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Review: James A. Matisoff (2003) *Handbook of Proto-Tibeto-Burman. System and philosophy of Sino-Tibeto-Burman Reconstruction*. Berkeley, Los Angeles, London: University of California Press.

For over thirty years the only general work on ST comparison and TB reconstruction had been Benedict's *Conspectus* (Benedict 1972; henceforth STC). Written around 1942-3, the manuscript was published in 1972, edited by Matisoff, updated with a thick layer of footnotes which presented Benedict's, and in some cases, Matisoff's ideas at the time the manuscript was being prepared for publication. The STC included several hundred reconstructions for a proto-language ('Tibeto-Burman') regarded as ancestral to all of ST except Chinese and Karen. Although his TB reconstructions were often cited, Benedict's system was not sufficiently explicit on sound correspondences and no one else (save Matisoff) seems ever to have used it productively. Lack of explicitness also preempted attempts at evaluating the system's internal consistency, and more generally, critical discussion. There have been expectations that Matisoff's new book would finally provide an explicit and testable system of TB reconstruction in the Benedictian tradition, as well as integrate the results of 30 years of post-STC research into Sino-Tibetan.

Matisoff's 750-page book deals with the reconstruction of the phonology, morphology and lexicon of Proto-Tibeto-Burman, conceived as ancestral to all of ST -this time including Karen-, less Chinese. The book is meant to be a companion to the *Sino-Tibetan Etymological Dictionary and Thesaurus* volumes where the full cognate sets will eventually appear, but the first fascicle of the first volume, said (p. x) to have been produced in 1997-1998, has not been made public, and no date for its publication is given on the STEDT website.

After a general introductory chapter, the *Handbook* describes the PTB syllable canon. The rest of the book is organized into chapters, each dealing with a piece of the PTB syllable: initial consonants, prefixes, rhymes, vowel length, final nasals, final stops, final liquids, final -s, suffixes. Another chapter deals with 'allofamic' variation in rhymes. There is an imposing critical apparatus, including a copious amount of front matter, two appendices on OC (by Z. Handel and R. Cook), six indexes, and a reference list. The style is readable, somewhat chatty.

1. general issues.

subgrouping

The ST family is now very widely considered to be real,¹ but its internal subgrouping remains controversial. Matisoff presents a genetic tree for ST (p. 5; index V). Sino-Tibetan (at "perhaps 6000 years BP", p. 537) has two branches: Tibeto-Burman and Chinese. The binary, Chinese-vs.-the-rest structure of ST is inherited from Benedict. Benedict appears to have regarded TB as a subgroup partly because he had himself inherited this view and partly on the basis of cognate counts (Benedict 1976). This view, though not implausible in itself, needs to be buttressed by evidence of unique TB innovations. Such evidence however, is still missing. In Matisoff's phylogeny, TB itself has a star-shaped structure, with eight branches (the Tujia ² branch as defined on p. 692 is missing in the chart on p. 5). M. does not present the grounds on which he considers any of TB's sub-branches to be valid taxa: in particular he makes no attempt to identify innovative characteristics at each node. He does not recognize, or discuss, Burling's innovation-based Sal group (Burling 1983). Recently van Driem (1997) has argued (again without presenting evidence of uniquely shared innovations) that Chinese and Tibetan belong in the same primary branch of the family. Matisoff replies in typical fashion, deriding van Driem's proposal (fn. 3 p. 535), while in effect staying clear from substance as far as his own proposal goes. In a footnote (fn. 38 p. 561) he plays down the significance of his own subgrouping ("a working hypothesis"): all right, but considering that the hypothesis of a TB branch underpins his entire book, it is a surprise, and a disappointment, that he does not defend it. ³

There is a certain disconnect between the theory and the data. Claims made in the book can only be verified by checking the cognate sets, but finding the cognate sets is not straightforward. One must check all the index references for a particular reconstruction: the reference with the cognate set is not singled out. At times the cognate set is distributed over several references (*kla~*gla 'fall'). At times where you find a set, forms in the cognate set are not glossed (*put 'burn/raze' p. 365 note d). At times there is no cognate set to be found (*nyey 'younger sibling', *g-wa <> *r-wa 'village', *kra 'head hair' etc.). These problems discourage verification.

¹ I have been one of the last doubters. After discovering the first elements of evidence of a genetic relationship between Chinese and Austronesian, where TB elements were not prominent, I claimed in a conference paper (Sagart 1990) that Chinese stood closer genetically to Austronesian than to Tibeto-Burman. That was an error. I now fully recognize that Sino-Tibetan is a valid grouping: I consider that ST as a whole, not just Chinese, forms a genetic unit with Austronesian. See Sagart (2005b).

