (Tamang ³pik)
 pTani *duk; [*mro]
 Bai [tv⁵³ (D), du³³ (B), tu⁵⁵ (J)]⁵⁶
 Tuj. [tu²¹; tu³⁵] (< Chinese)
 Sul. d̥ə³³d̥ək⁵⁵
 OC *d’òk 毒

5.7 Pronouns (2)

1st person
 pTB *ŋa-y; [*ka-y]
 WT ŋa; ŋed
 WB ŋa; Lh. ñà
 Jg. ŋāi
 pKC [*kay-maʔ]
 pNN *ŋa
 pKar j̥ə’ (pPho); j̥əʔ (pSgaw)
 pTmc *^{Ah}ŋa
 pTani *ŋo
 Bai ŋo³¹ (D, J), ŋo⁴² (B)
 Tuj. ŋa³⁵; ŋo³³
 Sul. goh⁵⁵
 OC *ŋâ 我 ≈ *ŋo 吾

2nd person
 pTB *naŋ ≈ *na
 WT [khyed; khyod; nyid]
 WB naŋ; Lh. n̄
 Jg. nāŋ
 pKC *naŋ
 pNN *na(:)ŋ
 pKar *n̄ə’ (pPho); n̄à’ (pSgaw)
 pTmc (*^{Be}e: ≈ ^{Be}ek; ^Agi(-C); *^{Bh}ŋai)⁵⁶
 pTani *no
 Bai no³¹ (D, J), n̄ə⁵⁵ (B)
 Tuj. ni³⁵; ni³³
 Sul. na⁵⁵
 OC *n̄jo 汝

5.8 Verbs (8)

BITTER; DIE; DREAM; EAT; ILL; KILL; LICK; STEAL

	<i>bitter</i>		<i>die</i>
pTB	*ka-n	pTB	*səy
WT	kha-ba	WT	śi-ba
WB	khâ; Lh. qhâ	WB	se; Lh. št
Jg.	khá	Jg.	sī
pKC	*khaa	pKC	*thii
pNN	*C-kha	pNN	*səy
pKar	*kháq	pKar	*sih
pTmc	*Bkam	pTmc	*Asi, Bsi
pTani	*ka:-	pTani	*si
Bai	[khu ³³ (D, J), qhu ³³ (B)] ⁵⁷⁾	Bai	ei ³³ (D, B, J)
Tuj.	kh ⁵⁵ ; kh ³⁵ tsi ³⁵ tsi ³⁵	Tuj.	se ²¹ ; se ³⁵
Sul.	[a ³¹ dziu ⁵³]	Sul.	ji ⁵⁵
OC	*k'o 'bitter' 苦 ≠ *kân 肝 'liver' OC		*sjær 死
	<i>dream</i> ⁵⁸⁾		<i>eat</i>
pTB	*r-maŋ	pTB	*dzya
WT	rmaŋ-lam; rmi-lam	WT	za-ba
WB	?ip-mak; Lh. yì?-mâ?	WB	câ; Lh. câ
Jg.	?yúp-māŋ	Jg.	śá
pKC	*maŋ	pKC	(Lu. fa?) ⁵⁹⁾
pNN	*ma?	pNN	*dza
pKar	*mimán' (pPho); mímà (pSg)	pKar	[?ámq]
pTmc	*Aməŋ, Bməŋ	pTmc	*Atsa(:)
pTani	*jup-maŋ	pTani	[*do]
Bai	mu ⁵³ (D), mu ⁴² (B); mu ³¹ (J)	Bai	ju ⁴⁴ (D, J), ji ⁵⁵ (B)
Tuj.	mv ³⁵ ; mu ²¹ tsi ²¹	Tuj.	ɣɛ ³⁵ ; [ka ³⁵]
Sul.	mə ³¹ bak ⁵³	Sul.	tɛih ⁵³
OC	*mjəŋ 夢	OC	*đjək 食 ⁶⁰⁾
	<i>ill</i>		<i>kill</i>
pTB	*na ≠ *nan ≠ *nat	pTB	*g-sat
WT	na-ba; nad-pa	WT	gsod-pa, bsad
WB	na, ?əna; Lh. nà	WB	sat
Jg.	?ənà	Jg.	sàt
pKC	*naa; *nat	pKC	*that
pNN	[*C-da:k; *dzat]	pNN	*?-sot
pKar	[*chàh]	pKar	maθi (pPho); màθi (pSgaw)
pTmc	*Ana, *Anak, *A/Bhna(:)	pTmc	*sat
pTani	[*ki]	pTani	[*man]
Bai	[peɪ (D), sṽ ³¹ (J), sō ⁴² (B)]	Bai	[ɕa ⁴⁴] (< Chinese)
Tuj.	[ti ³⁵ ; dɪ ²¹]	Tuj.	[pu ³⁵ ; ?ɪ ¹³]
Sul.	[ɣaŋ ⁵⁵]	Sul.	wa't
OC	nân 難 'difficulty, suffering'	OC	*sat 殺

