REVIEW ARTICLE

The Contribution of Tangut to Trans-Himalayan Comparative Linguistics

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Tangut is among a handful of Trans-Himalayan[1] languages with an early date of attestation and a vast literature. First recorded in 1042 C.E., Tangut is more recent than Chinese (c. 1200 B.C.E) and Tibetan (650 C.E.), but older than Burmese (1113 C.E.). With the loss of the Tangut polity to the Mongols in 1227 C.E., the language gradually declined, with the most recent known text from 1499 C.E. The decipherment of Tangut became possible after Pyotr Kozlov excavated a sizable number of documents at Khara-Khoto in 1909 and transferred them to St Petersburg. The language and its literature are now reasonably well understood and actively researched. Nonetheless, the diachronic development of the language has garnered scant attention. The work under review treats the phonology and morphology of Tangut within a comparative context. Jacques makes particular reference to Japhug Rgyalrong, a spoken language of our day. By any standard, the methodological rigor and philological sophistication of this work is outstanding. The author has mastery over Tangut philology and its attendant secondary literature, written in French; the work consults research in Russian, Chinese, and Japanese. Tangut texts are cited at first hand and lucidly presented. In addition, Jacques brings the results of his extensive fieldwork on Japhug Rgyalrong to bear throughout.

Jacques unapologetically holds faithfully to the methods of the Neo-grammarians. As one facet of this tradition, he names sound laws after their discoverers (p. 34). In addition to employing a number of named Tibetan sound changes (p. 100 *et passim*),[2] he coins "Nishida's law" and "Gong's law" to

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[1] As a geographic term unburdened by strong implications regarding the place of Chinese on the Stammbaum, "Trans-Himalayan" has advantages over its competitors "Sino-Tibetan" and "Tibeto-Burman" (cf. George van Driem, "Trans-Himalayan").

[2] Jacques uses Nathan W. Hill, "An Inventory of Tibetan Sound Laws," 441–57, as a point of departure for named Tibetan sound laws. Unfortunately, that work no longer reflects my

describe the respective changes *rCV > CVr and *SCV > CV (p. 34) in Tangut. Jacques cites blog posts form 2007 to 2009 by Mark Miyake on www.amritas. com as an independent source of the suggestions *C-p > w-, *C-k > ɣ-, *C-ts > z-, and *C-t > l- (pp. 31–32). Miyake's more recent article appeared too recently for it to be consulted by Jacques.[3] In addition to lenition,[4] Miyake offers numerous other intriguing suggestions, such as the reconstruction of uvulars in Tangut.[5] One is curious as to which of Miyake's proposals Jacques would accept, and whether he would deem any to merit the moniker "Miyake's law." Jacques himself demonstrates several dozen previously unnoticed sound changes. His contribution so far surpasses those of his predecessors and his successors will find it difficult to speak of a "Jacques' law," unable to choose from among the wealth of his discoveries.

Jacques follows the transcription system for Tangut synchronic phonology established by Gong Hwang Cherng.[6] This choice has much to recommend it. Gong's system captures distinctions such as the four "divisions" that the systems of Nishida and Arakawa omit. The choice is also practical because Li Fanwen's dictionary uses Gong's system.[7] Nonetheless, Gong's notation has an exotic look. The system sticks closely to symbols used in the International Phonetic Alphabet, suggesting that Tangut phonology is known with greater precision than it is probably possible to know the pronunciation of any language of antiquity. Some phonetic distinctions, such as -ji, -jii, -jij, and -jiij, strain credulity. In Gong's system -əj- and -ij- are in complementary distribution, as are -ej- and -ij. Tibetan cognates of Tangut words in -ij and -ej include རྗེ rǰe "exchange," མིང miṅ "name," སྙིང sñiṅ "heart," ཤེས śes "know," and ལྟེ་བ lte-ba "navel" (p. 166). It is noteworthy that all of these words show the vowel -e-, except for those with velar codas, which instead have -i-. This distribution supports Dempsey's law *eŋ > -iṅ in Tibetan,[8] suggesting that *-e- is original for these words in both Tibetan and Tangut. Thus, rewriting Gong's -ij as -ej makes both synchronic and diachronic

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preferred terminological choices. Jacques refers to *m-ś- > mčh- in Tibetan as "Li's second law" (p. 100, 103). Hill (ibid, 447) calls the change *ḥ-ś- > ḥčh- "Li's first law," but I now refer to this as "Conrady's law" (cf. "Relative order of Tibetan sound changes affecting laterals," 194, n. 4). The extension of this change to m- as well as ḥ- is Jacques' innovation. Jacques refers to the change *ml > md- as "Sun's law" (p. 199), but I call this "Bodman's law" ("Inventory," 196 n. 12).

[3]   Marc Hideo Miyake, "Complexity from Compression: A Sketch of Pre-Tangut," 244–61.

[4]   Ibid., 249.

[5]   Ibid., 252.

[6]   Jacques offers one substantive change to Gong's system, namely to analyze rime 100 as tense rather than rhoticized (p. 142).

[7]   Li Fanwen, *Xia-Han zidian* 李範文, 夏漢字典.

