The laterals in Tibetan.[1]

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The reconstruction of lateral consonants in Sino-Tibetan languages is often complex. The laterals of Archaic Chinese, for instance, change into all sorts of consonants in Middle Chinese : d- 定, th- 透, y- 以, sy- 书, x- 晓, and even l- 来, not to mention the consonant clusters (Pulleyblank 1962 and Jaxontov 1976 ; see Starostin 1989: 191-234, Baxter 1992: 196-8, Sagart 1999: 30-40, Jacques 2000, Gong 2001 and Jin 2001 : 50-111 for recent developments on this subject).

The evolution of laterals from proto-Tibetan to Classical Tibetan is equally complex. In this paper, we will firstly describe the system of laterals in Classical Tibetan (henceforth CT), and secondly offer a reconstruction for several consonant clusters which we believe come from proto-Tibetan laterals incorporating insights from other scholars as well as new proposals.

1. The laterals in Classical Tibetan

The structure of the syllabe in CT is implicitely described in the writing system. Tibetan is famous amongst Sino-Tibetan languages for its unusually complex consonant clusters, that are paralleled only in the rGyalrongic languages within the family. Traditionally, the Tibetan grammarians distinguish four positions in initial consonant clusters :

1. *sngon-'jug* སྔོན་འཇུག་(g- d- b- m- '- གཌདབམའ)

2. *mgo-can* མགོ་ཅན་(r- l- s- རལས)

3. *ming-gzhi* མིང་གཞི་(radical)

4. *'dogs-can* འདོགས་ཅན་(w- r- l- y- ཝརལཡ)

The only position that must be filled with a consonant is the *ming-gzhi*, the other positions can be left empty. It is possible for both the *sngon-'jug* and the *mgo-can* positions to be filled at the same time, but then the *sngon-'jug* must be b- (groups such as *grt- are not found). Following the terminology used in Jacques (2004) for the rGyalrongic language Japhug, we will call <u>*preinitials*</u> both *sngon-'jug* and *mgo-can*, <u>*initial*</u> the *ming-gzhi* and <u>*medial*</u> the *'dogs-can*. In Tibetan, unlike rGyalrongic languages, we do not find any process of partial reduplication that could help us to analyse the syllable structure. We must rely on the distribution of the phonemes to analyse the syllabe.

A basic constraint on the CT syllabe is that syllable with the same phoneme in the preinitial position and the medial position are not permitted (*rgr-, *lbl-): a similar constraint is found in Japhug (Jacques 2004: 72).

In CT, we find only two laterals, l- and lh-. The lateral l- appears in two kinds of clusters, as a

[1] The Archaic Chinese reconstruction follow Sagart 1999, the Middle Chinese transcription is from Baxter (1992), and the Tamang data is from Mazaudon (1994-2003).

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preinitial, and as a medial. We find l- as a preinitial in the groups presented in Table 1 ; the groups with only few examples are written in parenthesis, and the examples given for these groups are exaustive.

	l-	examples	bl-	examples
k-	(lk-)	*lkug-pa* གླུག་པ་ *lkog* གློག		
g-	(lg-)	*lga* གླ་ *lgang-pa* གླང་པ་		
ng-	(lng-)	*lnga* ལྔ་ *lnga-pa* ལྔ་པ་		
c-	lc-	*lca-ba* ལྕ་བ་ *lci-ba* ལྕི་བ་		
j-	lj-	*ljags* ལྗགས་ *ljid-pa* ལྗིད་པ་		
t-	lt-	*lta* ལྟ་ *ltung* ལྟུང་ *lteb* ལྟེབ་	(blt-)	*bltams* བལྟམས་ « be born »[3]
d-	ld-	*ldab* ལྡབ་ *lding* ལྡིང་*ldug* ལྡུག་	(bld-)	only past / future tense forms
p-	(lp-)	*lpags* ལྤགས་		
b-	(lb-)	*lba-ba* ལྦ་བ་ *lbu-ba* ལྦུ་བ་		

Table 1 : The groups with l- *mgo-can* in CT.

From Table 1 it is obvious that l- occurs as a preinitial only before stops, and that examples are fairly rare with grave initials (labials and velars). There is no l- prefix in CT. Finally, the l-preinitial is incompatible with any medial: groups such as *lgr- or *lby- are unfound in the language.

The phoneme l- also occurs in the *'dogs-can* position; these cases have been summarized in Table 2.