<i>lick/tongue</i>		<i>steal</i>	
pTB	*m-lyak; *s-lyam	pTB	*r-kəw
WT	ldag-pa ‘lick’, ljags ‘tongue’	WT	rku-ba
WB	lyak; Lh. lèʔ, lé	WB	khûi; Lh. qhô
Jg.	mətáʔ	Jg.	ləgú (v.); ləgút ‘thief’
pKC	*liak	pKC	(Lai fiir-khùu ‘thief’) ⁶¹⁾
pNN	*C-glay	pNN	*C-kə:w
pKar	léʔ (pSgaw); lénq (pPho)	pKar	*-yúq (pPho); *yýʔ (pSgaw)
pTmc	*Alem	pTmc	*A ^h u; *A/B ^h uk ≈ *k ^h up ≈ *k ^h ut
pTani	*ryak	pTani	[*pjəŋ]
Bai	tsi ³³ (D, J), dzẽ ⁴³³ ji ⁵⁵ (B)	Bai	[tɕ ³¹ (D, J), die ⁴² (B)]
Tuj.	lo ²¹ ; la ³⁵	Tuj.	ɣɛ ³⁵ ; ʔe ⁵⁵
Sul.	via ⁵⁵ ; lau ⁵⁵	Sul.	yah ⁵⁵
OC	*đjat 舌 (< g’liak) ≈ *g’iak 滕 ‘tongue’	OC	*k’u 寇

5.9 Abstract (3)

COPULA; NEGATIVE; NEGATIVE IMPERATIVE

<i>copula</i> ⁶²⁾		<i>negative</i>	
pTB	*way ≈ *ray	pTB	*ma
WT	red-pa, re-pa	WT	ma, mi
WB	kai ≈ rai; Lh. ve ≈ ʔi	WB	ma; Lh. mâ
Jg.	ʔai; rái	Jg.	ń-
pKC	(Lu. e ~ ve)	pKC	[*law]
pNN	*ley	pNN	----
pKar	ʔóq (pPho); *ʔóʔ (pSgaw) ⁶³⁾	pKar	[*ʔèʔ(pPho)]; *təʔ-báʔ (pSgaw)]
pTmc	[Tamang ¹ mu; ² hin]	pTmc	(Tamang ³ a)
pTani	----	pTani	----
Bai	[tso ³³ (D), tsur ³³ (J), dʔ ³³ (B)]	Bai	mu ³³ (D); ja ³⁵ , a ²¹ (J), a ⁴² (B)
Tuj.	siu ³⁵ ; si ¹³ [< Chinese]	Tuj.	ma ⁵⁵
Sul.	wi ⁵⁵	Sul.	ba ³¹
OC	*điwər ⁶⁴⁾ 惟維唯佳	OC	*mijwo, etc. ⁶⁵⁾
<i>negative imperative</i>			
pTB	*ta ≈ *da ⁶⁶⁾	pTmc	(Tamang ⁴ ta)
WT	[ma + Vimp/Prt]	pTani	----
WB	(Lahu tâ)	Bai	[nɔ ⁴⁴ pu ³¹ (D), miã ⁴⁴ (J), a ⁴² nɔ ⁴⁴ (B)]
Jg.	[khùm]	Tuj.	tha ⁵⁵ ; ta ²¹
pKC	----	Sul.	[ba ³¹ ... bo ³³] ⁶⁷⁾
pNN	----	OC	/see note 65/
pKar	----		