[8]   Nathan W. Hill, "Some Tibetan verb forms that violate Dempsey's law," 91–92.

sense, in addition to enhancing readability. One benefit of Jacques' study will be to assist in the creation of a more transparent, elegant, and useable system of Tangut transcription.

Jacques' work puts forward a number of claims of significance in relation to Trans-Himalayan linguistics at large. He proposes a "macro-Rgyalrongic" sub-branch of the Trans-Himalayan family, consisting of Qiang, Tangut, Pumi, and the Rgyalrongic languages; more tentatively, he suggests that this sub-branch is part of a larger Burmo-Qiangic branch that gathers "macro-Rgyalrongic" status, together with Lolo-Burmese, Ersuic, and Naic (p. 2). The fact that the manner of articulation between Japhug and Tangut is regular (p. 35) is alone suggestive of a macro-Rgyalrongic sub-branch; the manner correspondences found between other languages (e.g., between Tibetan and Chinese) are bafflingly complex. Jacques points out that the Tangut first person singular pronoun 𗟲 *ŋaˀ* (2098), although appearing very similar to Tib. ᨞ *ṅa*, Bur. ငါ *ṅā*, and Chi. 吾 *ngu* < *ŋˤa (01-29f)[9] of the same meaning, cannot be cognate with these forms because pre-Tangut *ŋa would have developed regularly into Tangut *ne (pp.139, 218). This paramount observation well demonstrates the danger of discussing the relationship between pronoun and verb agreement in the Ursprache without a solid understanding of the historical phonology of each of the languages considered.

Jacques's observation that in Tangut the open syllable cognates of Chinese *a and *ə behave differently is an important finding (p. 76).

Tan. -*i* : Chi. *a
  Tan. 𗰔 *dzji¹* < *ndzja (4517) "manger," Ch. 咀 *dzjoX* < *dzaˀ (01-57u)
  Tan. 𗤁 *.jir²* < *r-ja (2798) "cent," Chi. 百 *paek* < *pˤrak (02-37a)
Tan. -*u* : Chi. *ə
  Tan. 𗡩 *nju¹* < *njə (4681) "oreille," Chi. 耳 *nyiX* < *nəˀ (04-40a)
  Tan. 𗫉 *dzu¹* < *ndzə (1338) "aimer," Chi. 慈 *dzi* < *dzə (04-49j) "kind" (adj.)
Burmese also provides evidence of the separate treatment of *-a- and *-ə-; *aj and *əj distinctly yield -*ay* and -*i* respectively.[10]
Bur. -*ay* : Chi. *aj
  Chi. 沙 *srae* < *sˤraj (18-15a) "sand," Bur. သဲ *sai* "sand"
    Chi. 俄 *nga* < *ŋˤaj (18-05h) "slanting," Bur. နဲ့ *nai?* "be inclined on one side"

Chi. 跛 *paX* < *pˤajʔ (18-16m) "walk lame," Bur. ၆ *phai* "avoid, shun," ဖယ် *phay* "push aside"

Chi. 破 *phaH* < *pʰˤajs (18-16o) "break" (v.), Bur. ဖဲ့ *phaiʔ* "break off a small piece"

Bur. -*i* : Chi. *-əj

Bur. မီး *mīh* "fire," Chi. 焜 *xjwɨjX* < *m̥əjʔ (27-17e) "burn"

Bur. နီး *nīh* "near," Chi. 邇 *nyeX* < *nəjʔ (07-20c) "near, draw near to"

Bur. မြီး *mrīḥ* "tail," Chi. 尾 *mjɨjX* < *[m]əjʔ (27-17a) "tail"

Handel claims that all Trans-Himalayan languages other than Chinese merge *a and *ə;[11] he uses this apparent shared merger to characterize "Tibeto-Burman" as one branch on a bifurcate Stammbaum. Both Tangut and Burmese, by maintaining evidence of the distinction between *a and *ə, show that Handel's proposal is not correct.

In general, Jacques points out comparanda in Tibetan, Chinese, and Burmese in relation to the Tangut and Japhug cognates which he discusses. However, he often omits relevant forms that are widely discussed in the literature. In view of his aim to demonstrate the Burmo-Qiangic hypothesis, the frequent omission of Burmese cognates is unhelpful. To the comparison of Tan. 𗤁 *.wa¹* < *C-pak (0294) "cochon" with J. Rgy. *paʁ* and Tib. ཕག *phag* (p. 130), should be added Bur. ဝက် *wak* "pig." The lenition in both Tangut and Burmese weighs in favor of Burmo-Qiangic. To the comparison of Tan. 𗤁(𗤁) *zar²* < *srak (5921[1193]) "avoir honte" with J. Rgy. *nɣzraʁ* (p. 132), should be added Bur. ရှက် *rhak* "ashamed," Mizo *zak* < *yak or *yhak "ashamed," Chi. 赫 *xaek* < *qʰˤrak (02-10a) "red, fiery," and Tib. ཁྲག *khrag* "blood." The original sense is "red," with the shared development to "ashamed" in Tangut, Burmese, and Kuki-Chin supporting the Burmo-Qiangic hypothesis. To the comparison of Tan. 𗤁 *zjwị¹* < *C-S-ptsja (2134) "neveu," J. Rgy. *tɯ-ftsa*, and Tib. ཚ་བོ *tsha* "nephew, grandchild" (p. 90), should be added Chi. 子 *tsiX* < *tsəʔ (04-47a), "child";[12] to Tan. 𗤁 *.jir²* < *r-ja (2798) "cent," J. Rgy. *ɣurʑa* < *wə-rja, and Tib. བརྒྱ *brgya* < *brja (Li's law) (p. 92), should be added OBur. ရျာ *ryā* "hundred" and Chi. 百 *paek* < *pˤrak (02-37a); to Tan. 𗤁 *.jaar²* < *r-jaak (0811) "jour," J. Rgy. *tɣ-rʑaʁ* "une nuit," and Tib. ཞག *źag*