² On p. 3 Matisoff puts Tujia, a TB outlier language in Central China, among those TB language with over a million speakers: unfortunately only 50.000 to 60.000 actually speak Tujia, most of them northern Tujia (Xu Shixuan, p.c. 2005). The vast majority of ethnic Tujias speak Mandarin Chinese.

³ I use 'TB' to mean 'all ST languages except Chinese'. My use of that term should not imply that I am presently convinced that it is a valid grouping.

method of reconstruction

There is no statement of method except in the most general terms ("conservative"; "care"; "suitably hedged": p. xii). M. says all reconstructions are to PTB unless otherwise indicated, but some are based on evidence from only one TB language (*l-ta-t-s 'look', *blu-t-s 'ransom', both based on WT, p. 456); others are based on one TB language plus Chinese (*m:in 'name, order, command' p. 529; *grol 'finish, loose, relax' p. 423). As for data, M. appears to have in view the entire body of evidence ever published on all TB languages, with an emphasis on Lolo-Burmese, and especially on Lahu, M.'s specialty. Yet Written Tibetan, the oldest TB literary language, with its abundant literature and convenient lexicography, is under-represented. Because many TB languages are not well documented, the sound correspondences for all of them cannot be known, as Matisoff acknowledges elsewhere (1991). Unfortunately, when he gives cognate sets, he does not say which forms obey known sound correspondences, and which are included on the basis of educated guesses. Consider *ta 'box, cabinet', a reconstruction based on Lahu ta-qō, Naxi tō⁵⁵, Tujia tho⁵³, Karen (which?) dǝ⁵⁵ and Pumi tó. On p. 164 M. gives a sound correspondence that accounts for the Lahu vowel reflex, but the initial consonants in all five languages, as well as the Naxi, Tujia and Karen tones, are not supported by any explicit correspondences. Because the boundary between sound correspondences and guess-work is not marked in the cognate set, the reasoning which led M. to reconstructing *ta cannot be fathomed. This is a very widespread problem with Matisoff's book, just as it was with Benedict's.

falsifiability

Matisoff characterizes his own hypotheses as falsifiable (p.9), in contrast to theories like Jones's Sino-Mayan, Starostin's Sino-Caucasian and my own Sino-Austronesian, which he vituperates collectively on p. 536. Matisoff forgets that for Popper falsifiability goes on a par with explicitness. Only explicit theories can be tested, and hence falsified. I cannot speak for Jones and Starostin but I can assure Matisoff that my Sino-Tibetan-Austronesian theory (Sagart 2005) is very explicit on sound correspondences and makes predictions that can be tested linguistically in a number of ways. It is in fact with Matisoff's work that lack of explicitness gets in the way of falsification.

2. TB

sound system of PTB

Overall, the reconstructed system is inherited from Benedict; changes are in the direction of replacing phonological or morphological problems with untestable variation hypotheses: for instance syllable-initial alternation between velar stops and zero in languages like Lushai and WB, treated by Benedict

as conditioned by prefixes, is regarded by M. as a lexical alternation at the PTB level. Thus 'shoot', Benedict TB *ga:p, is replaced by two PTB 'allofams': *ga:p and *ʔa:p. In the next section, a suggestion will be made that the velar vs. zero alternation reflects earlier uvulars.

initial consonants

Initial consonants (Chapter 3) are the least well understood and the shortest part of the book: only 44 pages. Matisoff offers little discussion of the evolution of manner contrasts: on this central issue of TB comparison he refers the reader to the minimal, 60-year-old chart of initial correspondences for WT, WB, Kachin, Garo and Lushei in STC 17-18. Surely sixty years of research should have led to the chart being modified, improved, enlarged, but disappointingly Matisoff's book does not approach the issue. Benedict thought two manner types for stops (voiced vs. voiceless), combined with various morphological processes, were sufficient to account for the evolution of manners contrasts in TB languages. His chart of correspondences makes testable predictions on the manner of articulation of Tibetan and Burmese and, to some extent, Lushei stops, but basically excludes no stop reflexes at a given point of articulation in Garo and Jingpo. In addition, Benedict assumed that PTB had a morphological process ("alternation of root initial"), whereby transitive verbs with voiceless initials alternated with intransitive verbs with voiced initials, for instance PTB *bleŋ 'straight' vs. *pleŋ 'straighten'. Matisoff maintains the same range of assumptions, but treats root alternation, not mentioned by name, simply as lexical variation at the PTB level. Thus one still finds reconstructions like *bleŋ~pleŋ 'straight(en)', but here the members of the pairs form a lexical doublet, and the single gloss for the two forms suggests (perhaps falsely) that Matisoff does not believe that the voicing and transitivity contrasts are correlated. In Sagart (2003), I have argued that the transitivity-related voicing alternation, at least, is better explained as induced by a prefix (intransitive m-, see below) than as lexical variation in PTB, and even in PST. Benedict's 'root alternation' and Matisoff's lexical variation are over-powerful, make the theory less parsimonious, and reduce its empirical content. Every effort should be made to replace them with explicit prefixation hypotheses. Matisoff earlier (1972) produced such a hypothesis for Burmese-Lolo. It would have been interesting to know how similar proposals fare in other TB languages or branches.