	0-	example	b-	example
k-	kl-	*klad* སྐད་ *klu* སྐུ་ *klog* སྐོག་	(bkl-)	only past / future tense forms
g-	gl-	*glang* སྒང་ *gling* སྒིང་ *glu* སྒུ་		
b-	bl-	*bla* སྦ་ *blug* སྦུག་ *blo* སྦོ་		
z-	zl-	*zla* སྟ་ *zlug* སྟུག་ *zlog* སྟོག་	(bzl-)	only past / future tense forms

[3] This verb is the only genuine root with this cluster, the rest being past and future tense of verbs in lt- such as blta, bltabs, bltos etc.

r-	rl-	*rlan-pa* རླན་པ་ *rlig-pa* རླིག་པ་	brl-	*brla* བརླ་, *brling-po* བརླིང་པོ་
s-	sl-	*slad* སླད་ *slu* སླུ་ *sleb* སླེབ་	(bsl-)	only past / future tense forms

Table 2 : The groups with -l- *'dogs-can* in CT.

The implicit analysis given by the Tibetan script is that in these groups -l- is always medial. However, as we have already mentioned, b- / g- can fill the *sngon-'jug* position and r- / s- can fill the *mgo-can* position : in the four groups gl-, bl-, rl-, sl- we could assume that g-, b-, r-, s- are preinitials when -l- is initial. In Japhug (Jacques and Chen 2004, Jacques 2004), the patterns of partial reduplication allow us to disambiguate this kind of clusters: in partial reduplication, the medial consonnant is dropped, but no such morphological process exists in CT.

Beyer (1992 : 74-78) has argued that in all these clusters except zl-, -l- is the real initial, his main reason being that no preinitial but b- can be added before these clusters : *skl-, *rgl- are unfound in the language. This insight comes from Tibetan grammarians.

The consonant lh- is analysed as a group l + h, l being *mgo-can*, but most researchers believe that this represents only a voiceless lateral (Sun 2003: 787 presents a divergent view).

2. Historical reconstruction of Tibetan laterals.

In order to reconstruct the proto-system of Tibetan lateral, we have two sets of data at our disposal : firstly, the internal data, consisting of the alternations observed in word families containing laterals and internal reconstruction based on the distribution of the phonemes, and the external data, in particular the comparison with closely related languages such as Tamang or Bumthang.

If we exclude the groups with l- or hl- as a medial / initial in CT, there are many other series of group coming from laterals : zh-, lc-, lj-, rj-, md-, 'd-, lt-, ld-, phy- and by-.

2.1 The origins of zh- and lj-

The lateral origin of zh- is proven by external comparison. This fricative comes from a palatalized lateral. This has been noted earlier by Benedict (1972), Gong (1977), Coblin (1986) and Michailovsky and Mazaudon (1994).

The first to propose that zh- comes from a lateral was Benedict (1972 : 33 - footnote 104), but only for the numeral "four". His interpretation was that *lyi > lji in CT, but that *blyi became *blji then *bzhi* because either *blji or *bji are impossible syllables in CT. Gong (1977 [2002] : 391) proposed a similar rule according to which *ly- becomes zh- before preinitials b- and g- (*gly- > gzh-, *bly- > bzh-).

Coblin (1986 : 15) also proposed that *ly- become zh- in CT, but his proto-Tibetan *ly- also

becomes lj- in other examples (*ljags* “tongue hon.”). This is in fact the implicit reason why Gong did not extend his rule *ly- > zh- to examples without a preinitial: one cannot give two outcomes for one reconstruction in proto-Tibetan.

A lateral origin for zh- is confirmed by word families within Tibetan :

zh-	Meaning	lateral	Meaning	Reference
gzhogs གཞོགས་	side	*logs* ལོགས་	side	Gong 1977 [2002 : 391]
bzheng བཞེང་	construct; establish (hon.)	*lang* ལང་	rise	Gong 1977 [2002 : 394]
bzha བཞའ་	humidity	*rlon* རློན་ *brlan* བརླན་	wet	Jacques 2004 : 144
gzhongs གཞོང་ས་	region[4]	*ljongs* ཇོང་ས་	region	

Table 3 : Examples of zh- coming from a lateral (word families).

Michailovsky and Mazaudon (1994 : 553), based on data from Bumthang, suggest that “the conditioning of the differential treatment *l > lj and *l > zh in WT might have been the presence / absence of a voiceless prefix, as reflected by the high/low tone of the Kurtoep reflexes”. They present the data in Table 4 to support their hypothesis, comparing CT to the Bumthang dialect Kurtoep and other related languages such as mTsho-sna mon-ba (Lun 1986).