[11] Zev Handel, "What is Sino-Tibetan? Snapshot of a Field and a Language Family in Flux," 422–41.

[12] Chi. 孭 *tsiX* < *tsəʔ (04-47a) "child," which compares to Tan. 𗤁 *zjwị¹* < *C-S-ptsja (2134) "neveu," has the same rime as Chi. 耳 *nyiX* < *nəʔ (04-40a) "ear," which compares to Tan. 𗤁 *nju¹* < *njə (4681) "oreille." The discrepancy in the vowels of the Tan. 𗤁 *zjwị¹* and 𗤁 *nju¹* may complicate Jacques' suggestion that Tangut preserves evidence of an inherited *ə in this environment.

(p. 135), should be added OBur. ရျက် *ryak* and Chi. 夜 *yaeH* < *N.raks (02-27j); to Tan. 蕀 *.jar¹* < *r-jap (5755) "être debout" and Situ Rgy. *rjap* (p. 120) add OBur. ရျပ် *ryap*; to Tan. 夏 *.jar¹* < *r-jat (4602), Japhug Rgy. *kɯrcat*, Tib. བརྒྱད *brgyad* < *brjat, and Chi. 八 *peat* < *pret (20-14a) (p. 125), should be added OBur. ရျတ် *rhyat* (cf. Nishi 1999: 47);[13] to Tan. 蔎 *mạ¹* < *S-mak (4820) "gendre" and Tib. མག་པ *mag-pa* "bridegroom" (p. 132), should be added Bur. မက် *mak* "son-in-law"; to Tan. 憮 *khiwə¹* < *khru (3517) "corne" and J. Rgy. *ta-ʁru* < *qru (p. 146), should be added Tib. རུ *ru* "horn," གྲུ *gru* "corner," WBur. ခြို *khyui* "horn,"[14] and Chi. 角 *kaewk* < *C. kˤrok (11-02a) "horn, corner"; to Tan. 絆 *phiọw¹* < *phrvm (1572) "blanc" and J. Rgy. *wɣrum* (p. 196), should be added Tib. ཕྲོམ *phrom*, attested in the manuscript Pelliot tibétain 1040 in the phrase མཁར་དངུལ་ཕྲོམ *mkhar dṅul phrom* "white, silver castle";[15] to Tan. 夙 *kowr²* < *r-kvm (0039) "dent" and Situ Rgy. *tə-mkám*, J. Rgy. *tɣ-mɢom* "étau," and Bur. အံ *aṁ* "molar" (p. 200), should be added Tib. སྐམ *skam* "pincers"; to Tan. 諤 *.o²* < *aŋ (1616) "entrer" and Tib. འོང *hoṅ* < *hʷaŋ "come" (p. 201), should be added Bur. ဝင် *waṅ* "go, come" and Ch. 往 *hjwangX* < *ɢʷaŋʔ (03-26k) "go"; to Tan. 蒰 *no²* < *(r)nok (0118) "cerveau" and J. Rgy. *tɯ-rnoʁ* (p. 202), should be added WBur. နှောက် *nhok* and Chi. 腦 *nawX* < *nˤuʔ (16-28f). Jacques compares Tan. 嬤 *mjij²* (2370) "terre" to Written Burmese မြေ *mre* (p. 169), without proposing a pre-Tangut reconstruction. The Old Burmese ancestor of this word မ္လိယ် *mliy* has a lateral medial, which Tib. གཞི *gźi* < *glʲi (Benedict's law) and Chi. 地 *dijH* < *lˤej-s (18-09b)[16] confirm. Jacques proposes no cognates for Tan. 羖 *khjɨ¹* < *khji "pied" (3990) (p. 249), but OBur. ခြိယ် *khriy* "foot" provides an obvious comparison.

I sometimes offer Burmese cognates where Jacques includes a comparison with Bradley's proto-Loloish,[17] thereby implying a Burmese comparison. In a discipline such as Indo-European, where the historical phonology of most languages is well known and the primary data are conveniently accessible, there is little danger involved in citing reconstructions without supporting evidence. Nonetheless, it is generally the practice of Indo-Europeanists to provide a few

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[13] Nishi Yoshio, *Four Papers on Burmese*, 47.

