Relative Ordering of Tibetan Sound Changes Affecting Laterals*

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Several sound changes affect the development of inherited laterals in Tibetan: Conrady’s law (*hl > ld-), Bodman’s law (*ml- > md-), and Benedict’s law (*l- > ž-). Benedict’s law occurred subsequently to both Conrady’s and Bodman’s laws. Because Conrady’s law and Bodman’s law do not interact, their relative chronology is not subject to direct exploration. Of several additional hypotheses for sound laws affecting inherited laterals which Jacques (2004) puts forward *rl- > rj- appears promising. The three changes affecting laterals occur after Schiefner’s (*dz- > z-) and Houghton’s law (*ŋ- > ŋ-) and before Dempsey’s law (*-ŋ > -iŋ and *ek > -ig).

Key words: sound laws, laterals, Tibetan, Bodish

The Tibetan verb √lud ‘pour’ has a present stem ལྡུད་ldud and a past stem བྲུད་blud. The past stem poses no analytic hurdles. The b- prefix is seen in the past stem of all

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1 This essay uses the Library of Congress system for transliterating Tibetan with the following changes: ‘ʰ’ rather than apostrophe, ‘č’ rather than of ‘c’, and ‘ǰ’ rather than ‘j’. The Library of Congress system is used for Burmese also, with the exception that as ħ and ʔ are used rather than ´ and ‘. For Chinese I provide the character followed by Baxter’s Middle Chinese (1992), an Old Chinese reconstruction taken from or compatible with the current version of Baxter & Sagart’s system (2011), and the character number in Karlsgren (1957[1964]). Like in Baxter’s own recent work, for Middle Chinese I use ‘ae’ and ‘ea’ in place of his original ‘æ’ and ‘ɛ’. I do not however following him is changing ‘ɨ’ to ‘+’. All Tibetan verb forms cited herein can be confirmed in Hill (2010b). This paper employs the following abbreviations: PT (Pelliot tibétain), IOL (India Office Library), OBur. (Old Burmese), WBur. (Written Burmese), Chi. (Chinese), Mon. (Mtsho-sna Monpa, Wenlang dialect, apud Lu 1986), Tib. (Tibetan), Kur. (Kurtöp, apud Hyslop 2011), Rgy. (Rgyalrong). When Old Burmese would not differ from Written Burmese it suffices to employ Bur. (Burmese). For changes from Old Burmese to Written Burmese see Nishi (1999), Yanson (2006), and Hill (2012:66-69).
eight of Coblin’s paradigms for Tibetan strong verbs (cf. Table 1); one may name √krub ‘winnow’ with the past bkrubs as a concrete example of this prefix. The -s suffix of the past stem seen in six out of eight of Coblin’s paradigms and in bkrubs is not directly observable in blud, because it has assimilated to the root final -d (i.e. *-ds > *-dd > -d, cf. Coblin 1976:50-51).

Table 1: Tibetan verb paradigms according to Coblin (1976)

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>present</th>
<th>past</th>
<th>future</th>
<th>imperative</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>h—d, b—s, b—, —s</td>
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<td>3</td>
<td>—d, b—s, b—, —s</td>
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<td>4</td>
<td>—d, b—s, b—, —s</td>
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<td>5</td>
<td>g—, b—, d—, —s</td>
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<td>6</td>
<td>h—d, b—, d—, —s</td>
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<td>7</td>
<td>h—, b—s, d—, —s</td>
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<tr>
<td>8</td>
<td>h—d, b—s, d—, —s</td>
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</tbody>
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The present stem ldud is more opaque; one anticipates *ḫlud on analogy to √krub ‘winnow’, with present ḥkhrub. Because the initial cluster *ḫl- does not occur in Tibetan, this sequence is available to posit as the source from which ld- descends. To propose a change *ḫl- > ld- might appear rash, but it can be broken down into three plausible steps. First, Conrady’s law accounts for the dental in ldud; according to this law a dental stop is inserted between h and a following fricative, rhotic, or lateral (Conrady 1896:59, Li 1933:149, Hill 2011:446-447). For example, the fricative initial verbal root √so ‘nourish’ has the present ḥtsho and the rhotic initial verbal root ḥriṅ ‘be distant’ has the present ḥhr̥iṅ (Li 1959). Analogously, the prefix h- induces an epenthetic dental before laterals (*ḫl > *hdl); following Conrady’s law the speculative ancestor of ldud changes from *ḫlud to *ḥdlud. Second, Simon proposes the metathesis *dl- > ld; he bases this suggestion on groups of related words such as ldum-po and zlum-po ‘round’, ldoṅ-pa and loṅ-ba ‘be blind’ (1929:187).