Matisoff gives a proto-system of 23 initial consonants. Discussion is speedy and not quite to the point. The reader is invited to admire e.g. the "fricativality" of the Pumi (p. 29), but Matisoff gives no tabulation of reflexes for proto-initials, even in the most important languages. The reader who wishes to find what the reflex of a particular initial is in, say, Tibetan, must turn to the index of reconstructed roots, look up each root beginning with a particular initial, and check the text for occurrences of that root in Tibetan. As an illustration, I have investigated unprefixated *w-, an initial

occurring in 23 reconstructed etyma. There is a blanket statement on p. 46 that its usual reflex in TB languages is w or v, and some detail is given on Loloish and Karen, but there is no statement anywhere in the book what *w- might go to in WT. Upon checking the index, I found to my surprise that while Matisoff's unprefixed *w- is reflected (as w-) in at least eleven WB words, it is reflected in only *one* WT word: Hon (where 'H' writes the Tibetan letter known as 'a-chung') 'bring' < TB *wal 'load, burden, transport'. Here Matisoff has missed a sound correspondence (Table 1).

	WB	WT
'go'	s-wâ	H-gro
'tuber'	wa'	gro
'round'	wân	gor
'opening, open space/space'	ə-wa'	go

Table 1. WB w- corresponding to WT g-. Note: The forms in bold type are not cited by Matisoff.

Table 1 shows that the missing reflex of Matisoff's *w- in WT is g-. Because Matisoff does not give a table of the reflexes of TB initials even in the main languages, one cannot see at a glance how widespread the problem identified here for *w (no reflex of a phoneme in a very well described literary language) is.

Unexpected alternation between labial stops and w-, widespread in TB languages (e.g. 'pig': WT phag, WB wak), was first treated by Benedict (1972:23, text) as a case of lenition of labial stops when preceded by a lost prefix. Later (1972: 23, fn. 78) he regarded it as characterizing words with initial w- with or without a preceding p- or b- prefix. Matisoff proposes a third interpretation: a -w- glide arises between a labial stop initial and a following -a- (that is, Pa- > P^wa-), after which the stop may, or may not, be reanalyzed as a prefix ("extrusion") and dropped. In Matisoff's view, then, alternation between labial stops and w- is due to "extrusion", a process randomly changing P^wa- initials to wa-: and yet his reconstructions distinguish between PTB *Pa- and *P^wa- (only P^w- can evolve to w-). This is presumably because he cannot state the conditions under which the glide arises. Moreover, since Matisoff also has PTB *Pw-, with full segmental -w-, his PTB actually has a three-way contrast between P-, P^w- and Pw-. This is not felicitous. Furthermore, it is not clear why the initial is not just as often reanalyzed as a prefix in *Pw- (or in *Kw-, Ky-, Py- etc., for that matter). Benedict's first solution, which is also that supposed by Haudricourt and Ferlus (see Ferlus 1982) to explain Vietnamese spirantization of voiceless stop initials, should be preferred.

Another problem with M's inventory of consonants is the alternation, already mentioned, between initial velars and zero. Matisoff treats it as just variation, but another possibility, adopted in Peiros and Starostin (1996), is that this alternation reflects earlier uvular initials. In support of this, Gyarong (Jacques 2004) has contrastive velars and uvulars, and some of the words which in Burmese and Lushai have zero initial have uvulars in Gyarong ('needle'; 'jaw'). In Old Chinese too evidence for uvular consonants may be derived from phonetic series mixing Middle Chinese velar and laryngeal initials: significantly, 'needle' and 'jaw' belong to such series.

rimes

The treatment of TB rimes forms the core of the book: 280 pages are devoted to it. The inventory of vowels /i e a o u/, with a length contrast, and of final consonants /p t k m n ŋ y w l r s/, are taken unchanged from Benedict. This part is much more detailed and explicit than with initial consonants, a most welcome advance from the STC. Here reflexes of the posited proto-rimes in some important languages (usually Tibetan, Burmese, Jingpo, Lahu, Lushai, and a representative of the Bodo-Garo group, sometimes also Mikir, Nung) are tabulated and examples are given. Evidence for the different rimes varies from the very strong (*-a) to the very weak (*-e). The majority of the rime correspondences presented in the book appear credible at first sight, but the uncertainty on initial consonants and on tones (below) weighs on the comparisons. Tibetan, again, is under-studied (thus four out of thirteen diphthongal TB rimes in Table 14 p. 235 are without WT reflex); yet overall this long section is the most successful of the entire book.