[14] The medial -y- rather than -r- in Burmese requires explanation.

[15] Yoshiro Imaeda, et al., *Tibetan documents from Dunhuang*, 38. Jacques is correct to reject a comparison with WBur. ဖြူ *phrū* "white" (p. 196); the comparison is even more obviously improbable if one consults the Old Burmese form ဖ္လူ *phlū* instead.

[16] According to Nicolas C. Bodman, "Proto-Chinese and Sino-Tibetan: towards establishing the nature of the relationship," 99, Chi. �儴 has an addition reading *lˤis that would make the correspondence regular.

[17] David Bradley, *Proto-Loloish*. Jacques treats Bradley's reconstructions as Proto-Lolo-Burmese, which is perhaps appropriate because Bradley uses considerable Burmese data in his Loloish reconstructions.

attested forms to enable the reader to confirm reconstructions. The data underlying Bradley's Proto-Loloish are not easily consulted nor are his reconstructions easy to independently confirm. In addition, Bradley's work is out of date. Unaware of Maung Wun's law *-uŋ, *-uk > -oṅ, -ok acting in the history of Burmese,[18] Bradley reconstructs many words with the rime *-ok where *-uk is more appropriate. Thus, Jacques compares Tan. 𗅡 *tɕhjiw¹* < *thrjvk (3200) "six" to J. Rgy. *kutʂɤɣ*, Tib. �དྲུག *drug* and Loloish *C-kròk (p. 191). Bradley reconstructs the *-o- vowel, on the basis of WBur. ခြောက် *khrok* "six," although the Burmish languages such as Lashi, with *khjukH,* confirm the vowel -u- seen in Tibetan and Chi. 六 *ljuwk* < *k.ruk (14-16a). Bradley's Loloish reconstruction is here of no value for the interpretation of Tangut or the recovery of the Urform. In a similar case, if one compares Tan. 𗥔 *no²* < *(r)nok (0118) "cerveau," J. Rgy. *tɯ-rnoʁ*, Loloish *(C)-nòk (p. 202) and Chi. 腦 *nawX* < *nˤuʔ (16-28f), one is tempted to explain that Tangut and Japhug maintain the inherited vowel, whereas Chinese innovates. However, keeping in mind that WBur. နှောက် *nhok* "brain" descends from *ʔnuk, as Atsi *ʔnuʔ⁵* confirms, it is clear that Tangut and Rgyalrong have innovated. The simplification of *ry*- to *r*- in the history of Burmese is another detail of the history of this language unaccounted for in Bradley's reconstructions. The comparison of Tan. 𗍫 *.jar¹* < *r-jat (4602)"huit" and Tan. 𗵜 *.jir²* < *r-ja (2798) "cent" with OBur. ရွတ် *rhyat* and OBur. ရာ *ryā* "hundred" is more compelling and straightforward than a comparison with Loloish *C-yèt and *C-ra' (pp. 92, 125). Bradley's Loloish *-wa- is also unreliable; in Burmese -*wa*- results from the breaking of Old Burmese -o₁- (< *-o-) in historic times.[19] Inattentiveness to this change draws Jacques into speculation regarding Bradley's Loloish *ŋwa¹ "be the case," a cognate of Tan. 𗤁 *ŋwu²* < *ŋo (0508) "être" and J. Rgy. *ŋu* "id." Jacques writes: "Les formes japug et tangoutes feraient attendre une racine *ŋo¹ en pré-lolo-birman; *ŋwa¹ pourrait résulter de la fusion de ce *ŋo¹ avec un suffixe de TAM, ou être la trace d'un ablaut" (p. 61). A better explanation is that Bradley is mistaken in his efforts to reconstruct *ŋwa¹ and that in fact Lolo-Burmese does have *ŋo¹. In general, a direct comparison with attested Lolo-Burmese languages would have served Jacques better than Bradley's reconstructions.

In addition to including nearly all of the known inherited Tibetan etyma in his study, Jacques proposes new and convincing etymologies for several Tibetan words. For example, he ties the Tibetan doublet བརླན *bźaḥ* < *blʲaḥ (Benedict's law) "wet" and Tib. √rlan (pres. རློན *rlon*) "dampen" with Tan. 𗣜 *lhji²* < *lhja (1036) "humide" and J. Rgy. *ɣɤla* "id." (p. 90), and the Tibetan verb མཆི *mčhi*, མཆིས *mčhis* "go" he links to Tan. 𗀔 *çji²* < *çe (4469) "aller" and Japhug Rgy. *çe*

(p. 103). Nonetheless, his treatment of Tibetan is not without the occasional small problem. He lists *-l-* as a possible Tibetan medial (p. 21), but as Hahn argues (1999), *-l-* in Tibetan is always the མིང་གཞི་ *miṅ-gźi* consonant[20] of its syllable, regardless of its vertical placement in the orthography. Jacques incorrectly glosses the word གྲི་ *gri* "knife" as "épée" (162), a meaning that properly belongs to རལ་གྲི་ *ral-gri*. In the comparison of Tan. 𗄊 *dze¹* < *ndze (2664) "vie" with J. Rgy. *tu-tsi* "vie, période d'une vie" and Tib. ཚེ་ *tshe* "temps, moment" (p. 112) the Tibetan gloss is accurate, but nonetheless the word ཚེ་ *tshe* also means "life," a meaning that perfectly matches the other two languages.