2 For more recent discussion of Tibetan verb paradigms confer Hill (2010b:xv-xxi) and Jacques (2012).
3 One might also propose *glud, but in fact there do not appear to be verbs that have gl- in the present and bl- in the past.
4 I have previously referred to Conrady’s law as ‘Li’s first law’, but subsequently discovered that Conrady took this sound change for granted without arguing for it (cf. Conrady 1896:59). Rather than crediting two laws to Li (as in Hill 2011:446-447), it is more elegant to amend ‘Li’s first law’ to ‘Conrady’s law’ and ‘Li’s second law’ to simply ‘Li’s law’.

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The metathesis *dl > ld follows the results of Conrady’s law, thus *ḫlud > *ḥdlud > *ḥldud. Third, Coblin’s law, which dictates that prefixes yielding clusters that violate Tibetan phonotactics are dropped, accounts for the final change of *ḥldud to ḡdlud (cf. Coblin 1976:48 et passim, Hill 2011:446). The present stem verbal prefix g- nicely illustrates the motivation for Coblin’s law. Of those verbs that exhibit ‘a’ to ‘o’ ablaut in the present, wherever phonotactically possible the present stem is also marked with the prefix g- (e.g. √sad ‘kill’, with present *gsod). The correlation of ‘a’ to ‘o’ ablaut with the g- prefix suggests that the prefix causes the ablaut. This suggestion in turn inspires the proposal that the prefix is responsible for the ‘a’ to ‘o’ ablaut even in words where the prefix itself is not phonotactically possible (e.g. √skaṅ ‘fulfill’, present *gskoṅ). Summarizing the effect of these three changes, the present of √lud ‘pour’ develops from *ḫlud to ḡdlud through the steps, *ḫdlud (Conrady’s law) > *ḥldud (metathesis) > ḡdlud (Coblin’s law). The development with voiceless laterals is entirely parallel: the present of √ltuṅ ‘fall’ develops from *ḫltuṅ to ḡltuṅ through the steps, *ḥltuṅ (Conrady’s law) > *ḥltuṅ (metathesis) > ḡltuṅ (Coblin’s law).

Although verb paradigms motivate the proposal *hl- > ld- (hereafter understood as a sub-case of Conrady’s law) comparative evidence confirms this change before inherited palatalized laterals in nominals also.

5 With slight disagreements in detail Shafer (1951:1024), Nishida (1958:39), and Jacques (2012: 219) reconstruct a prefix *go- suggesting that the vowel in the prefix induces a change in the stem vowel. However, pointing out that the -o- is redundant since all verbs that can take a g- prefix undergo the ablaut, Coblin quite reasonably wonders whether “we may not in fact suspect that pre-initial g- itself is responsible in some way for the -a- > -o- change in the present roots of verbs” (1976:55).
Following a proposal of Benedict’s (1972:39, note 127) and citing these same words Jacques (2004:6) reconstructs *hlʲ- as the origin of lč-. The notation ‘hl’ is ambiguous as to whether ‘h’ represents a glottal fricative articulated before the onset of the lateral or whether ‘hl’ together indicates a voiceless lateral. Schuessler reconstructs lč- < *lhʲ- (2007:465, 467, 497) which is certainly to be understood as *l̥ʲ-. Benedict intends ‘h’ segmentally; he proposes that ཀྲ་ lči ‘dung’ derives through the steps *s-kli > *skli > *hl­i < 1972:39, note 127), where the change of ‘s’ to ‘h’ unambiguously suggests that ‘h’ is a segment independent form the following l- . Jacques (2004:6) and Schuessler (2007:465) add the Chinese cognate屎 syijX < *l̥ijʔ (0561d) for ‘dung’.6

The proposal *hlʲ > lč is unmotivated; in no other instance has an ‘h’ prefix been suggested in Tibetan phonetic history. In contrast, if one follows Baxter & Sagart in reconstructing屎 syijX < *qʰijʔ rather than *l̥ijʔ, the velar initial of the Burmese and uvular initial of the Chinese supports the suggestion of a velar initial *ḫ- in the Tibetan, and thereby weighs in favor of the proposal *hlʲ > lč-, which is also the superior choice on the grounds of symmetry with the changes *ḫlʲ > l̥j- and *hlʲ > lt-.

The palatalized laterals in these nominal forms have bypassed Benedict’s law, which normally changes *l̥- to ʑ- (cf. Benedict 1939:215, Hill 2011:445).