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	HUSBAND/MALE	*p^wa
DIE	*səy	NAME	*r-miŋ
DOG	*k^wəy	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⁾

	<i>pTB</i>	<i>Sulung</i>
‘fire’	*mey	bæ ⁵⁵
‘person’	*r-mi(y)	bi ⁵⁵
‘son-in-law’	*s-mak	a ³¹ bua ⁵³
‘dream’	*r-maŋ (PLB *s-mak)	mə ³¹ bak
‘negative’	*ma	ba ³¹
‘1st person’	*ŋa	goh ⁵⁵
<i>Exceptions:</i>		
‘corpse’	*s-maŋ	çə ⁴⁵⁵ muəŋ ⁵⁵
‘smell’	*m/s-nam	naŋ ⁵⁵
‘cooked/ripe’	*s-min	a ³¹ min ⁵⁵

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 yî?-mâ?).

(2) *Brightening*

Sulung seems to show “brightening” of PTB *-a > -i, as is characteristic of the Qiangic languages, e.g., ‘eat’ Sul. tɕih⁵³ < *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’, yuuk⁵⁵ ‘three’, lie⁵⁵ ‘seven’, duaŋ³³ja⁴⁵³ ‘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

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

Appendix: More Sulung Reflexes of Well-established PTB Roots

	<i>PTB</i>	<i>Sulung</i>	<i>Other</i>
‘arrow’	*m-da	mi ³³ ta ⁷⁵⁵	WT mda
‘axe’	*p ^w a	ba ⁵³	Pumi ꨀꨑꨓ, OC *piwo 斧
‘bee’	*kway ≈ *gwa:y	ku ³¹ ŋuai ⁵³	WB kwâi, Mizo khuai
‘bent/crooked’	*guk ≈ *kuk	a ³¹ gok ⁵³	WB kauk, Lh. qəʔ, OC k’juk 曲
‘bird’	*daw ≈ *dow	pu ³¹ tu ⁵⁵	Pwo/Sgaw tho, Garo do, Dimasa dau
‘bow’	*d-ləy	lei ⁵³	Nung thəli, WB lê
‘buy’	*ywar	ve ⁴³⁵	Mizo zuar, Lh. vi
‘cattle/livestock’	*dzay	çi ⁵⁵	Lh. cê-cà
/HPTB: 209–211/			
‘chew’	*m-g ^w ya	we ⁵⁵	Lisu gua ³¹ , Lh. bê, Naxi ŋgu ³³
‘child/nephew/ descendant’	*m-du ≈ *m-tu	a ³¹ du ⁵⁵	Lh. dù, WB tu, Nung phədu
‘cloud’	*dim	kə ³¹ tu ⁵⁵	WB tim
