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On Coblin's Law*

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Coblin's law is one of the most important phonetic laws in Tibetan historical phonology. This law was devised to explain alternations in the verbal system, but the present article shows that its range of application can be observed in the nominal system too. It also suggests an extension of Coblin's law: *sNC- > *sC*-.

Key words: Tibetan, phonology, morphology, dissimilation, cluster simplification

1. Introduction

In a recent article, Hill (2011:446) has proposed the term "Coblin's law" for a set of rules of cluster simplification observed in the Tibetan verb, first stated by Coblin (1976). Coblin's analyses have been widely accepted by specialists of Tibetan historical linguistics, and it seems fitting to provide a contribution on this topic for a Festschrift in honour of Professor Coblin.

In this article, I will present the empirical basis of Coblin's law, show its significance for Tibetan historical phonology outside of the verbal system, and finally propose an extension of this law, namely *sNC- > *sC*-.

2. Coblin's three rules

Coblin's law encompasses three distinct phenomena, which we designate respectively as rules 1, 2 and 3.

Rule 1 concerns the dissimilatory loss of labial stops, which occurs in the past and future stems of *b*- or *p*- initial verbs (Coblin 1976:49, 53). An example of the application of this rule is provided by the paradigm of the verb *bʲed* 'to do'. We present here the paradigm of this verb with a pre-Tibetan reconstruction based on Coblin's insight but following Jacques' (2012a) reconstruction model of pre-Tibetan reconstruction:[1]

* In this paper, Tibetan is transcribed using Jacques' (2012b) transcription system. I wish to thank Nathan Hill, Newell Ann Van Auken and two anonymous review for insightful comments on this paper; I am responsible for any remaining errors.

[1] The symbol *V in the pre-Tibetan reconstructions refer to a vowel that was weakened to

Table 1: The paradigms of *bʲed* 'to do' and *ⁿbʲin* 'to take out'

	Present	Past	Future	Imperative
Pre-Tibetan	*bʲa-d	*BV-bʲa-s	*BV-bʲa	*bʲa-s-o
Old Tibetan	*bʲed*	*bʲas*	*bʲa*	*bʲos*
Pre-Tibetan	*N-bʲuŋ-d	*BV-pʲuŋ	*GV-bʲuŋ	*pʲuŋ-o
Old Tibetan	*ⁿbʲin*	*pʰʲuŋ*	*dbʲuŋ*	*pʰʲuŋ*

Since initial geminate stops are not allowed in Old Tibetan, the past and future prefixes *BV- > *b-* are deleted and the forms appear prefix-less. This law applies without exception. Coblin (1976:49) argued the verb 'to write' *ⁿbri* to be an example of this law, and postulated for the past form the development *b-bri-s > *bris*. However, as shown by Hill (2005), this verb is an example of *r-* stem. The archaic present form was *N-ri > *ⁿdri* and the present form *ⁿbri* attested in Classical Tibetan and in modern languages results from analogy with the past form *bris*. The Past Tense prefix *b-* was reinterpreted as part of the root:

Table 2: The paradigm of *ⁿbri* 'to write' (analogical forms are shaded in grey)

	Present	Past	Future	Imperative
Pre-Tibetan	*N-ri	*BV-ri-s	*BV-ri	*ri-s-o
Old Tibetan	*ⁿdri*	*bris*	*bri*	*ris*
Classical Tibetan	*ⁿbri*	*bris*	*bri*	*bris*

Rule 2 is the loss of the present *N- prefix when the verb root contains an initial cluster. In Old Tibetan, we do find three-element consonant clusters that have the nasal preinitial *ⁿ-* (ཧ) as the first element, such as *ⁿgr-* or *ⁿbʲ-*. However, such clusters only occur when the third element is one of {r, ʲ, ʷ}, that is when it is a *medial* consonant. Neither NCC_i- nor CNC_i- type clusters are allowed in Tibetan when C_i represents the radical consonant of the cluster (which is called *miŋ.gzi* in Tibetan). For instance, while *ⁿgr-* is possible, *ⁿgd- or *ⁿdm are not.

Given this phonotactic constraint, the present prefix *N- never appears in the paradigms of verbs with a CC_i- type cluster. For instance, in the paradigm of 'see', the present form is *lta* not *ⁿlta because the cluster *ⁿlt- violates the constraint above. Again, this rule is without exception.

schwa, and then to zero; the loss of labial prefixes occurred only after the vowel in these prefixes disappeared: *BV-bʲa-s > *B-bʲa-s > *bʲas*.