Tib. རིང་ʑiṅ < *liṅ ‘field’ : Kur. ⁴leŋ⁷, Bur. ཁྱུན་ lay, Chi. دعاء den < *fiŋ (0362a) ⁴leŋ⁷
Tib. རིམ་ʑim < *lim ‘tasty’ : Kur. lem, Chi. دعاء dem < *fem (0621-) ‘sweet’
Tib. རིོ་ʑo < *lō ‘yoghurt’ : Japhug Rgy. tv-lu ‘milk’
Tib. རིོ་ʑi ‘ground’ : OBur. ཁྱུན་mliy, Chi. བོད་ dijH < *fēj-s (0004b)⁸
Tib. རིོ་ʑu < *gli ‘bow’⁹ : Kur. limi, OBur. ཁྱུན་liy, Chi. བོད་ syijX < *l̥ijʔ (0560a) ‘arrow’
Tib. རིོ་ bзи < *blī ‘four’ : Kur. ble, OBur. ཁྱུན་liy, Chi. གྲེང་ siJH < *s.l[ij]-s (0518a)

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6 Jacques also compares Tib. རིོ་ lčags ‘iron’ and Chi. རིོ་ thet < *fik (1256b) ‘iron’. Because of its relatively late appearance as a technology ‘iron’ cannot be a genuine cognate between Tibetan and Chinese. In China iron only appears circa 500 BCE (Wagner 1993:52-96), a good seven hundred years after the introduction of writing. Schuessler repeats the comparison, but suggests that it is an ‘area word’ (2007:497).

7 This word, apparently lacking in Hyslop (2011) is taken from Michailovsky & Mazaudon (1994:553).

8 Bodman reports that 地 has an addition reading *fis, which makes the correspondence regular (1980:99).

9 The word ‘bow’ is spelled རིོ་ gзи in an Old Tibetan version of the Rāma story (IOL Tib J 0737/1 line 168, cf. de Jong 1989:115).
There are also grounds internal to Tibetan for proposing Benedict’s law (cf. Gong 1977[2002:391-392]).

Tib. གཞོགས་ gźogs < *glogs ‘side of the body’ : Tib. གཞོངས logs ‘side’
Tib. བཞེང་ bźeṅ < *blṅ ‘rise’ : Tib. བཞེང laṅ ‘rise’

If the *lʲ in *klʲi-ba (> ḥl趔 ḥji-ba) ‘flea’ and similar words did not undergo Benedict’s law, the sequence *l in such words must have already changed to something else before the change *l > ź occurred. Examining the chain of changes *klʲi-ba > *ḥdlʲi-ba > *ḥldi-ba > ḥl趔 ḥji-ba, in order for the sequence *l to avoid Benedict’s law, the metathesis of *dl- to ld- must have taken place prior to its application, i.e. Conrady’s law precedes Benedict’s law.

However, conflicting evidence suggests that Benedict’s law occurred before Conrady’s law. Since Japhug Rgyalrong ṭs-lu ‘milk’ confirms that Tibetan ཞོ་ zo ‘yoghurt’ derives from *l." (Jacques 2008:128), in order to account for ḥjjo as the present of the verb རེ་ zo ‘to milk’, the change *hž- > ḥj- must have occurred after the change *l > ź-, i.e. Conrady’s law (*hž- > ḥj-) took place after Benedict’s law (*l > ź-). Gong also implicitly puts Benedict’s law prior to Conrady’s when he compares Tibetan གཞོ་ zo ‘yoghurt’ and, in order to reconstruct the Tibetan form *kl lòng (1995[2002:168, #45]). His view might be paraphrased as suggesting *kl lòng > *hž lòng (Benedict’s law) > /ḥjž lòng/ (Conrady’s law), spelled གཞོ་ ḥjjo.

There is a thus a choice between the ordering (1) Conrady, (2) Benedict (to explain ḥl趔 ḥji-ba ‘flea’ and the like), or the ordering (1) Benedict, (2) Conrady (to explain the present stem གཞོ་ zo ‘to milk’); either words like ‘flea’ or the paradigm of ‘to milk’ arose due to analogical change. A verb such as /ʒu/ ‘to milk’, the change *hž- > ḥj- must have occurred after the change *l > ź-, i.e. Conrady’s law (*hž- > ḥj-) took place after Benedict’s law (*l > ź-). Gong also implicitly puts Benedict’s law prior to Conrady’s when he compares Tibetan གཞོ་ zo ‘yoghurt’ and, in order to reconstruct the Tibetan form *kl lòng (1995[2002:168, #45]). His view might be paraphrased as suggesting *kl lòng > *hž lòng (Benedict’s law) > /ḥjž lòng/ (Conrady’s law), spelled གཞོ་ ḥjjo.

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in the paradigm of √зо < *ло ‘to milk’.\(^{11}\)

Not only ʰb- alters the development of laterals in Tibetan; according to Bodman’s law, a prefix \(m\)- leads to the fortition of *l- into d- (Bodman 1980:170, Hill 2011:450). Two words furnish comparative evidence for Bodman’s law.

Tib. **མདའ་** mdaḥ < *mlaḥ ‘arrow’ : Monpa mла ḍ, OBur. ḍmlāḥ, Chi. ḍ zye ḍ < *Cə.lak (0807a) ‘hit with bow and arrow’

Tib. **མདོམ་** mdom ‘fathom’\(^{12}\) : Monpa glам, Bur. cO laṃ, Chi. ڇ zim < *sə-lam (0662a) ‘measure of circa 8 feet’

Tibetan internal evidence supports such a proposal.