Tibetan	Meaning	Kurtoep	mTsho-sna	Chinese	Reference
bzhi བཞི་	four	*ble*	*pli*^{53}	四 *^{b}s-lij	Benedict 1972 : 94
gzhu གཞུ་	bow	^{L}*limiʔ*	*li*^{13}		
zhing-ka ཞིང་ཀ་	field	^{L}*leŋ*	*leŋ*^{13}	田 *^{a}liŋ	
zhim-po ཞིམ་པོ་	tasty	^{L}*lembu*	*lim*^{13} *po*^{53}	甜 *^{a}lim	Coblin 1986 : 145
lji-ba ལྗི་བ་	flee	^{H}*lija*	*liu*^{55}		
ljid-po ལྗིད་པོ་	heavy	*ɻit*	*li*^{55} *po*^{53}		

Table 4 : The origin of lj- and zh- in CT (comparison with Bumthang).

These comparisons are quite convincing, but it is not necessary to suppose that the prefix was voiceless to explain the high tone in Bumthang languages. In some Tibetan dialects that lost preinitials, sonorant preinitials of CT yield high tone, as in the Lhasa dialect (syllables coming from etyma with clusters like mn-, mng-, rl- in CT have high tone in this dialect). Our solution is to reconstruct *ly > lj- when preceded by a sonorant: *n-ly > lj-, *m-ly- > mj- and *r-ly- > rj- . We can add the following examples to those of Table 4 :

[4] These words are unrelated to *gshongs* « narrow valley », a deverbal noun (caused by –s suffix) from the verb *gshong-ba* « to hollow out ».

Tibetan	Meaning	Burmese	Tamang	Reference
rje རྗེ་	exchange	*lây*		Benedict (1972 : 64, f. 205)
rje རྗེ་	lord		*4kle* « king »	
brjed བརྗེད་	forget		*2mlet-pa*	
mjing མཇིང་	neck	*laŋŋ*		Benedict (1972 : 33)

Table 5 : Examples of lj- / rj- / mj- coming from clusters with lateral initials.

The group brj- comes from *m-rly- in « to forget », the *m being denasalised in this position (there is no group *mrj- in CT). For the word *rje* "lord", we must reconstruct different prototypes in proto-Tibetan and proto-Tamangic, one with preinitial *r-, and the other with *g-.

Not all zh-, though, come from laterals, as some of these belong to word families with stops or fricatives. Many examples can be found in Gong 1977:

zh-	Meaning	stop / fricative	Meaning	Reference
bzhugs བཞུགས་	to remain (hon.)	*'dug* འདུག་	to remain, to stay	Gong 1977 [2002 : 390]
bzhed བཞེད་	to wish (hon.)	*'dod* འདོད་	to wish, to like	Gong 1977 [2002 : 390]
bzhes བཞེས་	to take (as of food, clothe), food	*za* ཟ་	to eat	Gong 1977 [2002 : 391]

Table 6 : Examples of zh- not coming from laterals.

Also, Simon (1930 : 30) suggested that j- becomes zh- when preceded by b- and g- : *g-dy- > gzh- as in *gzhom*, future of *'joms* "to destroy, to conquer" (where *dy- > j-, following Koerber's law).

In the present work, we will reconstruct *ly- in proto-Tibetan for all the zh- coming from a lateral, regardless of whether they are prefixed or not. This reconstruction is possible since no group *ly- exists in CT.

2.2 The reconstruction of lc-

There is little controversy on the reconstruction of this group in proto-Tibetan. All authors from Benedict (1972 : 39, footnote 127) have agreed that *hly- > lc-.

Tibetan	Meaning	Chinese	Tamang	Reference
lcags ལྕགས་	iron	铁 *^{b}lhik		Chang 1972
lcang-ma ལྕང་མ་	willow	杨 *^{b}laŋ		
lci-ba ལྕི་བ་	excrement	屎 *^{b}hlijʔ	*1kli*	Benedict (1972 : 185)

Table 7 : Examples of lc- corresponding to laterals in other languages.

We will adopt this reconstruction. However, not all cases of lc- come from *lhy-, eg : *bltams-pa* "to give birth to a child" / *lcam* "wife (hon.)", with a honorific -y- infix (*lt-y-am > lcam), as shown by Gong 1977 [2002 : 391] (for *ty > c- in CT, see Koerber 1935).

2.3 The reconstruction of 'd- / md-

It was recognized in Benedict (1972 : 111) that the Tibetan word *mda* "arrow" corresponded to words with laterals in other languages; such as Burmese *mra:*; but the explanation as a fortition of the lateral was not explicitely given : *ml- > md-.

Gong (2001 [2002: 198]) provides more evidence for this change in word families:

md-	Meaning	lateral (medial / initial)	Meaning
mdongs མདོངས་	blind	*ldong-pa* ལྡོང་བ་ *long* ལོང་	id.
mdan-pa མདན་	cheek	*ldan-pa* ལྡན་	id.