tones

Tone languages in East Asia occupy a large continuous area encompassing all of Hmong-Mien and Tai, plus some ST and Austroasiatic languages. The origin of Vietnamese and Chinese tones has been successfully explained by Haudricourt (1954a,b) as resulting from the loss of final laryngeal segments around 2000 years ago. It is highly likely that tonal TB languages acquired their tones in similar ways. Benedict (1972: 194) saw a basic two-tone agreement between Chinese and some tonal TB languages. It increasingly seems that the contrast observed by Benedict is real, though phonetically it was probably a contrast between sonorant endings followed by a glottal stop and sonorants not followed by a glottal stop. Matisoff's PTB has neither tones nor anything out of which tones can arise. He is aware of the problem (p. 542), but wishes to leave open the possibility, defended by him so far, that tones arose "repeatedly and independently" (out of what?) in TB languages: not a very promising proposition.

Vowel length

Especially on the basis of Lushai, Benedict reconstructed a PTB vowel length contrast, with marked long vowels. He reconstructed few words with long vowels, however. Matisoff reconstructs many more. This will be of particular interests to students of Chinese, because it has been claimed by Zhengzhang and Starostin that the TB length contrast correlates with the Chinese distinction between type A and B syllables (type B syllables are those in which a medial yod appeared in Middle Chinese). At first sight, the TB length distinction as reconstructed by Matisoff does not correlate particularly well with the Chinese distinction: thus, in the pair of TB rimes -uk and -u:k (pp. 356ff), two comparisons with Chinese ('six', 'deep/thick') support the proposed alignment of TB long :: Ch. type A, TB short :: Ch. type B, while four ('brain', 'neck', 'poison', 'belly') argue against it. I have not conducted a full investigation of the correlation between the two features, however.

morphology

prefixes

nasal prefixes. An intransitive nasal prefix m- was reconstructed for TB by Wolfenden (1929), and this is maintained by later writers, including Matisoff. Sagart (1993, 1994, 1999, 2003) identified the corresponding prefix in Chinese: N-, preserved as prenasalization in early loans to Hmong-Mien. Matisoff appears unaware of Sagart's work on this prefix, as well as on Old Chinese morphology (Sagart 1999). He fails to recognize the existence of a second nasal prefix *mǝ-, of volitional or controllable action (often causative in TB), which at times merges phonetically with intransitive m- and at times is kept distinct. This prefix was first reconstructed for Old Chinese by Sagart (1999) but the reconstruction appears to hold good for the whole of ST. Thus Matisoff (p. 119) is puzzled by the fact that in Daai Chin, prefixed m- (which in his mind can have no other source than PTB intransitivizing m-) has a causativizing function, while the intransitive or stativizing function "has been taken over by another Daai nasal prefix, ng-".⁴ I believe that Daai Chin causative m- comes from PST volitional *mǝ-. More examples of this prefix can be found in other TB languages, like Kachin and Karen; most of the proto-Loloish verbs reconstructed by Bradley (1979) with prefixed m- are of this type: 'dig' *m-du², 'grind' *m-kriH, 'hit' *m-tokH, etc., and even some PTB forms by Benedict: *m-dza 'to love', *m-lyak 'to lick'.

Other prefixes. Matisoff gives more detail than the *Conspectus*, but his discussion is hardly complete. Thus for *d- he presents the prefixed bodypart terms of Ao Naga as late and secondary, overlooking

⁴ G. Jacques (p.c., January 2005) observes that the ng- prefix of Daai Chin belongs in a set of reflexive/reciprocal prefixes including Gyarong (Cogtse) nga- and Tangkhul Naga ng-: he suggests TB antiquity for a reciprocal/reflexive ŋ- prefix.

those in Lepcha (Mainwaring 1979 [1898]) and in Gyarong (Jacques 2004): thus 'stomach, belly': Ao Naga te-pok, but also Lepcha tä-bāk, Gyarong tə-pok. He lists the *d- prefixed kinship terms of Ao but omits those in Gyarong; he discusses an 'attributive-adjectival' function of *d- in Jingpo, but overlooks the Lepcha examples (tä-gryuk 'naked', tä-gryom 'lying forward', tä-bun 'large and shaggy'). Sagart (1999) identified a t- prefix in Chinese which has some of the same functions: it occurs primarily in intransitive and stative verbs, including color terms (as in Jingpo): thus 經 MC trhjeng 'red' < OC ʔt-khrej (compare Matisoff's PTB *kyeng 'red'), and in at least one kin term: 姁 MC tsyowng 'husband's elder brother or father' < OC ʔt-kong.