Tib. **མདོན་པ་** mdoṅ-pa < *mloṅ-pa ‘blind’ : Tib. ḍloṅ-pa ‘go blind’ < *hloṅ-pa (Conrady’s law), Tib. ڇ loṅ ‘be blind’

Tib. **མདན་པ་** mdan-pa < *mlan-pa ‘cheek’ : Tib. ḍlan-pa ‘cheek’ < *hlan-pa (Conrady’s law)

Nominals also provide examples of Bodman’s law before inherited palatalized laterals.


Tib. **མཇེ་** mǰe /мджe/ < *mlи́ ‘penis’ : Kur. plik, WBur. ڇ lѐ ‘lìh

The question again arises as to the relative timing of this law (*ml > md) relative to Benedict’s (*l > z). If Bodman’s law occurred before Benedict’s then *mlи́н develops into **མཇིང་** mǰiṅ /мджи́н/ ‘neck’ without an intermediate stage. If Benedict’s law occurred before Bodman’s, the result is *mlи́н > *mʒи́н > **མཇིན** mǰiṅ, where the change of *mʒ- to

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\(^{11}\) As a corollary, when this analogical change occurred ʰ Insets must have still meant ‘milk’ and not yet changed its meaning to ‘yoghurt’.

\(^{12}\) The variant **ཇིན-པ་** j-domain for **མདོམ་** mdom ‘fathom’ is probably not an etymological spelling. After the change of the Old Tibetan velar fricative ʰb- before a stop consonant to prenasalization in Common Tibetan (Hill 2005:114-115, 2009:131), the sequence /nd-/ would be spelled ‘ʰd’ regardless of its etymological origin. The assimilation of /m-/ to /n-/ before d- explains the change of /mdom/ to /ndom/. This hypothesis will be difficult to confirm philologically until the relative chronology of Old Tibetan texts is better understood.

\(^{13}\) The variant **ཇིཝ-པ་** j-domain for **མཇིན** mǰiṅ ‘neck’ is probably not an etymological spelling; compare note 12.
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*mb* must be explained as a change analogous to Conrady’s law, but after *m- rather than *h-.

14 If Conrady’s law subsumes *mb > *mj, then Benedict’s law precedes Conrady’s law, i.e. *mlŋ > *mzn (Benedict) > mjiin (Conrady), but words like བོད་པ་ lji-ba ‘flea’ have already led to the rejection of this ordering of the sound changes. If *mb > *mj is not linked to Conrady’s law, then, because *mb > *mj would be neither a result of Conrady’s nor of Bodman’s law, the ordering of Benedict’s law before Bodman’s law leads inexorably to the postulation of a new sound change that would otherwise not be required; William of Ockham would not approve. One must conclude that Bodman’s law preceded Benedict’s law. Summarizing the progress made so far: Benedict’s law occurred subsequently to both Conrady’s law and Bodman’s law. Because Conrady’s law and Bodman’s law do not interact, their relative chronology is not subject to direct exploration.

Jacques accepts Benedict’s15 and Bodman’s16 laws and proposes a number of additional sound changes involving inherited laterals (2004:8-9). Although he accepts Conrady’s law, he restricts its application to verb paradigms. Outside of verb paradigms he proposes that *hl leads to *hd- and offers the comparison of Tibetan སྣོད་པ་ hdab-ma ‘leaf’ to Chinese སྦེ་ yep < *lap ‘leaf’ (0633d) as supporting evidence (Jacques 2004:8).17 The proposal that a sound law is conditioned by a morphological category rather than a phonetic environment appears to violate a basic principle of historical linguistics, that sound change is exceptionless and ignores the meaning of the affected words.18 However, because Jacques proposes that *h- itself has a separate origin before nouns and in verb paradigms (2004:8), there is no methodological objection to his proposal. One could paraphrase Jacques morphological account in phonological terms by distinguishing *h1 and *h2 and proposing *h1l > *hl- and *h2l > *ld- as exceptionless sound laws, together with a subsequent merger of *h1 and *h2 as h.

14 Some proposed reconstructions also suggest the insertion of an epenthetic dental after *m-. Gong reconstructs བོད་པ་ mch in-pa as *m-sin-pa ‘liver’ in light of WBur. འབུ་ ཁམ བ་ sa-in ‘liver’ and Chinese གྷ ཞsin < *sin (0382a) ‘pungent; painful’ (1995[2002:91, #82]) and for different reasons both Beckwith (2008:179, note 59) and Jacques & Michaud (2011: appendix, p.11) reconstruct ། mtsho ‘lake’ as *m-swa.


16 Jacques separately catalogs *ml > md- and *ml > mj- (2004:9).

17 Jacques also points to Tib. སྣོད་པ་ hdom-pa ‘fathom’, but སྣོད་པ་ mdom-pa is probably the etymologically correct spelling (cf. note 12).