In places, Jacques offers reconstructions of pre-historic stages of Tibetan without presenting either argument or evidence, e.g., བགོ་ *bgo* < *p-gʷa "wear" (p. 38) and Tib. ཁྱི་ *khyi* < *kwi "dog" (p. 163). Unexplained, such reconstructions are unconvincing. In particular, if one considers the mismatch among the rimes of Tib. ཁྱི་ *khyi*, OBur. ခွေး *khuyḥ*, and Chi. 犬 *khwenX* < *kʷʰˤenʔ (32-04a), the likelihood is high that this a Wanderwort and the forms in these languages are not strictly cognate. The similarity of the Chinese word for "dog" with Indo-European forms such as Grk. κύων < *k̂uōn adds to the likelihood that the Trans-Himalayan forms are loans and not cognates.[21]

In rare cases Jacques proposes cognates that are questionable. He compares Tan. 𗧀 *bji²* < *mbje < *mbjeN "corde" (0251) with Tib. འབྲེང་ *ḫbreṅ* "braid" (p. 96), but because the Tibetan word violates Dempsey's law (*eŋ > *-iṅ*) it cannot be inherited. Jacques compares 𗀻 *pju²* < *pjo (4413) "chauffer, brûler" (cf. J. Rgy. *pu* "chauffer dans la braise") to Bradley's Loloish reconstruction *pút (p. 45), which is based on Burmese ဖုတ် *phut* "bake, roast."[22] The Burmese word ပူ *pū* "hot" (weather) provides a better phonetic match.

At times, Jacques proposes reconstructions that are surprising in light of the correspondences he uncovers. Thus, Tan. -*i*- : J. Rgy. -*i*- : Tib. -*i*- he reconstructs as *je (pp. 81, 95), whereas *i presents itself as the more obvious choice. The main motivation for his proposal is a presumed chain shift *i, *u > ə, *e > i, *o > u (p. 145). However, the benefits of this account remain if one simplifies the proposal to *e, *u > ə, *o > u, reconstructing Tan. -ə to *-e and viewing -*i* as in part inherited. Jacques' own comparisons of Tan. 𗒤 *məə¹* < *mii "feu" (4408) and Tan. 𗁬 *njɨ¹* < *nji "tante paternelle" (3894) to Tib. མེ་ *me* "fire" and Tib. ཨ་ནེ་

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[20] The མིང་གཞི་ *miṅ-gźi* syllable position is paradoxically called "initial" in Trans-Himalayan linguistics. In a syllable such as བརྒྱད་ *brgyad* the མིང་གཞི་ *miṅ-gźi* is "g," which is certainly not the first phoneme in the word.

[21] For similar reasons words for "salt" in the Trans-Himalayan languages are likely to be Wanderwörter (p. 164).

[22] David Bradley, *Proto-Loloish*, 354–55.

a-ne "aunt" (pp. 158, 160) support this alternative proposal. In those cases where Tibetan has -i-, such as the comparison of Tan. 朡 *lə²* < *li (4565) "puce" to Tib. ལྗི་བ *lji-ba* "flea" (p. 161), the current understanding of Tibetan historical phonology does not preclude the option that Tibetan has innovated -*i* from an inherited *-e.

I find one inconsistency in Jacques' reconstruction, applying to a phase of language prior to pre-Tangut: the reconstruction *eN sometimes goes to *-e (e.g., Tan. 蕤 *sji¹* < *sje < *sjeN [4250] "bois, arbre," p. 100) and sometimes goes to *-ej (e.g., Tan. 箹 *mjiij²* < *mjeej < *mjeeN [2639] "nom," p. 169). The mechanical solution to this inconsistency is to reconstruct *mjeejN rather than *mjeeN for "name." Nonetheless, a more tempting solution is to reconstruct *sjiN and *mjeeN to match the vowels of Chinese 薪 *sin* < *si[ŋ] (32-33n) "firewood" and Chi. 名 *mjieng* < *C.meŋ (09-31a). In this view, *-jiN would merge with *-je rather than with *-ji.

Jacques is unsure as to how to reconstruct Tan. 皾 *mej¹* (4684) "oeil" (cf. J. Rgy. *tɯ-mɲaʁ*), rejecting both *mik and *mjak (p. 183). He settles for *mej, but notes that this reconstruction does not correspond well with cognates in other languages; each of the languages, Bur. မျက် *myak* "eye," OTib. དམྱིག *dmyig*, and Chi. 目 *mjuwk* < *C.muk (14-24a), points to a distinct main vowel in this etymon. Keeping Dempsey's law (*-ek > -ig) in mind for Tibetan, a pre-Tangut reconstruction *mek conforms to one possible origin of the Tibetan form and Jacques does not employ *-ek in his reconstruction (p. 206), so this rhyme is available as a source of attested Tangut -*ej*. The proposal *-ek > -*ej* facilitates a solution to another problematic correspondence. Jacques suspects that Tan. 豣 *dzeej¹* (0800) "combattre" is a loan from Tib. འཛིང *hdziṅ* "fight" (p. 112) rather than a cognate, because Tibetan -*iṅ* "correspond habituellement à -jij" (p. 113) in Tangut. However, if we consider the cognates Bur. စစ် *cac* "war, battle" and Ch. 爭 *tsreang* < *m-tsˤreŋ (09-23a), it becomes clear that Burmese reflects the inherited *-ek as opposed to *-eŋ in Tibetan and Chinese. The Tangut form Tan. 豣 *dzeej¹* is explainable as descending from *dzeek, with the same development as in Tan. 皾 *mej¹* (4684) "oeil."[23]