suffixes

While TB does have a number of relatively well-supported suffixes, all of them alveolar (such as nominalizing -s, transitive or applicative -t, nominalizing -n), the basis for several of Matisoff's suffixes is extremely thin. "Collective or pluralizing" -n (p.446), inherited from Benedict, is based on a very small number of non-minimal pairs whose members are drawn from different languages, and none of which exhibits the required semantic contrast. It probably does not exist. A new "mysterious" and "semantically elusive" suffix introduced by Matisoff is -k (p. 479). This is better understood as a root-final consonant, lost in conditions that have not been identified. When roots where Matisoff supposes -k have Chinese cognates, Chinese normally has -k. This must be because the form with -k is basic. In turn, Matisoff's empty "suffixes" become a source of confusion between TB roots: thus M. reconstructs a root *kla ~ gla 'to fall', reflected in particular in the WB pair khya' 'throw down' vs. kya' 'to fall'. He claims (580) that Lushai tlaak 'fall' reflects the same root, suffixed with -k. However, while Lushai tl- can only reflect an earlier gl-, WB ky- can reflect gr- as well as gl-. Gyarong, which distinguishes gr- and gl- (Jacques 2004: 411) has the same pair as WB: cf. Japhug ka-kra 'make fall' vs. ka-ŋgra 'fall', showing the medial was -r- (and incidentally that the alleged "variation" between k- and g- is really due to the intransitive nasal prefix): we are dealing with two distinct roots: (1) *kra 'throw down' (intransitive *mkra 'fall'); and (2) *glak 'fall'. Both roots have Chinese counterparts: (1) 稼 ʔkra(?) -s 'to sow' (=throw down seeds) (intransitive: 下 ʔNkra? 'to go down'), and (2) 落 ʔkə-lak 'to fall'. On p. 443 Matisoff justifies his resorting to "suffixes" with no semantic or grammatical content by comparing them to the Indo-European augments. An important difference is that when you remove one of Matisoff's empty suffixes, typically one consonant is left in the stem, and lexical comparisons become considerably shakier. In effect Matisoff is using empty suffixes as wild cards.

lexicon

Matisoff's book contains many proposed TB and lower-level cognate sets, a good number of them enlarged from the STC, some entirely new. Despite the methodological problems described earlier, TB reconstructions at times converge with OC reconstructions, more that M. himself realizes. Thus his PTB *dzəy 'seed' and PLB m-dzəy 'liquor' (188, 189) are good matches for OC 資 ʔdzij 'store of grain' and 釀 ʔdzij 'liquor', both with the 次 phonetic.⁵ Some of the new TB etyma provide etymological solutions to words earlier reconstructed, for instance M.'s TB reconstruction for 'copper': *grəy, is probably to be referred to his *s/m-grəy 'melt'. They can also explain certain grammaticalizations: thus the ST negation *ma- may have been grammaticalized out of Matisoff's *ma 'lose, disappear'. There are also problems, discussed below.



Undetected loans, anachronisms.

Matisoff has no safeguards against loans. Loans from Chinese are not recognized: Matisoff (p. 504) compares WT pir 'writing brush' to Chinese 筆 *bǐ* < MC pit 'id.', apparently implying PST had writing-related terms. This is hard to believe. The oldest indigenous writing system in all of East Asia, from c. 3400 BP, is the Chinese script. Tibetan, the oldest ST literary language outside of Chinese, was not reduced to writing until c. 700 CE. How can PST speakers have known writing brushes? The isolated WT form, with tell-tale final -r, is without a doubt a late borrowing from a variety of NW Chinese where -t had become -r in the late first millennium CE (Coblin 1994: 55 for the sound change).

A similar story may be told about the word for 'ride'. Matisoff reconstructs two distinct TB forms of that meaning: *gyar and *gyi, claiming (188) that the second has "an obvious Chinese cognate" in 騎, MC gje, Mandarin tʰi. However this Chinese word goes back to OC *bgaj, which can reflect an earlier *gar. This is a much better match for TB *gyar than for TB *gyi. The collection of forms under Matisoff's high-vowelled *gyi 'ride' are from TB languages in contact with Chinese (Lolo-Burmese, Qiangic, Tujia): they are best regarded as late loans from Chinese.

Despite his anti-megalocomparativist stance, Matisoff is himself a half-believer in Austro-Tai. This theory of Benedict's says that the Austronesian and Tai-Kadai families originate in an early SEA language —Proto-Austro-Tai—, once the bearer of the high culture in East Asia, which allegedly loaned large numbers of cultural words to Sino-Tibetan languages. Benedict's idea that ST, and

⁵ Bill Baxter (p.c., January 2005), points out that the correspondence between TB *-əy as reconstructed by Benedict and Matisoff often corresponds to his own OC rhyme *-ij.