18 An apparent counterexample is loss of Uto-Aztecan *p- in Nahuatl nouns but not in verbs. However, since “verb roots rarely stand alone and are usually preceded by some prefix, a hypothesis is suggested that **p- is lost in absolute initial position, a regular change” (Campbell & Langacker 1978:201, note 43).
Interpreting $h$ as a nasal, Jacques sees *$h_1$l- > $hd$- as parallel to Bodman’s law (*ml > md). Since $h$ is not a nasal but a velar fricative (cf. Hill 2009) the elegance of *$h_1$l- > $hd$- as parallel to *ml > md vanishes. Keeping in mind that ʰདབ- $hdab-ma$ means ‘wing’ as well as ‘leaf’ one can suggest that the true Chinese cognate of this word is ʰAllocation/ Allocation_yik < *grap ‘wing’ (0912b, 0954d) and not ʰAllocation/ Allocation_yep < *lap ‘leaf’ (0633d). The correspondence of Tibetan d- to Chinese *Allocation/ Allocation_g- receives support from the comparison of Tibetan ʰAllocation/ Allocation_dom ‘bear’ and Chinese ʰAllocation/ Allocation_hjüng < *Allocation/ Allocation_g(r)am ‘bear’ (0674a).19 Because Jacques restricts Conrady’s law to verb paradigms (*$h_2$l- > ld-), for him it cannot subsume the change *$h_1$l$^j$ > lj- seen in nouns such as ʰAllocation/ Allocation_qi $lji$-ba (a proposal which he accepts, cf. 2004:8). Jacques’ proposal *$h_1$l- > $hd$- entails both the separation of *$h_1$ and *$h_2$ and the separation of *$h_1$l$^j$ > lj- from *$h_2$l > ld-. These machinations are a high price to pay in order to safeguard the comparison of Tibetan ʰAllocation/ Allocation_dab-ma ‘leaf’ to Chinese ʰAllocation/ Allocation_yep < *lap ‘leaf’ (0633d). Multiplying unattested elements in order to account for one comparison is not elegant, in particular when an alternative etymology is available. Because it is poorly motivated and entails inelegant consequences, Jacques’ proposed sound change *$h_1$l- > $hd$- is best rejected.

Jacques proposes a sound change *pl > phy in order to account for alternations within Tibetan noted by Gong (1977[2002:392]).

Tib. ʰAllocation/ Allocation_lag ‘hand’ : Tib. ʰAllocation/ Allocation_phyag ‘hand (hon.)’
Tib. ʰAllocation/ Allocation_logs ‘side’ : Tib. ʰAllocation/ Allocation_phyogs ‘side’
Tib. ʰAllocation/ Allocation_log ‘to return, to go back’ : Tib. ʰAllocation/ Allocation_phyogs ‘to turn’
Tib. ʰAllocation/ Allocation_lhug-po ‘rich’ : Tib. ʰAllocation/ Allocation_phyug-po ‘rich’
Tib. ʰAllocation/ Allocation_lug ‘sheep’ : Tib. ʰAllocation/ Allocation_phyogs ‘cattle’
Tib. ʰAllocation/ Allocation_gliñs-po ‘felt rug’ : Tib. ʰAllocation/ Allocation_phyin-pa ‘felt’
Tib. ʰAllocation/ Allocation_lcam ‘beam, rafter’ : Tib. ʰAllocation/ Allocation_phyam ‘beam, rafter’

Gong himself suggests that the attested forms in l- derive from *phl- and the attested forms in phy- have their origin in *phl- (1977[2002:392]). This proposal has the advantage of making these pairs analyzable in terms of the -j- honorific infix that Gong notes in other words (e.g. ʰAllocation/ Allocation_skam ‘dry’ and ʰAllocation/ Allocation_skjem ‘be thirsty [hon.]’, cf. Gong 1977[2002:389]).

From the perspective of the Old Tibetan phonological system such reconstructions are meaningless. Old Tibetan lacks a phonemic contrast of aspiration (Hill 2007), so Gong’s reconstruction *ph must be understood as simply *p. This results with *pl > l and *plʲ > pʲ. All consonants in an Old Tibetan initial cluster agree in voicing with the final consonant of the cluster (Hill 2010a:122). Consequently, Gong’s reconstructions must be again rewritten, now appearing as *bl > l and *blʲ > pʲ. The cluster /bl/ is however attested in Old Tibetan and thus is not available for this reconstruction. The Old Tibetan spelling <bl> reflects both /bl/ and /blʲ/. For example, the stems of the verbal root √lag ‘read’ are written as present ཀློག་ klog, past བླགས་ blags, future ཕླག་ klag, imperative བློགས་ lhogs with the phonemic interpretation /glog, blags, glag, lags/ (Hahn 1999). The same considerations apply to Jacques’ reconstruction of the alternation as l- versus *pl > phy- (2004:8-9); his reconstruction *pl- must be interpreted as the attested /bl/.