‘corpse’	*s-maŋ	çə ⁴ 55 muaj ⁵⁵	Chepang hmaŋ, Newar si-mha, Jg. māŋ
‘fart’	*woy	væ ⁵³	rGyalrong wu, Lh. vi, Hakha Lai voiʔ
/HPTB: 229/			
‘fly’	*byam	pie ⁵⁵	Jg. pyēn, WB pyam, Lh. pò
‘go/come/walk’	*s-wa	wu ⁵⁵	WB swâ ‘go’, Newari wa ‘come’
‘good/well/properly’	*m-d(y)ak ≈ *lyak/ŋ	tak	Lh. dàʔ; WT legs-pa ≈ lags-pa
‘head’	*m/s-gaw	a ³¹ kau ⁵³	WT mgo, Dimasa sakau
‘heart’	*m-luŋ	a ³¹ luk ⁵⁵	Tangkhuł məluŋ, Mizo luŋ
/This root shows final nasal/stop variation; cf. ‘roast’./			
‘heavy’	*s-ləy	a ³¹ lei ⁵⁵	WT ltsi-ba, WB lê, Lh. hō
‘knife-edge/sharpen/ whetstone’	*wi	tche ³³ vi ⁵³	Lh. á-thə-vʔ
/Not in STC or HPTB./			
‘laugh’	*r(y)a(y)	yue ⁵⁵	WB ray, Lh. yì
‘leech’	*k-r-wat	ku ³¹ vat ⁵³	WB krwat, Lh. vèʔ
‘marrow’	*r-klɪŋ	a ³¹ tuəŋ ⁵³	Mikir ar-kleŋ, Mizo thliŋ
‘medicine’	*s-man	çi ³³ min ⁵⁵	WT sman, Pumi ‘mí
/The Sulung form may be a loan from Tibetan./			
‘mortar’	*t(s)um	aŋ ⁵⁵ dzə ⁴³¹	Jg. thùm, WB chum, Lh. che
‘mountain’	*g(r)aŋ	graŋ ⁵³	WT sgaŋ, Lh. qhə, OC *kâŋ 岡
/The medial -r- is not yet attested elsewhere./			
‘navel’	*lary ≈ *s-tay	a ³¹ lui ⁵⁵	Mizo lai, WT lte-ba, Jg. šəđāi
‘near’	*na:y ≈ *s-ney	a ³¹ nei ⁵⁵	WT nye-ba, WB ní, Mizo hnai
‘otter’	*sram ≈ *ram	kua ⁵⁵ bə ³¹ rai ⁵³	WT sram, Lh. yì-šo-lo
/Sulung kua ⁵⁵ and Lahu yì mean ‘water’./			
‘outer covering’	*kok ≈ *kwa:k	(a ³¹)kə ^{31/53/55}	Lh. qú, WB khauk
‘bark of tree’		hren ³³ kə ³¹	Lh. šíʔ-qú
‘eggshell’		mu ³¹ hi ⁵⁵ a ³¹ kə ⁵⁵	Lh. u-qú
‘rind of fruit’		a ³¹ vai ⁵⁵ kə ⁵³	Lh. í-šī-qú
‘owl/bird of prey’	*g-laŋ	mu ³¹ laŋ ⁵³ ‘owl’	Jg. gəłəŋ, WB ləŋ-taʔ, Garo do-reŋ