Jacques considers comparing Tan. 恔 *mej²* < *mej (2563) "poil" (cf. J. Rgy. *tɯ-rme*) to Loloish *ʔ-mwe³, but worries that "si c'est le cas la rime **–ul (LB –we) a eu un destin différent dans ce mot que dans 'argent' et 'serpent'" (p. 169, cf. p. 203). A few pages later he considers comparing Tan. 猻 *sjij¹* < *sjej (2734) "sang" (cf. J. Rgy. *tɯ-se*) with Loloish *swe², but concludes that such a comparison "est en revanche plus hypothétique, car la médiane –w– devrait être préservée aussi bien en rgyalrong qu'en tangoute" (p. 174). In this latter

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[23] Nonetheless, against the proposal *ek > -*ej* weighs the consideration that after other vowels *-k develops to -w in Tangut (pp. 187–92).

comparison he apparently overlooks his own proposal that **-ul is the source of Bradley's *-we. In fact, Bradley's reconstructions with *-we are mistaken, as OBur. သွေး: *suyḥ* "blood" shows. Burmese offers cognates to all of the four words "silver," "snake," "hair," and "blood."

> pre-Tan. *oj : Tib. *-ul* : OBur. *-uy*
>> Tan. 貎 *ŋwo²* < *ŋoj (3572) "argent," Chi. 銀 *ngin* < *ŋrə[n] (33-01k) "silver," Tib. དངུལ *dṅul* "silver," OBur. ငွဲ *ṅuy* "silver"
>> Tan. 𗀈 *phio²* < *phroj (0080) "serpent" (cf. J. Rgy. *qapri*), Chi. 虺 *xjwɨjX* < *m̥ruʔ (27-19a) "snake," Tib. སྦྲུལ *sbrul* < *smrul (Simon's law) "snake," OBur. မြွဲ *mruy* "snake"
> pre-Tan. *ej : OBur. *-uy*
>> Tan. 𗋒 *mej²* < *mej (2563) "poil" (cf. J. Rgy. *tɤ-rme*), Chi. 眉 *mij* < *mrər (27-14a) "eyebrow," WBur. မွေး: *mweḥ* < *muyḥ "body hair"
>> Tan. 𗹢 *sjij¹* < *sjej (2734) "sang" (cf. J. Rgy. *tɤ-se*), OBur. သွေး: *suyḥ* "blood"

No clear pattern emerges as a result of these comparisons, but it does seem probable that *uj is one source of the pre-Tangut *-ej. The distinction between *uj (in "hair" and "blood") versus *oj (in "silver" and "snake") is sufficient to index the divergent Tangut outcomes until a more secure hypothesis comes to light.

Jacques compares Tan. 𗤁 *rer²* < *ra (1634) "filet," Tib. དྲ་བ *dra-ba* "net," and Chi. 羅 *la* < *rˤaj (18-10a) with the remark that "Il faut sans doute partir d'une forme plus ancienne *ral, avec chute du *–l en birmo-qianguique commun comme dans 'grenouille'" (p. 105). However, in the comparisons for "frog" (Tan. 𗤣 *pie¹* < *S-pa (0499), J. Rgy. *qaɕpa*, Tib. སྦལ་པ *sbal-pa*, Bur. ဖား *phāḥ*) Tibetan has an *-l*, whereas it lacks this final in the word "net." The correspondence seen in "net" I reconstruct as *aj as opposed to *al;[24] the same correspondence is seen in the comparison of Chi. 沙 *srae* < *sˤraj (18-15a) "sand," Tib. ས *sa* "earth," and Bur. သဲ *sai* "sand" and in the comparison of Chi. 詖 *pje* < *p(r)aj (18-16h) "one-sided, insincere words" with Tib. ཕྲ་མོ *phra-mo* "slander." Thus, there is no need to postulate a final *-l in the ancestor of Tan. 𗤁 *rer²* < *ra (1634) "filet."

Throughout the volume Jacques points out those cases where evidence from Japhug Rgyalrong or Tangut bears on discussions in linguistic typology. Japhug, as a verb final language that makes heavy use of prefixing in morphology, contradicts a widely held universal that verb final languages should be suffixing (p. 283). The Tangut ergative marker comes from a verb "to do" (p. 212), a source

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24   Nathan W. Hill, "Cognates," 98–99.

of ergative marking otherwise unnoticed in the literature. The syntactic behavior of the Tangut word 犻 .*wjɨ²* (0385) "être capable" contradicts a typological theory of Tsunoda.[25] This author posits a scale of predicates, with predicates higher up the hierarchy showing greater transitivity than those lower down the hierarchy:

Effective action > Perception > Pursuit > Knowledge > Feeling
> Relationship > Ability.