Jacques’ most tentative proposal is *bli- > byi- for which he provides one example (2004:9), viz. Tibetan བྱིངས་པོ་ byiṅs-po ‘completely, entirely’ compared both to Tibetan བྲིངས་པོ་ bliṅs-po ‘id.’ and to Tamang ḍpli- ‘id.’. This suggestion presumes that pre-Tibetan distinguish *bli- (> byi-) and *bli- (> bźi-), which serves the added purpose of explaining why the sequence li- is still found in some Tibetan words; one may thus contrast བིན < *bīn ‘field’ with བིན་ liṅ ‘hunt’. Although some languages do distinguish /i/ and /i/, e.g. Modern Burmese Ɬ /pi/ ‘be distinct’ versus ꞧ /pjī/ ‘vie with, rival’ and ꞧ: /mī/ ‘fire’ versus ꞧ: /mjī/ ‘tail’, this solution is not satisfying. Examples of laterals before the vowel ‘i’ in Tibetan are vanishingly few and all end in velars: ལིང་gliṅ ‘island’, ལིང་gliṅ ‘flute’, ལིང་ནེ་ liṅ-ñe ‘dangling, waving’, ལིང་ tīn- ‘a film or pellicle on the eye’, ལིང་ liṅ-ba ‘a piece’, ལིང་ tshe liṅ-tshe ‘lattice’,21 ལིང་ liṅ ‘hunt’, and ལིང་ rlig-pa ‘testicle’.22

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20 The sound change */blʲ > /pʲ/ does not suffer the same problems as its partner; the change is phonologically plausible and Old Tibetan has no /blʲ/, but in the absence of */bl > /l/ there is no motivation for suggesting */blʲ > /pʲ/.

21 Note that most Tibetan words that end in -tse or -tshe are Chinese loanwords, e.g. བོད་ don-tse ‘copper coin’ (< 銅子 tōngzi), ཤོག tseg-tse ‘table’ (< 桌子 zhuōzi).

22 This list is based on Jäschke’s dictionary (1881), excluding regional dialect forms, loanwords, or words for which the only authority is the extremely unreliable dictionary of Schroeter (1826). This work was compiled by F. Francesco Orazio della Penna (1680-1745) as a Tibetan-Italian glossary. Schroeter died while revising the work and learning Tibetan; the editors who saw the work through publication knew no Tibetan (cf. Simon 1964, Bray 2008). Jäschke does not give Tib. བིན་ liṅs-po ‘completely, entirely’, which Jacques cites.
Jacques’ explanation takes no account of this limited distribution.23

According to Dempsey’s law, Tibetan changed original *-en and *-ek to -iin and -ig (e.g. Tib. ཤིག gčig ‘one’, Chi. ཀི རྡེས་*skyek < *tek [1260c] ‘one of a pair’, Tib. རྡེ་ myiin ‘name’, Chi. རྡེ་*mjieng < *[m]en [0826a] ‘id.’, cf. Dempsey 2003:90, Hill 2012:73). If Dempsey’s law occurred after Benedict’s law, this would explain why all instances of li- appear in words with velar finals. The words ‘field’ and ‘hunt’ were originally *liin (with *liin a subphonic pronunciation) ‘field’ and *leins ‘hunt’; after the application of Benedict’s law they became *žiin ‘field’ and *leins ‘hunt’; after the application of Dempsey’s law they became the attested མིན་liin ‘field’ and མིན་liins ‘hunt’. Dempsey’s law also accounts for the lack of palatalization in most words that contain the sequences -di- and -ni-. All but two words that contain the sequence -di- end in a velar. The seven examples with velar final are: བིག་ di- ’a stammerer’, སྤིན་ hdiig ‘stop, stammer’, སྤིན་ sdiig ‘thick’, སྤིན་ sdi- ’scorpion, sin’, √sdiig ‘show, aim, threaten’, སྤིན་ sdiüns ‘cavity, depression’, སྤིན་ rdig ‘household utensils’). 24 The two counterexamples are the grammatical word སྤིན་ hdi ‘this’ and the verb √rdib ‘collapse, break down’. Grammatical morphemes often undergo different sound changes that the bulk of lexical stock; སྤིན་ hdi ‘this’ need not cause concern.25 The exception √rdib ‘collapse, break down’ is harder to account for; this verb is the intransitive pair of √rtib ‘break, pull down’. The fact that the distribution of -i- after t- is less restricted than it is after d-26 suggests that √rdib ‘collapse, break down’ may have derived from √rtib ‘break, pull down’ after the general

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23 Jacques (2004:10) includes a list of words that contain the sequence -li-. He does not give textual or lexicographical authorities for the cited words. The only examples not before velars are བིག་ li ‘bronzef, སྤིན་ li-ba ‘curled (of hair)’, སྤིན་ rli-d-bu ‘animal skin’, and སྤིན་ rlibs ‘wear’. Of these སྤིན་ li ‘bronzef is certainly a loanword and སྤིན་ rlibs ‘wear’ is likely an attempt to etymologize a dialect pronunciation of སྤིན་ klub ‘wear’.