Table 8 : Examples of md- < *ml-

Since no cluster *ml- exists in CT, this explanation fits very well. As we have another nasal preinitial written with '- in CT, it is possible to reconstruct a group *nl-. Li (1933) proposed that this *n-l- (*'l in his notation) yields ld- through *d-l- in CT. This hypothesis was accepted by Gong (2000, 2001) and Coblin (1986). However, we notice that the group 'd- also corresponds to laterals, as can be seen in Table 9.

Tibetan	Meaning	Chinese	Other languages	Reference
'dab-ma འདབ་མ་	leaf (also *ldebs* ལྡེབས་*lheb* ལྷེབ་)	叶 *^{b}lap		Jin (2001 : 142)
'dom འདོམ་	two outstreched arms	尋 *^{b}sləm	Bur. *lam*	

Table 9 : Examples of 'd- < *nl-

Therefore, we suggest that 'd- comes from *nl- in some cases, and this change is fully parallel to md- < *ml-. Another reconstruction will be necessary for ld-.

2.4 The reconstruction of lt- and ld-

The group lt- seems to come very rarely from a group with lateral initial. The only clear example from word families is *ltung, ltungs* « to fall » that is related to *lhung, lhungs* of same meaning.

The comparative evidence is not clear. The comparison of *lteb, bltabs* "to fold" with Chinese 摺 *tsyep* < *[b]t-lip was proposed by Simon (1929 : 240) and Gong (1980 : 146) and the related word *ldab, blabs* "to repeat" with Chinese 疊 *dep* < *[a]lip by Shafer (1966 : 14.12), Benedict (1972 : 184), Coblin (1986 : 124). Though it is not sure that this comparison is acceptable, given the discrepancy in vowels and the fact that we do not find laterals in cognates from others languages (eg.: Burmese *thap*), this family could provide an example of lt- coming from a group with lateral initial (the Chinese data suggest *t-l- > lt-).

On the other, it is widely acknowledged that ld- comes from a group with lateral origin. Li Simon (1930 : 30-31) proposed the change *d-l- > ld-, and Fang-kuei (1933) proposed to reconstruct ld- as *n-l- > *d-l-. Li's view is also held by Coblin (1986) and Gong (1980, 2000, 2001). There are many pieces of evidence from word families:

ld-	Meaning	lateral (medial / initial)	Meaning
ldong-ba འདོང་བ་	blind people	*long* ལོང་ *longs* ལོངས་	to be blind
ldug འདུག་ *ldugs* འདུགས་	to pour in	*blug* བླུག་ *blugs* བླུགས་	id.
ldob འདོབ་ *ldobs* འདོབས་	to know, to understand	*slob* སློབ་ *bslabs* བསླབས་	teach
ldang འདང་ *ldangs* འདངས་	to get up, to rise, to be enough	*lang* ལང་ *langs* ལངས་	to rise

Table 10 : Examples of ld- coming from groups with lateral initial.

Given that *n-l- > 'd- in our reconstruction, we suggest to adopt *d-l- > ld-. As for lt-, we follow Li (1933: 149) in reconstructing *d-lh- > lt- to explain to word family *ltung* / *lhung*.

Some groups lt- come from older *lt- with a real l- preinitial, for instance *lta bltas* "see" which is probably cognate to Chinese *[a]taʔ 睹 (Gong 1980 #16, Yu 1989 #5.21).

2.5 The reconstruction of phy-

Gong (1977 [2002: 392]) noticed three examples of word families where phy- alternates with l-, and we can provide here some more examples.

phy-	Meaning	lateral	Meaning	Reference
phyag ཕྱག་	hand (hon.)	*lag* ལག་	hand	Gong (1977 [2002: 392])
phyogs ཕྱོགས་	side	*logs* ལོགས་	id.	Gong (1977 [2002: 392])

phyogs ཕྱོགས་	to turn	*log* ལོག་	to return, to go back	Gong (1977 [2002: 392])
phyug-po ཕྱུག་པོ་	rich[5]	*lhug-po* ལྷུག་པོ་	rich	
phyugs ཕྱུགས་	cattle	*lug* ལུག་	sheep	
phying-pa ཕྱིང་པ་	felt	*glings-pa* གླིངས་པ་	rug felt	
phyam ཕྱམ་	beam, rafter	*lcam* ལྕམ་	id.	