especially Chinese, have a thick layer of "loans from Austro-Thai" is based on very early, but now discredited, dates for bronze in northern Thailand (Solheim 1971): the idea that the Chinese vocabulary of agriculture, metallurgy, horse-riding etc. might contain numerous loans from an early SEA language is simply not to be taken seriously in view of modern Asian archaeology (Bellwood 1997), quite apart from the fact that it makes no linguistic sense (Sagart 1999 for metal names).⁶ Yet Matisoff's book is scattered with observations telling the reader that words like 'writing brush' and 'ride' just discussed⁷ may well be loans from Austro-Tai into ST (188; 504).

missing cognate sets

Many important TB and ST cognate sets are missing from M.'s book, even in the most basic vocabulary (in the following, '#' indicates a pre-reconstruction): #ka 'I' (first-person pronoun): Qiang, Kuki-Chin, Chang Naga, Lhokpu, Dhimal, Toto, Geman Deng, etc.; #a '1' (Aka, Bai, Qiang); #koŋ '2' (Bai, Jingpo, Sulung); etc. Essential crop names like the two millets #tsək 'Setaria italica': Chinese 稷 *tsik (Trung, Lhokpu) and #tsap 'Panicum miliaceum': Chinese 稷 *tsap-s (WB) are also missing.

3. Sino-Tibetan

Despite '*Sino-Tibetan reconstruction*' in the subtitle, this book does not present a reconstruction of ST, neither does it identify new sound correspondences between TB and Chinese, or approach ST morphosyntax. Presentation of Chinese cognates ("comparanda") is the main goal. These are tabulated in the various chapters on rimes. The great majority are inherited from Benedict and other sources, in particular Gong (2002). Some are Matisoff's own Burmese-Lolo based cognate sets. Often there are several widely different Chinese comparanda for one TB word, or vice versa. M. "lets the reader choose". The tables of Chinese comparanda are of limited value in elucidating the system of sound correspondences between TB and Chinese rimes, because (a) the system of reconstruction chosen for OC gives a severely distorted image of OC phonology, (b) the charts include many faulty comparisons and (c) many valid comparisons have not been seen. For significant progress on ST sound correspondences, see Gong (2002).

⁶ Yet Benedict's early linguistic observations on Austronesian and Thai were accurate. Much progress on sound correspondences between Tai-Kadai and Austronesian has been achieved by Ostapirat (2005), leaving no doubt that a genetic interpretation is valid. But Tai-Kadai is not a distinct group from Austronesian: as I have recently argued (Sagart 2005a), the Tai-Kadai languages participated in several early Austronesian innovations and must therefore be considered a branch of Austronesian, coordinate with Malayao-Polynesian.

⁷ According to Benedict, the ST word he identified as meaning "brush" was borrowed as 'fibre' from his Austro-Tai, changing to 'brush' only in ST.

Use of Karlgren's OC reconstruction

It is cause for consternation that M is still using Karlgren's system of OC reconstruction.⁸ Karlgren's reconstruction in its final shape is embodied in his *Grammata Serica* of 1940. When Benedict wrote his *Conspectus* in 1942-43 it was natural that he should use that reconstruction, then the most advanced in the world. By the late 1960's, when Benedict and Matisoff were preparing the *Conspectus* for publication, work by Haudricourt (1954a,b), Pulleyblank (1962) and Yakhontov (1965) had already resulted in major modifications to Karlgren's system, even though their work had not been presented to the non-sinological public in as convenient a format as *Grammata Serica*. The revised *Conspectus* took no notice. Li Fang-kuei's system (1971, 1976), a very clearly and systematically exposed revision and simplification of Karlgren's (although it did not incorporate all the insights of Haudricourt, Pulleyblank and Yakhontov) became the new standard of OC reconstruction in the eighties. Benedict and Matisoff could, and should, have used it, but Li's system contained features that they could not accept, such as r-clusters in words which in their reconstruction of TB had no -r-. When, starting in the eighties, the results of the next wave of scholarship (Zhengzhang 1987; Starostin 1989, Baxter 1992) started appearing, independently arriving at essentially the same system of over fifty OC rhymes (as against 30 or so in the systems of Karlgren and Li) and adopting features originally proposed by Pulleyblank and Yakhontov, making Li's system obsolete, it was too late, the body of Chinese-TB lexical comparisons Benedict and Matisoff recognized was too dependent upon Karlgren's OC for them to allow their treatment of the ST family to be affected by the insights of sixty years of successful post-Karlgrenian research into OC. In this book (and elsewhere) Matisoff makes a virtue of necessity, adopting the stance that OC reconstruction is in disarray, that there are a multitude of competing proposals on OC which cannot be evaluated on Chinese evidence alone, and that "until the dust settles" (542) it is preferable to stick with Karlgren's old system. This choice is unfortunate. For all its immense historical merits, Karlgren's system fails to use the same vowel for OC words which rhyme together in OC poetry, has a spurious series of unaspirated voiced stop initials, has spurious voiced stop endings -b, -d, -g in most MC open-vowelled rimes, misses medial -r-, misunderstands the evolution of laterals... almost any post-Karlgrenian system is preferable to Karlgren's.