24 One might also include here the present stem སྤིན་ hdiin of the verb √niin ‘spread out’, but perhaps it should instead be considered together with words that have initial t-.

25 In an analogous case, Old Chinese _colour.  བིག་ tsyi < *te (0962a) should have lead to zhī in Mandarin, but the word is instead pronounced de [tə], now written with the character བིག་.

26 For ti- there are quite a few more examples བིག་: sti ‘rebuke, scold’), སྤིན་ sibs ‘offer sacrifice’, སྤིན་ stim ‘enter, penetrate’, སྤིན་ sti ‘rest, repose’, སྤིན་ gtib ‘gather’, སྤིན་ gtig ‘drop’, སྤིན་ gtin ‘bottom, depth’, སྤིན་ gt-pug ‘ignorance’, སྤིན་ mthin ‘deep blue’, སྤིན་ mthil ‘bottom’, སྤིན་ ῥྩི ‘drop’, སྤིན་ ῥྩི-slad ‘a term of abuse’, སྤིན་ ῥྩི bs ‘cover, covering’, སྤིན་ ῥྩི bs ‘gather’, སྤིན་ thigs ‘a drop’, སྤིན་ thib ‘dark’, and other forms of the verb √niin ‘spread’, past སྤིན་ btiins, future སྤིན་ gtin, imperative སྤིན་ thins. There are no Tibetan words that contain the sequence -pi- or -ki. Only grammatical suffixes contain -gi- (gi, gin, gis) and they are just one allophone of these. The two examples of -bi- are easily dismissed: སྤིན་ tbi-ins ‘a type of clay’ is likely a loanword or dialect form and the present stem of སྤིན་ bbiga of the verb √bug, where the present stem suffix -d has induced a ‘u’ to ‘i’ ablaut (cf. Coblin 1976:58).
palatalization of \(d\)- before \(-i\). 27 Four out of five of the words that contain the sequence 
\(-ni-\) end in velars: 
\(ན་ནིང་\) na-ni\(ṅ\) 'last year', 
\(ཞེ་ནིང་\) že-ni\(ṅ\) 'year before last', and 
\(མ་ནིང་\) ma-ni\(ṅ\) 'hermaphrodite'. The exception is the topic marker 
\(ནི་\) ni which is a grammatical word 
like \(བདེ་\) ḷdi ‘this’.

Dempsey’s law is motivated by evidence independent of explaining the pattern of 
Tibetan palatalization (Dempsey 2003:90, Hill 2012:73). If Benedict’s law took place 
after Dempsey’s law then one must invoke a distinction between \(*i\) and \(*\ʲi\) in order to 
explain such pairs as 
\(འཇིག་\) ḷǰig / ḷ媬 / ‘destroy’ and 
\(འདོག་\) ḷdg / ‘stop’ or 
\(ཞིང་\) ʑi\(ṅ\) ‘field’ and 
\(ལིངས་\) li\(ṅ\)s ‘hunt’, with the prevalence of 
\(-i-\) before velars credited to coincidence. 
However, if Benedict’s law took place before Dempsey’s law such pairs and their 
prevalence before velars is an automatic consequence of sound change. A consequence 
of failing to distinguish between \(*i\) and \(*\ʲi\) is the rejection of Jacques’ proposal 
\(*bli > byi\).

One of Jacques’ suggestions may be tentatively embraced; he offers three examples 
of \(*rl- > ḷr-\) (= \(rd\)) (2004:4-5).

\[
\text{Tib. } ḷrje < *rle 'exchange', \quad \text{Tib. } ḷrje < *rle 'lord', \quad \text{Tib. } ḷrje < *rle 'king'
\]

Bodman had previously offered the comparison of ‘exchange’ (1980:127). 29 Rather 
than \(*rl-\) directly yielding \(rj-\) (before Benedict’s law), Bodman presents \(rj-\) as the outcome 
of the series of changes \(*rl- > *rž- > rj-\), of which the first change is Benedict’s law. In 
the absence of evidence for proposing \(*rž- > rj-\) as a change in its own right 30 there is

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27 Both \(ṛd\) and \(ṛtib\) are attested in Old Tibetan. Thus, the Old Tibetan Chronicle offers 
the phrase \(mthos-te ni dguṅ myi ḷrīb\) // ‘being high, the heavens did not fall’ 
(PT 1287, l. 457) and the verb \(ṛtib\) occurs four times in PT 1134 always in the phrase 
\(pho-braṅ ni g.yon-tu ḷtībs-sig! \quad žugs thab ni g.yasu gliṅs-sig! \)
“collapse the tent (?) to the right! Spread (?) the hearth-fire to the right!”.