Table 3: The paradigm of *lta* 'to see'

	Present	Past	Future	Imperative
Pre-Tibetan	*N-lta	*BV-lta-s	*BV-lta	*lta-s-o
Old Tibetan	*lta*	*bltas*	*blta*	*bltos*

Rule 3 concerns the deletion of the *g-*/*d-* present and future prefixes, which occurs with another conjugation class.[2] The preinitials *g-* and *d-* in Tibetan occur in complementary distribution with respect to the radical consonant. As pointed out by Li (1933), *g-* appears before dentals and palatals (*gt-*, *gtɕ-* etc), while *d-* appears before labials and velars (*db-*, *dŋ-* etc). The only cases in which they are potentially contrastive is before *r-* and *l-*, as *DV-l- yields *ld-* while *GV-l- becomes *gl-*.

The present tense prefix appearing as surface *g-*/*d-* has to be reconstructed *Go- in pre-Tibetan: the vocalism *o is reconstructed on the basis of the vowel alternation that occurs in verb roots of this type (as in *gtoŋ*, past *btaŋ* 'to send'; see Jacques 2012a).[3]

The reconstruction of *G- rather than *D- is based on the fact that lateral initial verbs still takes a velar prefix, as for instance *klog* < *Go-lhag 'to read'; if the present prefix were a dental *Go, we would rather expect a form *ltog.[4]

The following paradigm illustrates the application of rule 3 (Coblin 1976:56-57):

Table 4: The paradigm of *skaŋ* 'to fill'

	Present	Past	Future	Imperative
Pre-Tibetan	*Go-skaŋ	*BV-skaŋ-s	*BV-skaŋ	*skaŋ-s-o
Old Tibetan	*skoŋ*	*bskaŋs*	*bskaŋ*	*skoŋs*

The present form is *skoŋ* not *dskoŋ, as a cluster such as *dsk-* violates the constraint stated above.

No language seems to present exactly the same phonotactic rules as those proposed by Coblin for Tibetan. We do find dissimilatory phenomena applying to prefixes in related languages such as Horpa and Lavrung (Sun 2007 and Lai 2013:139-144), but the phonological processes observed in those languages are still considerably different from those postulated for pre-Tibetan.

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[2] Despite the doubts of an anonymous reviewer, rule 3 does apply to the *g-*/*d-* present prefix. The *d-* allomorph is attested in verbs such as *dgod*, *bgad* 'to laugh' and *dgroŋ*, *bkroŋs* 'to assassinate' (the latter has the alternative present form *ⁿgroŋ* also attested in Hill 2010).

[3] Coblin (1976:55) proposed to reconstruct simply *g- for the present prefix, but this reconstruction does not account well for the rounding of the vowel.

[4] On the conjugation of this verb, see de Jong (1973) and Hahn (1999).

3. Coblin's law outside the verb system

The three phonetic rules proposed by Coblin are based on his internal reconstruction of the verbal system. It is not likely that this rule only applied to verbs, but finding evidence for Coblin's law outside the verbal system is more difficult, as the prefixal nominal morphology in Tibetan is less developed than the verbal one. In this section, we will concentrate on Coblin's rule 3, the deletion of *d-*/*g-*, as potential examples are more numerous.

In Tibetan, we find at least three distinct *d-*/*g-* prefixes[5] outside of the verb system: an "animal classifier" prefix, a "body part" prefix, and a nominalization prefix. The existence of these prefixes has already been mentioned by other scholars (such as Wolfenden 1929, Matisoff 2003), but their behaviour in Tibetan requires special comments.

3.1 Animal prefix

Many authors such as Matisoff (2003:134-135) mention the existence of a velar "animal prefix". In Tibetan, many animal names have a *g-*/*d-* prefixal element, an in a few of these words, we have bisyllabic Japhug Rgyalrong cognates where Tibetan *g-* corresponds to either a velar *kɯ-* or a uvular *qa-* prefix (Jacques 2008:53-54):[6]

Table 5: The animal prefix *g-* in Tibetan

Tibetan	Meaning	Japhug	Meaning
g-zig	leopard	*ku-rtsɤɣ*	id.
g-lag	eagle	*qa-liaʁ*	id.
g-jaŋ	sheep	*qa-ʑo*	id.
k-lu < *GV-lhu	nâga	*qa-jɯ*, also *-ʁjɯ* in compounds	worm

The "prefixes" are not real derivational prefixes, as they are not used to create a noun out of another lexeme. Their origin is unclear, though they may be the remnant of a system of noun classification.