Tsunoda claims that in "every language ... as we go down the scale, transitive case frames are less likely to occur, and we tend to have some other case frames in addition to, or in place of them."[26] The fact that Tangut 犻 .*wjɨ²* is transitive, although verbs of perception in the language are generally intransitive (p. 299), directly contradicts Tsunoda's scale. In another case of a typological theory giving way in the face of Tangut evidence, the order of affixes in the Tangut verb phrase, by putting the person marker closer to the verbal root than the markers of aspect or mood, violates Joan Bybee's "relevance hierarchy,"[27] which predicts an order of person < mood < tense < aspect < voice < verb root (p. 284). The ease with which Jacques is able to collect damning counterexamples to well known typological theories showcases both the desultory élan with which such suggestions appear and the vacuity of typological research in relation to historical linguistics.

The overwhelming importance of this book for Tangut studies, for Trans-Himalayan historical grammar, and for linguistic typology, is clear. Nonetheless, there are drawbacks in the choice of conventions. Jacques uses rather idiosyncratic transliterations of both Tibetan and Burmese. The system of Tibetan transliteration is presented in an earlier paper,[28] uncited in this work; the Burmese transliteration remains unexplained. Jacques' aim is to render these scripts in a way easily readable to linguists by employing symbols from the International Phonetic Alphabet. Pursuing this goal risks evoking "a feeling that a phonological transcription is being given"[29] and interferes with the principal that "the ideal transliteration system involves a one-to-one mapping of graphemes."[30] Contrary to this principle, Jacques transliterates the Tibetan letter འ as both ɴ and *ɦ*; as a final he omits a representation of the letter altogether, for example writing མཛའ *mdzaḥ* as *mdza* (p. 44).

A confusing point in Jacques' reconstructions is that "v" has no fixed meaning; on page 93 it signifies any vowel except *i, whereas on page 187 it indicates *i, *u

25 Tasaku Tsunoda, "Remarks on Transitivity."
26 Ibid., 390.
27 Joan L. Bybee, *Morphology: a study of the relation between meaning and form*, 29–37.
28 Guillaume Jacques, "A new transcription system for Old and Classical Tibetan."
29 Eitan Grossman and Martin Haspelmath, "The Leipzig-Jerusalem Transliteration of Coptic," 147.
30 Ibid, 145.

or *e. The Old Chinese reconstruction of Baxter & Sagart provides a more useful and transparent convention, namely to reconstruct a particular vowel but to place this vowel in brackets to indicate that other solutions are also permissible. For example, with the cognates Tib. དྲུག *drug*, WBur. ခြောက် *khrok* < *kruk, and Chi. 六 *ljuwk* < *k.ruk (14-16a) in mind, one can reconstruct Tan. 𗤷 *tɕhjiw¹* (3200) "six" as *thrj[u]k, rather than *thrjvk, and with the cognates J. Rgy. *qro*, Tib. གྲོག་མ་ *grog-ma*, and WBur. ရွက် *rwak* < OBur. *ro₁k in mind, one can reconstruct Tan. 𗁨 *kjiwr¹* (2768) "fourmi" as *k-rj[o]k, rather than *k-rjvk.

In keeping with a growing trend in linguistic research, Jacques cites his own fieldwork in a way that imitates the citation of published work. For example, he cites an example from Pumi as "Le mendiant 4" (p. 29). Nowhere does the reader learn what "Le mendiant" is, nor where it is available for consultation. Citations of this type are no more verifiable than "a notebook" or "my memory." They provide a semblance of scientific explicitness where none exists. A more honest and helpful practice would be to publish or archive the underlying data, potentially without transcription or annotations of any kind, and to employ a citation that is traceable back to the publicly available data. A citation that is not verifiable serves no purpose. Japhug should publish these primary fieldwork materials as a matter of urgency.

The book contains many typos and inconsistencies. Mistakes vary from the trivial, such as "on ne peut peut pas" (p. 110), to the dangerous, such as writing proto-Na *mbi (p. 100) in place of *siN[31] or offering the pre-Tangut reconstruction of 𗥫 *ɣie¹* (0439) "cuire" as *C-S-qa rather than *C-S-ka (p. 106).[32] The abbreviation DCT is not defined; it refers to Zhang Yisun's *Bod rgya tshig mdzod chen mo*. The abbreviation ST normally means "Sino-Tibetan" but on page 43 means "Situ." A work by Paul Benedict is referred to (p. 254) but not cited and does not appear in the bibliography. Chinese reconstructions are not quite in the system of Baxter & Sagart (e.g., 熬 *ŋŋaw for *ŋˤaw p. 64, 慈 *dzɨ for *dzə p. 76, etc.). Middle Chinese is mostly omitted, but occasionally only Middle Chinese is given (e.g., 乳 *nyuX*, p. 69).