28 The Monpa word suggests that the root of the Tibetan verb is \(\text{\textbar}brje\) rather than \(\text{\textbar}rje\). Some 
lexicographical sources agree with this, but it is not the majority opinion (cf. Hill 2010b:101). 
The question merits more detailed philological investigation.

29 Bodman also adds Chinese \(เยก\) ye\(k\) ‘change; exchange’ (0850a) to the comparison 
(1980:127), whereas Gong proposes Chinese \(เย\) ye < \(laj\) (0003q) ‘change’ as the cognate 
and Schuessler proposes Chinese \(มา็ก\) me\(k\) < \(mraj\) (1240c) ‘buy’ (2007:66).

30 One might suggest that the change \(*rž- > lj-\) would parallel a change \(*lž- > lj-\), which 
the spelling of the word \(ཁུལ་\) kho\(l\) ‘crib’ as \(ཁུ་ལྗོ\) kho\(l\)ǰo in the Old Tibetan Chronicle (PT 1287 
line 43) might be taken as evidence for. However, since \(ཁུ་ལྗོ\) kho\(l\)jö is attested prior to 
\(ཁུལ་\) kho\(l\)
no way to decide whether *rl- > rř- occurred before Benedict or whether *rź- > rř-
occurred after Benedict’s law.

The relative chronology of sound changes affecting laterals is now more or less
clear. Conrady’s (*ḫl- > ld-) and Bodman’s (*ml- > md-) laws preceed Benedict’s law
(*l- > ź-). Possibly a change *rl- > rř- also occurred before Benedict’s law or alternatively
a change *rź- > rř- occurred after Benedict’s law. It is also clear that Dempsey’s law (*-eŋ
> -iŋ and *-ek > -ig) took place after the sound changes affecting laterals. Every sound
law is potentially associated with a node on the Stammbaum of a language family. The
question naturally arises as to whether any of these changes are shared by other
languages, and can thus help to clarify the structure of the family. Citing comparisons
such as Tibetan ཇི་ ‘field’ to Kurtöp Ȗ ‘field’, Michailovsky & Mazaudon point
out that Benedict’s law (*l > ź) had not yet occurred in proto-Bodish (1992:553). The
comparison of Tibetan བིས་ ‘flea’ and བིས་ ‘arrow’ respectively to Mtsho-sna Monpa liu55 ‘flea’ and mla35 ‘arrow’ demonstrates that
Conrady’s law and Bodman’s law also took place after Tibetan split from proto-Bodish.
The Monpa word ple55 ‘exchange’ makes clear that, like the laws of Conrady, Bodman,
and Benedict’s, the change of *rl > rř- (if it took place before Benedict’s law) occurred
after Tibetan broke off from proto-Bodish. The evidence of the East Bodish languages
shows that all four changes affecting laterals took place after the split of Tibetan from
the other Bodish languages.

Houghton’s law (*ŋ > ŋ-) and Schiefner’s law (*dz- > z-) do effect Kurtöp and
ndza, Chi. ཞ། dzjōX < *dza? [0046u]). Consequently, Houghton’s and Schiefner’s laws
preceeded all of the sound changes affecting Tibetan laterals and Dempsey’s law.

In conclusion, Houghton (*ŋ > ŋ-) and Schiefner’s laws (*dz > z-), affecting
Kurtöp and Monpa, are shared innovations that characterizes the Bodish branch, which
precede all of the Tibetan internal changes that affect laterals. Within the history of
Tibetan, Conrady (*ḫl- > ld-) and Bodman’s (*ml- > md-) laws preceed Benedict’s law
(*l- > ź-) and Benedict’s law in turn preceedes Dempsey’s law (*eŋ > -iŋ and *ek > -ig).
Coblin’s law (loss of prefixes) took place after Conrady’s law, but it does not interact
with Benedict’s or Dempsey’s law. In addition, either a change *rl- > rř- occurred
before Benedict or a change *rź- > rř- occurred after Benedict’s law. Table 2 attempts to
present these conclusions in tabular format.

khul-ţo it is unattractive to suppose lj- the innovative variant. A superior analysis is to cite
these two words as an example of the change *j > ź at syllable initial position in syllable initial
position (Schiefner’s law, cf. Schiefner 1852:364).
Table 2: Relative chronology of Tibetan sound laws

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<th>Phase 1:</th>
<th>Relative chronology of Tibetan sound laws</th>
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<td>Schiefner’s law (*dz- &gt; z-)</td>
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<table>
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<th>Bodish (common ancestor of Tibetan, Kurtöp and Monpa)</th>
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<tr>
<td>Conrady’s law (*hl- &gt; ld-)</td>
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<th>Phase 3:</th>
<th>Phase 4:</th>
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<tr>
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</tr>
<tr>
<td>Dempsey’s law (*-ek, *-en &gt; -ig, -iŋ)</td>
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</tr>
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Old Tibetan as attested

References


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影響古藏文邊音衍變的語音規律
及其相對順序

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關鍵詞：語音規律，邊音，藏語，藏語群