/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 **mu**³¹ might be related to PKC *(h)muu ‘hawk; bird of prey’./

‘pigeon/dove’	* m-krəw	ok ⁵⁵ mu ³¹ ko ⁵⁵	Khami məkhru , Lh. gú
‘pine’	* raw ≈ * row	ta ³¹ ru ⁵³	Jg. mərāu , Nung śoru , WB thəŋ-rú
‘prefix’	* ʔaŋ-	aŋ ³³⁻	Mikir ang- , Bisu ʔaŋ- , Phunoi ʔā- , Sangkong aŋ ³³⁻ , Rawang aŋ- , Lahu ə-
	‘moon’	aŋ ³³ bo ⁵⁵	
	‘wind’	aŋ ³³ xuut ⁵⁵	
	/See HPTB: 522./		
‘ripe/cooked’	* s-min	a ³¹ min ⁵⁵	WT smin-pa , Mizo hmin , WB hm(y)añ , Lh. mɛ
‘roast’	* ga:ŋ ≈ * ka:ŋ	gak ⁵⁵	WB kaŋ , Lh. qɔ , Mizo ka:ŋ
	/This root shows final nasal/stop variation./		
‘sew’	* krwi(y)	khri ⁵³	pKC * khruy
	/This etymon was labeled “Kuki-Naga” in STC, despite its citation of Jg. tšwi ~ tšwi ./		
‘sharp’	* tak	a ³¹ tua ⁵³	WB thak , Lh. tháʔ
	/STC (p. 87) considered this root to be restricted to Lolo-Burmese/		
‘short’	* g-dun	a ³¹ tuŋ ³³	Jg. gədün ≈ kədün
	/Not in STC or HPTB./		
‘sit’	* duŋ/k ≈ * tuŋ/k	toŋ ⁵⁵	Jg. dūŋ , WB thuiŋ , WT ɬtug
	/See HPTB: 288, where the Sulung form is cited./		
‘sky’	* r-məw	kə ³¹ məŋ ⁵³	WT rmu-ba , WB múi , Lh. mú
	/Sulung -ŋ might be due to allophonic nasalization of the vowel after the nasal initial./		
‘slowly’	* zya-zya	dze ⁵⁵ dze ⁵⁵	Lh. a-yé-yé , Lisu a-zá-zá , Phowa zē-zē
	/Not in STC or HPTB./		
‘smell’	* m/s-nam	naŋ ⁵⁵	WT mnam-pa (v.i.) ≈ snam-pa (v.t.); WB nam , Lh. nù
‘son-in-law’	* s-mak	a ³¹ bua ⁵³	WT mag-pa , WB səmak , Lh. ə-má-pā
‘spider/spin/spindle’	* p^waŋ	woŋ ⁵⁵ ‘spider’	WT phaŋ , Jg. kəbāŋ , WB wāŋ , Lh. və ~ ɣə
	/See STC #48, HPTB: 269./		
‘spleen’	* pay	a ³¹ pie ⁵³ ‘liver’	Mpi ʔoʔphe ⁶ , Lh. ə-pe , Jg. kūm-pāi , OC * b’jēg 脾
	/For semantic interchange between the spleen and other internal organs, see VSTB, pp. 217ff./		
‘squirrel/rodent’	* rey ≈ * reŋ	lui ³⁵	WT sre-mo(ŋ) , Mikir iŋ-ren , WB hrāñ , Mizo hle i, Tangkhul saŋ-rí
‘star’	* gra:y	ha ³¹ ɣai ⁵³	WB krai , Lh. məʔ-kə
	/HPTB: 212/		
‘strength’	* ra	a ³¹ ha ⁴⁵³	WB ʔá , Lh. ɣá
‘sweat’	* grwəy	aŋ ³¹ tɕi ⁵³	WB khwrê , Lh. kī , Mara mathlai , Angami rúkhru , Qiang ɣtɕuə ⁵⁵

	/See HPTB: 82, 102, 129, 195, 414./		
‘urine’	*ts(y)i ≠ *zəy	ɕyai ⁵⁵	WT gtsí-ba , Jg. tsí , WB chî ≠ sê ; Lh. jî
	/See HPTB: 187./		
‘vagina’	*s-tu	a³¹tui ⁵⁵	WT stu , rGyalrong təctu , Meithei thù , Lisu tu ⁵⁵ bi ²¹
‘weave’	*rak ≠ *t(r)ak	yua ⁵³	WT hthag-pa , Jg. dà? , WB rak , Lh. yà? , OC *f[?]jək 織
‘winnow’	*ʔ-ra (PLB)	jaʔ ⁵³	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 ***f[?]iäk**).
- 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 Diffloth 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-collocations 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 **nâʔ-çhê**, the second syllable of which is a reflex of this etymon (Matisoff 1988: 754).
 - 23) The Lahu noun **ɔ̄-tɔ̄ʔ-ma** ‘poison’ adds a prefix and a suffix to this root.
 - 24) See Cook (2003, p. 526 {ajj}, 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 *hoka* ‘other’, usually written with the same character).
 - 27) Boyd Michailovsky has produced a valuable draft of such a study, still unpublished.
 - 28) See Matisoff (2001).
 - 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 the conditioning factors for 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 **pi³⁵tsi⁵⁵kha²¹**. 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 **a³¹læ⁵³**, which looks like it might descend from ***lak**.