Not all animal names in Tibetan have *d-*/*g-* prefix. Even in Japhug, the prefixes *kɯ-* and *qa-* are not found on all animal names; for instance, common name such as *tsʰɤt* 'goat' or *mbro* 'horse' lack it. Therefore, the absence of the *d-*/*g-* prefix in Tibetan

[5] As briefly mentioned in the previous section, the preinitials *g-* and *d-* are in complementary distribution, and thus we cannot distinguish between velar and dental prefixes, and between voiced and unvoiced stops on the basis of Tibetan data.

[6] The correspondence of Tibetan *j-* and *l-* to Japhug *ʑ-* and *j-* respectively is regular.

may in some cases be simply due to the fact that the prefix in question never existed.

However, in several cases at least, this might be due to the application of Coblin's law. In the following examples, we find Tibetan words whose Japhug equivalent has a *qa-* or *ʁ-* prefix:

Table 6: Application of Coblin's law in animal names

Tibetan	Meaning	Japhug	Meaning
ⁿpʰar	dhole	*qa-par*	id.
sbrul	snake	*qa-pri*	id.
ⁿbroŋ	wild yak	*ʁ-mbroŋ*	id.

The first two are cognates, while the third one is obviously borrowed from Tibetan into Japhug (Tibetan *-oŋ* corresponds to Japhug *-o* in the inherited layer, as in *mtʰoŋ* 'to see', Japhug *mto*). All three Tibetan words have a CC_1 onset: adding another consonant would be impossible. According to Coblin's law, if the proto-forms had been *GV-mpʰar, *GV-sbrul and *GV-mbroŋ, the *g-* would have been deleted without trace. Therefore, it is possible that the velar or uvular animal prefix had been present in these etyma.

The case of *ʁmbroŋ* 'wild yak' in Japhug is particularly interesting. It can be interpreted in two ways. First, one could consider that Japhug has borrowed the word from an archaic form of Tibetan that did not undergo Coblin's law. Alternatively, Japhug could have created this form by adding the animal prefix *qa-*; this would be the only example of productivity of this prefix in the Japhug language, and perhaps in the Sino-Tibetan family as a whole.

3.2 Body parts

The "body part" and "kinship terms" dental prefix in Sino-Tibetan languages has been mentioned by several authors (e.g. Matisoff 2003:140-141).

Unlike the "animal prefix", this prefix has a clear grammatical function. In the morphologically conservative Rgyalrong languages, such as Tshobdun (Sun 2003) and Japhug (Jacques 2008:47), both kinship terms and body parts have indefinite possessor *tɯ-* (or *tɤ-*) prefixes used with inalienably possessed nouns, which are replaced by personal possessive prefixes when the possessor is definite:

(1) *tɯ-jaʁ* 'a hand'
a-jaʁ 'my hand'
ɯ-jaʁ 'his hand'

In Tibetan, traces of this indefinite possessor as *d-*/*g-* commonly appear with body parts and kinship terms, such as *d-puŋ* 'shoulder', *g-ʑaŋ* 'anus' etc. Some of these have external cognates (group 1 in Table 6). At the same time, an important proportion of body part terms do not have traces of such a prefix in Tibetan, unlike the cognate forms in Japhug, and we can classify them into two groups, 2 and 3, as shown in the following table:

Table 7: Cognate body part terms between Tibetan and Japhug

Group	Tibetan	Meaning	Japhug	Meaning
1	*dmʲig*	'eye'	*tɯ-mɲaʁ*	id.
	dpʲi	'hip bone'	*tɯ-χpɣi*	'thigh'
2	*rɲil*	'gums'	*tɯ-rni*	id.
	ske	'neck'	*tɯ-mke*	id.
	mgo	'head'	*tɯ-ku*	id.
	rna	'ear'	*tɯ-rna*	id.
	sna	'nose'	*tɯ-ɕna*	id.
	snabs	'snot'	*tɯ-ɕnaβ*	id.
	mtɕʰin	'liver'	*tɯ-mtsʰi*	id.
3	*lag.pa*	'hand'	*tɯ-jaʁ*	id.
	pʰrag.pa	'shoulder'	*tɯ-rpaʁ*	id.
	pʰo.ba	'stomach'	*tɯ-pu*	'intestine'

Group 3 words present no trace of the *d- prefix, though in principle forms such as *ldag, *dprag and *dpo could have been expected. In the case of group 2 words however, we have complex clusters that would not allow an additional prefix to surface due to Coblin's law. If for instance *sna* 'nose' had been *DV-sna in pre-Tibetan as in Japhug *tɯ-sna*, the *DV- would have disappeared. These nouns are therefore potential examples of Coblin's law.