The book usefully includes many indices, but these indices are beset with problems and inconsistencies. In the Lolo-Burmese index some words are listed alphabetically but others according to their cognate number in Bradley's *Proto-Loloish*. Tibetan and Burmese are not in correct alphabetical order for these languages. The Tibetan word དམུ *dmu* "type of sky god" (p. 154) does not appear in the index.[33] The verb འཕེན *hphen* "throw, cast away" is indexed twice, once with

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[31]   Guillaume Jacques and Alexis Michaud, "Approaching the historical phonology of three highly eroded Sino-Tibetan languages," 15.

[32]   "En prétangoute, on ne reconstruit pas de toute façon d'uvulaires," 186.

the past འཕངས་ *ḥphaṅs* written as "ɴpʰangs" and once as "ɴpʰaŋs." One could list many other specific errors. Chinese is not indexed at all.[34] In addition, a French index would have added to the usefulness of the back matter. The bibliography also suffers. For example, Jäschke's (1881) dictionary mentioned in text (p. 70) is not included in the bibliography and Dài (1990) is not correctly placed. As recently published additions to the bibliography one can mention that Gong Xun "to appear" has now appeared (cf. Gong 2014) and Jacques himself[35] has published an elaboration of the proposal Tibetan *smn > *sn-* (p. 198).

These ultimately minor editing problems cannot undermine the stunning contribution of this work; it is quite probably the most important single book ever to be published in the field of Trans-Himalayan historical linguistics.

CHINESE INDEX

I present each Chinese word in either Middle Chinese, following William H. Baxter,[36] and Old Chinese, following William H. Baxter and Laurent Sagart,[37] followed by a reference number from Axel Schuessler, *Minimal Old Chinese and Later Han Chinese*. I add in parentheses Chinese comparisons made in this review, keyed to the relevant page of Jacques's monograph:

01-01u 苦 *khuX* < *$kh^ʕaʔ$, p. 107
01-29a 五 nguX < *$ŋ^ʕaʔ$, p. 159
(01-29f 吾 *ngu* < *$ŋ^ʕa$, pp. 139, 218)
01-67h 斧 *pjuX* < *$paʔ$, p. 87
(02-10a 赫 *xaek* < *$q^{hʕ}rak$, p. 132)
(02-27j 夜 *yaeH* < *N.raks, p. 135)
(02-37a 百 *paek* < *$p^ʕrak$, p. 92)
03-55d 想 *sjangX* < *$[s]aŋʔ$, p. 180
03-65a 亡 *mjang* < *maŋ, p. 178
04-24a 牛 *ngjuw* < *$ŋ^wə$, p. 109
04-40a 耳 *nyiX* < *nəʔ, p. 76
(04-47a 子 *tsiX* < *tsəʔ, p. 90)

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[33] Jacques might have mentioned Coblin's discussion of this word. See W. S. Coblin, "A Note on Old Tibetan Mu."

[34] I include a Chinese index at the end of this review.

[35] Guillaume Jacques, "On Coblin's law."

[36] *A Handbook of Old Chinese Phonology*.

[37] "Baxter-Sagart Old Chinese reconstruction (Version 1.00)," Placed online in 2011 at http://crlao.ehess.fr/document.php?id=1217.

04-49j 慈 *dzi* < *dzə, p. 76
06-21b 冰 *ping* < *p.rəŋ, p. 138
06-24b 繩 *zying* <*Cə-mrəŋ, p. 96,
(09-31a 名 *mjieng* < *C.meŋ, p. 169)
10-32a 乳 *nyuX* < *noʔ, p. 69
(11-02a 角 *kaewk* < *C.kˤrok, p. 146)
13-38a 首 *syuwX* < *l̥uʔ, p. 73
(14-16a 六 *ljuwk* < *k.ruk, p. 191)
14-21a 夙 *sjuk* < *[s]uk, p. 190
(14-24a 目 *mjuwk* < *C.muk, p. 183)
16-13h 熬 *ngaw* < *ŋˤaw, p. 64
(16-28f 腦 *nawX* < *nˤuʔ, p. 202)
(18-09b' 地 *dijH* < *lˤej-s, p. 169)
18-10a 羅 *la* < *rˤaj, p. 105,
19-21a 坐 *dzwaX* < *dzˤojʔ, p. 68
20-14a 八 *peat* < *pret, p. 125, n. 36,
26-19a 矢 *syijX* < *l̥i[j]ʔ, p. 162,
(27-14a 眉 *mij* < *mrər, pp. 169, 203)
(27-19a 舵 xjwɨjX < *m̥rujʔ, pp. 169, 203)
32-33n 薪 *sin* < *si[ŋ], p. 100,
(32-04a 犬 *khwenX* < *kʷʰˤenʔ, p. 163)
32-40k 昏 *xwon* < *m̥ˤən, p. 77
(33-01k 銀 *ngin* < *ŋrə[n], pp. 169, 203)
37-02h 汲 *kip* < *kəp, p. 120,
38-04- 針 *tsyim* < *t.qəm, p. 121 (Schuessler spells this word as 箴 and 鍼).

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