There are many comparisons to his own TB etyma which Matisoff has missed because Karlgren's system misrepresents OC. Here are examples of TB-Chinese comparisons with initial l- which M. could have seen, had he used a modern system of OC reconstruction such as Baxter (1992) or

⁸ With many errors: 梯 *t'ier* for *t'ier* pp.220, 511; 中 *tjəŋ* for *tjəŋ* p. 310; 鷹 *ʔiaŋ* for *ʔəŋ* p. 263; *dziäg* 霽 for *d'jäg* p. 176; 薯 *djo* for *djo* p.173; etc.

Sagart (1999): M. *m-ley ~ m-løy 'ground, earth, country' :: 地 ^alej 'ground' (M. compares the TB word to 泥 ^anij 'mud, mire'); M. *b-ling 'forest, field' :: 田 ^aliŋ 'field'; M. *m/s-lyak 'lick, tongue, eat (of animals)' :: 食 ^bm-lik 'eat' (M. compares the Chinese word to his *dzya(k) 'eat'); M *luk/lung 'maggot' :: 蟲 ^blruŋ 'insect, vermin' (M. compares the Ch. word to his *dyuŋ 'insect, bug'); M. *s-la 'tea' :: 茶 ^alra 'tea' (a TB loan into Chinese, Sagart 1999); M. *s-lum~lim 'warm, make warm' :: 尋 ^bs-lim 'to warm up'; M. d/s-løy 'bow, slingshot' :: 矢 ^bhlij? 'arrow' (M. unbelievably compares this word with his TB *tal 'arrow/bow', for which the correct comparison is 彈 ^am-tar 'shoot pellets at'). Failures of this type are not limited to laterals, of course: Benedict (1972: 174) thought he had identified a correspondence between TB labial stops p-, b- and Chinese ɣ- on the basis of two comparisons: TB *bwaŋ 'uncle' :: Ch. 兄 'elder brother', Karlgren *ɣiwǎŋ, and TB bwar~pwar 'burn, roast' :: Ch. 火 'fire,' Karlgren ɣwâr. Matisoff adds new allegedly related TB forms. In fact Li Fang-kuei (1971) showed that 火 'fire' had initial hm- in OC, based on the word-family connection with 焜 'burn' (GSR 583e), Karlgren *ɣmjiwər. This is widely accepted. Moreover final -r in this word is a reconstructive error of Karlgren's: Baxter (1992) reconstructs *hmaj?. Thus the correct comparandum for Ch. 火 'fire' is *mey, the main TB word for 'fire', not Matisoff's TB *hwa:r 'shine, bright' (misleadingly given as 'fire' in the index), or hwal~hwar 'fire, shine' (no cognate set given), or *pwa:r 'burn'. Likewise, Ch. 兄 'elder brother' has been shown to be a cognate of 孟 ^amraŋ 'elder brother' (Bodman 1954:35, Peiros-Starostin 1996; Sagart 1999:171). It reconstructs to OC *^bhmraŋ: the correct comparandum for Ch. 兄 'elder brother' is Benedict's TB *maŋ 'big, older' (brother, uncle), not his TB *bwaŋ 'uncle'.

faulty comparisons

In general, I estimate at over 15 % the proportion of faulty Chinese comparisons in M's book. Thus, of the 73 Chinese comparanda proposed by M. for TB words with rime *-a (p. 172ff), *at least 12* should be discarded, 8 of them involving empty suffixes (especially -n) on the TB side:

1. *srya 'yam/potato' :: 薯 ^bda(?)s 'bulb, tuber' (Karlgren ^djo; see fn. 8). The correspondence of initials is off. Expect a dental stop in TB. Better: Garo ta? 'tuber' (Burling 2004:35).
2. *m/s-twa 'spit/spittle' :: 吐 ^atha? 'spit, spittle' (Karlgren t'o). The Chinese word does not explain -w- in TB. Better: 唾 ^athoj-s (Karlgren t'uâ-) 'spit', identified by M. p. 174. For a parallel: WT 'spit' tho, 'hammer' tho :: OC 唾 ^athoj-s 'spit', 錘 ^bdroj 'sledge-hammer', both with the GSR 31 垂 phonetic.
3. *ka 'word/speech' :: 歌 ^akar 'sing, song' (Karlgren kâ). Sound correspondences are fine, but the better comparison, with better semantics and more specific phonetics, is on p. 401: *ga(:)r