- 38) This morpheme occurs in **a³¹mun⁵⁵** ‘beard’, **gu³³mun⁵⁵** ‘eyelash’, and **pau³³a³¹mun⁵⁵** ‘nose hair’.
- 39) Benedict revised the GSR reconstruction to ***djək** because the character 趯 ‘sound of marching’ occurs in the same phonetic series, and is reconstructed as ***t^hjək**; 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 ***k^w-** (cf. Lahu **phî**).
- 44) Other putative allofams of this root include ***kâ** 豨 ‘male pig, boar’; ***g^hwân** 豨 ‘kind of pig’, and ***pâ** 豨 ‘sow, pig’.
- 45) STC derives the OC form from ***p-səy** (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 烟 ***?ien** to PTB ***mey**.
- 48) Jäschke (1958: 253) cites a Persian comparandum (in Arabic script) for these Tibetan words. Sulung **du³³wa⁵³** 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 **kn**.
- 51) This word is derived from the Jg. verb **tâ** ‘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 **bryaŋ**; the Sulung 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. **-ʔ** (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 ***dzjəg** 飩 ‘feed, give food to’ and ***ts^hân** 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 **-wé-** ‘reported speech’.
- 64) PKB revised this reconstruction to ***sgjwər**. Allofamically related is ***g^hiwəd** 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: ***pjwət** 弗 ‘not’; ***pwət** 不 ‘id.’; ***pjug** 否 ‘id.’; ***pjwər** 非 ‘it is not’; ***mjwəd** 未 ‘not yet’; ***mjwət** 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**.
- 67) See Li Daqin (2004: 138).
- 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’ ***syā** > Tuj. **si**²¹.

References

- Benedict, Paul K.
 1972 *Sino-Tibetan: a Conspectus*. Contributing Editor, James A. Matisoff. Cambridge University Press.
 1975 *Austro-T(h)ai Language and Culture, with a glossary of roots*. New Haven: Human Relations Area Files Press.
- Bradley, David
 1979 *Proto-Loloish*. London and Malmö: Curzon Press.
- Burling, Robbins
 1959 Proto-Bodo. *Language* 35: 433–453.
 1967/1968 *Proto-Lolo-Burmese*. The Hague: Mouton and Co. Issued simultaneously as IJAL 33.2, Part II.
 1983 The Sal languages. *LTBA* 7(2): 1–31.
 2004 *The Language of the Modhupur Mandi (Garo)*. Vol. I: *Grammar*. New Delhi: Bibliophile South Asia, in association with Promilla & Co. Vol. II: *Lexicon* (on-line). Vol. III. *Glossary* (on-line).
- Cook, Richard S.
 2003 《說文解字·電子版》Shuo Wen Jie Zi—Dianzi Ban: Digital recension of the Eastern Han Chinese grammicon. Ph.D. dissertation, University of California, Berkeley.
- Dai Qingxia, *et al.*, eds.
 1992 *A Tibeto-Burman Lexicon*. [in Chinese] Beijing: Central Institute of Minorities. (“TBL”)
- French, Walter T.
 1983 Northern Naga: A Tibeto-Burman mesolanguage. Ph.D. dissertation, City University of New York.
- Hayashi, Norihiko
 2008 Historical development of Youle Jino and the linguistic substratum of Tibeto-Burman. Paper presented at the *Symposium on Linguistic Substrata in Tibet*, Osaka, Sept. 9–11.
- He Tianzhen
 1987 The relationship between the Tujia and Qiang languages. Paper presented at ICSTLL #20, University of British Columbia, Vancouver.