Table 11 : Examples of phy- < *pl-

Gong's solution to explain these word families is to suppose two parallel changes *phl- > l- and *phly- > phy-. For example, *phlak > *lag* and *phlyak > *phyag*). Since the group *phl- do not exists in CT, this explanation is consistent with the data. However, a simpler approach seems preferable : a change *pl- > phy-. In this view, *phyag* and *lag* differ not by a *-y- infix, but by a *p- prefix. We also disagree with Gong's later view (2001 [2002: 205]) that *pl- > lp- in the word *lpags* "skin".

Unlike *pl-, the group bl- is attested in Tibetan. However, there is no syllable beginning in *bli (*bli, *blig, *blid etc.). We found one example of the group by- having word family relationship with word having lateral initial.

by-	Meaning	lateral	Meaning
byings-po བྱིངས་པོ་	completely, entirely	*lings-po* ལིངས་པོ་	id.

Table 12 : One example of *bli- > byi-

We reconstruct therefore a change *bli > byi.

These two changes probably took place after *ly- > zh-, otherwise it would be difficult to explain why *bli- > *byi-* while *blyi- > *bzhi-* : if the changes had happened at the same time, we would have expected *bly- to change to by- also.

3. Conclusion

The reconstructions of Proto-Tibetan proposed in this paper can be summarized in Table 13.

Proto-Tibetan	Classical Tibetan
*ly-	*zh-*
*hly-	*lc-*

[5] This word has been compared to Chinese 富 *^{b}puk (Simon 1929 : #46; Shafer 1966 : 4; Coblin 1986 : 158), but this comparison is most certainly incorrect given the discrepancy in initial (*pluk vs. *^{b}puk) ; besides, it is not sure which meaning, of "cattle" and of "wealth", is the oldest. Gong (1995) also rejected this comparison on other grounds (the vocalism of the rime in Chinese).

*bly-	*bzh-*
*gly-	*gzh-*
*n-ly	*lj-*
*m-ly-	*mj-*
*r-ly	*rj-*
*n-l-	*‘d-*
*m-l-	*md-*
*d-l	*ld-*
*d-lh-	*lt-*
*pl-	*phy-*
*bli-	*byi-*

Table 13 : Evolution of groups with laterals from Proto-Tibetan to Classical Tibetan

The reconstruction proposed here differs slightly from previous works : in particular, the rules *n-l- > ‘d-, *n-ly- > lj- and *pl- > phyi- have not been proposed elsewhere.

The status of the reconstructed *-y- medial might be further investigated. Benedict (1972: p.33 footnote 104, also p.107) suggested that *li > *lyi > lji in Tibetan, in other words, that laterals palatalised before –i. This idea is interesting, especially where we consider that other dental consonants seem to have been through a similar change[6]. However, the origin of words where l- did not palatalise before –i needs to be explained:

li-	gli- / rli-	lhi- / ldi-
li ལི་ “bronze”	*gling* གླིང་ “continent”	*lhing-ba* ལྷིང་བ་ “calm”
li-ba ལི་བ་ “curled (of hair)”	*glings-pa* གླིངས་པ་ “felt rug”	*lding* ལྡིང་ “to fly”
ling-ling ལིང་ལིང་ “waving back and forth”	*rlig-pa* རླིག་པ་ “penis”	
lings-pa ལིངས་པ་ “hunter”	*rlid-bu* རླིད་ཀུ་ “skin of animal”	
lings-po ལིངས་པོ་ “entire”	*rlings-po* རླིངས་པོ་ “wide”	
	rlibs རླིབས་ “wear”	
	brling-po བརླིང་པོ་ “stable, solid”	

Table 14 : Non-palatalised laterals before the vowel –i in Tibetan.

One clue might be that palatalisation is hindered by a preinitial r-, so that *rli- cannot change

[6] The initial *n has been almost systematically palatalised before –i (*ni > nyi), the only exceptions being *ni* “focus particle” and *na-ning* “last year”. With *t- and *d-, the change occurred in some words, like *gcig* “one” coming from *g-tyik, with *ty- > c- / ch- as proposed by Koerber 1935), bu not in many others, like *mthil* “middle”.

to *rlyi- > rji-[7], but otherwise there is not explanation why l- does not palatalize in some cases. For example, *liŋ is not palatalized in *lings-pa* "hunter" (cognate with Chinese 畋 *den* < *[a]liŋ "to hunt") but is palatalized in *zhing-ka* "field" (Chinese 田 *den* < *[a]liŋ "field"). This might be the result of dialect mixture in proto-Tibetan.

However, a comprehensive study of palatalization in proto-Tibetan and Tibetan dialects would be needed to settle the issue, and lies beyond the scope of this paper.

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[7] The group *rdi- seems also no to have palatalised into rji-, for there are many roots with rdi- in CT.

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