- 'dance/sing'. Final -r in the TB form correctly predicts that words from the phonetic series of 歌 will have word-family contacts to words in -n.
4. *tsa-n <> za-n 'child' :: 親 ^ʰtshin 'parents, relatives'. Weak semantics; vowel correspondence off (see below at 'red', example 11). This is one of the comparisons offered by Benedict in support of his collective -n suffix.
 5. r-tswa-n 'grass' :: 草 ^ʰtshu? 'grass' (Karlgren ts'ôg). Vowel correspondence is off (M.'s only other ex. of this corr. is wrong too, see example 6 below). Better: 苴 (GSR 47t, q') ^ʰtsha, ^ʰtsha 'straw', with the well-established a :: a correspondence, despite slightly less good semantics. Medial -w- is a problem, though it is seen only in WT in this word.
 6. *s(y)a-n 'animal/flesh/body' :: 獸 ^ʰhlu(?) -s 'animal' (Karlgren śiôg). This word has graphic loan contacts with 首 ^ʰhlu? 'head' in the Zhou bronze inscriptions, which disambiguates the OC initial and makes a comparison with the proposed TB comparandum untenable, in addition to the unacceptable vowel correspondence.
 7. *s(y)a-n 'animal/flesh/body' :: 身 ^ʰhniŋ 'body' (Karlgren śiĕn). M. presents this as an alternative to the preceding. Baxter (p.c.) has recently given evidence that the initial of the Ch. word was hn-, which makes it a likely cognate of M.'s TB *s-niŋ 'heart' (through the notion of 'trunk'), but certainly not of M.'s *s(y)a-n.
 8. *m-ka-n 'heavens/sun' :: 天 ^ʰhlin 'heaven, sky' (Karlgren t'ien). Both the initial and main vowel correspondence are off. Dialectal variation between th- and x- in this word unambiguously points to OC ^ʰhl- and in no way to an earlier velar initial.
 9. *s/m-ra-ŋ 'horse' :: 馬 ^ʰmra?. This comparison is genuine but the horse arrives too late in Chinese culture to be inherited (Sagart 1999:195sq). The Chinese word has to be a loan from TB, made in the second mill. BCE.
 10. *tya-n 'red' :: 朱 ^ʰto 'red' (Karlgren t̥iu). Vowel correspondence without parallel. Better: 丹 ^ʰatan 'red, vermilion, cinnabar', given by M. just below.
 11. *tya-n 'red' :: 緋 ^ʰtsin-s 'pale red' (Karlgren tsjĕn). No good parallels for ty- :: ts-; no good parallel for the vowel corr. (see example 4).
 12. *tya-n 'red' :: 緋 ^ʰtshin-s 'red' (Karlgren ts'ien). No good parallels for ty- :: tsh-; vowel corr. off.

Certain comparisons are illustrative of an accumulation of weaknesses in Matisoff's method: thus, following an idea of Benedict's, later abandoned by him, M. compares his TB *s-ləy-t 'heavy' with Ch. 輕, Karlgren t̥iĕd 'carriage heavy in front'. The weaknesses here are that (a) final -t in the TB reconstruction is an empty suffix, and (b) there is no evidence in the Ch. form for a lateral. In the Sagart (1999) system, the Chinese word reconstructs to OC *^ʰbtik-s or ^ʰbtit-s. This corresponds perfectly to WB tac < tik 'heavily, weightily', a form overlooked by M. and in no way relatable to his

*s-ləy-t. Needless to say, M.'s comparison TB *b-ləy 'grandchild' with Ch: 姪 Karlgren d'iet, d'jěd 'nephew, niece' is spurious too, despite the fact that 姪 and 姪 share the same phonetic element. For the etymology of the Chinese word for 'nephew, niece', see Sagart (1999:166).

4. Conclusion

Despite the problems discussed in this review, Matisoff has to a large extent succeeded in making Benedict's reconstruction of TB rimes explicit, and thus testable: this is a noteworthy achievement, even if it falls short of M's stated aims. Matisoff's book will also be useful as a source of TB cognate sets, some preliminary, and of TB reconstructions which evince some patterns of regularity when compared to recent Old Chinese reconstructions. Although we are still without explicit testable theories of TB consonants and TB tones, it is clear that progress with the rhymes can only improve the prospects of solving them. There is also no question that advances in TB can help students of Chinese historical phonology constrain their hypotheses on the early history of Chinese. But this is a two-way street: TB specialists should also acknowledge that sixty-five years of research on Old Chinese have led to valuable results which they can benefit from.

Abbreviations

GSR	<i>Grammata Serica Recensa</i> (Karlgren 1964)
MC	Middle Chinese
OC	Old Chinese
PST	Proto-Sino-Tibetan
PTB	Proto-Tibeto-Burman
ST	Sino-Tibetan
STC	<i>Sino-Tibetan: A Conspectus</i> (Benedict 1972)
TB	Tibeto-Burman
WB	Written Burmese
WT	Written Tibetan

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