- 1994 Tujia-zu ji qi yuyan [The Tujia people and their language]. *Waiguoxue Yanjiu* 31: 11–31. Kobe: Kobe City University of Foreign Studies.
- Jäschke, H.A.
1881 *A Tibetan-English Dictionary*. London. Reprinted (1958) by Routledge and Kegan Paul Ltd., London.
- Jones, Robert B., Jr.
1961 *Karen Linguistic Studies: Description, Comparison, and Texts*. Berkeley and Los Angeles: University of California Press.
- Karlgren, Bernhard
1957 *Grammata Serica Recensa*. BMFEA 29: 1–332. (“GSR”)
- Koi Lam Thong
2001 A phonological reconstruction of Proto-Chin. M.A. thesis, Payap University, Chiang Mai, Thailand.
- Li Daqin
2004 *Sulong-yu Jianzhi* [Outline Grammar of the Sulong Language]. Beijing: People’s Publishing Co.
- Matisoff, James A.
1972 *The Loloish Tonal Split Revisited*. Berkeley: Center for South and Southeast Asian Studies, University of California.
1978 *Variational Semantics in Tibeto-Burman*. Philadelphia: Institute for the Study of Human Issues.
1979 Problems and progress in Lolo-Burmese: Quo Vadimus? *Linguistics of the Tibeto-Burman Area* 4(2): 11–43.
1985a God and the Sino-Tibetan copula, with some good news concerning selected Tibeto-Burman rhymes. *Journal of Asian and African Studies* 29: 1–81.
1986 Hearts and minds in Southeast Asian languages and English: An essay in the comparative lexical semantics of psycho-collocations. *Cahiers de Linguistique Asie Orientale* 15(1): 5–57.
1988 *The Dictionary of Lahu*. Berkeley, Los Angeles, London: University of California Press.
1997 *Sino-Tibetan Numeral Systems: Prefixes, Protoforms and Problems*. Pacific Linguistics B-114. Canberra: Australian National University.
2000 On the uselessness of glottochronology for the subgrouping of Tibeto-Burman. In Colin Renfrew *et al.* (eds.), *Time Depth in Historical Linguistics*, 333–371. Cambridge, U.K.: The McDonald Institute for Archaeological Research.
2001 On the genetic position of Bai within Tibeto-Burman. Paper presented at ICSTLL 34, Kunming. [To appear (2007) in Chinese translation (*Zang-Mian yuxi-li de Bai-yu xishu wenti*) by Fu Jingqi.]
2003 *Handbook of Proto-Tibeto-Burman: System and Philosophy of Sino-Tibetan Reconstruction*. Berkeley and Los Angeles: University of California Press.
2004b ‘Brightening’ and the place of Xixia (Tangut) in the Qiangic subgroup of Tibeto-Burman. In Ho Dah-an (ed.), *Studies on Sino-Tibetan Languages: Papers in Honor of Professor Hwang-cherng Gong on his 70th Birthday*, 327–352. Taipei: Institute of Linguistics, Academia Sinica.

Mazaudon, Martine

- 1993–94 Problèmes de comparatisme et de reconstruction dans quelques langues de la famille tibéto-birmane. 2 vols. Ph.D. dissertation, Université de la Sorbonne Nouvelle.

Ratliff, Martha

- 2006a Response to Sagart's 'The higher phylogeny of Austronesian: the position of Tai-Kadai.' Paper presented at University of Michigan Historical Linguistics Group. (February)
- 2006b The uses of lexical stability. Paper presented at 11th Spring Workshop on Theory and Method in Linguistic Reconstruction, Ann Arbor. (April)

Starostin, Sergei and Ilya Peiros

- 1996 *A Comparative Vocabulary of Five Sino-Tibetan Languages*. 5 fascicles. Dept. of Linguistics and Applied Linguistics, University of Melbourne.

Sun, Jackson Tianshin

- 1993a A Historical-comparative study of the Tani (Mirish) Branch of Tibeto-Burman. Ph.D. dissertation, University of California, Berkeley.
- 1993b The linguistic position of Tani (Mirish) in Tibeto-Burman: A lexical assessment. *LTBA* 16(2): 143–188.

Tian Desheng, He Tianzhen, Chen Kang, Li Jingzhong, Xie Zhimin and Peng Xiumo

- 1986 *Tujia-yu Jianzhi* [Outline Grammar of the Tujia Language]. Beijing: People's Publishing Co.

VanBik, Kenneth

- 1998 Lai psycho-collocation. *LTBA* 21(1): 201–233.
- 2006 *Proto-Kuki-Chin*. Ph.D. dissertation, University of California, Berkeley.

Whorf, Benjamin Lee

- 1956 *Language, Thought and Reality* (ed. J. B. Carroll). Cambridge, MA: MIT Press.

Xu Lin and Zhao Yansun

- 1984 *Bai-yu Jianzhi* [Outline Grammar of the Bai Language]. Beijing: People's Publishing Co.