3.3 Nominal forms

A widespread nominalization prefix in Sino-Tibetan is the velar prefix; Konnerth (2012) found traces of it in many languages of North-East India, and it is still extremely productive in languages such as Limbu (Kiranti) and in all Rgyalrong languages (see in particular Sun 2003, Jacques 2008).

Examples in the following list show *g-*/*d-* prefixes which appear to have a nominalizing function, often in combination with the nominalizing suffixes *-s*, *-d* and *-n*:

Table 8: Examples of the nominalizing *g-*/*d-* prefix in Tibetan

Verb/Adjective	Meaning	Derived Noun	Meaning
nag(*-po*)	'black'	*gnag*	'black ox'
ŋu, *ŋus*	'to cry'	*dŋud*	'a sob'
ŋan	'evil'	*dŋan*	'evil magic'
ⁿkʰʲil	'to flow together, to whirl'	*dkʲil*	'center'
blu, *blus*	'to redeem'	*glud*	'ransom'
ⁿpʰuŋ, *pʰuŋ*	'to be gathered'	*dpuŋ-po*	'heap'
glon (*ldon*), *blan*	'to answer'	*klan*	'answer'
jo	'oblique, twisted, deceitful'	*gjo*	'deceit'
ɲe	'near'	*gɲen*	'kin'
ɲo	'buy'	*gɲod*	'price'
maŋ(*-po*)	'many'	*dmaŋs*	'people'

In some cases, it is not clear whether a particular form is a nominalizing prefix or some other prefix; for instance, in the kinship term *gtɕuŋ* 'younger sibling' derived from the stative verb *tɕʰuŋ* 'to be small', the *g-* could be either a *gV- nominalization ('the small one') or the kinship term *dV- (see §3.2).

There are also cases where only the derived noun is preserved, yet the verb is lost. This is the case in particular of *gzob* 'burning smell', unmotivated in Tibetan but obviously cognate to Japhug *ɣndzʁβ* 'fire (accident)', an irregular nominal form of *ndzʁβ* 'to burn (intr.)', itself the anticausative of *tɕʁβ* 'burn (tr.)'.

As in the two previous categories, in the case of verb roots with complex onset, Coblin's law would have deleted the nominalizing prefix. Thus, a noun such as *ltas* 'omen' derived from *lta* 'to see' could in principle have been *gV-lta-s in pre-Tibetan: there is no way of knowing whether a velar prefix has been present.

4. An extension of Coblin's law

In the preceding section, we have shown potential cases where Coblin's law could have applied outside of the verbal system. Now, we would like to propose an extension (a fourth rule) for this law.

A common misconception in Sino-Tibetan studies is that Tibetan had a 'intransitive' or 'middle' *m-* prefix (Wolfenden 1929:39, Matisoff 2003:117). Scholars usually cite examples such as *mgu* 'rejoice', *mnal* 'sleep' etc, which are stative and present an onset cluster beginning in *m-*. However, this is not proof that *m-* is prefixal in these verbs; it could be part of the root. The only pair of verbs for which *m-* appears to have a derivational function is the following:

(2) *mnam* ‘emit a smell’
snom, *bsnams* ‘to smell (vt)’

The transitive form obviously contains the causative prefix *s*-, while the intransitive one has a onset in *m*-. One could conclude from this that the root is |nam|, and that *m*- is prefixal in this example.

However, if we compare Tibetan to other languages, we see that this analysis is unsubstantiated. In Japhug, the following cognate forms are found:

(3) *mnɤm* ‘to emit a smell (vi)’
nɤ-mnɤm ‘to smell sth (vt)’
ɕu-mnɤm ‘to cause sth to have a smell (vt)’

It is clear that all three verbs have a common root *mnɤm*. *ɕu*- is an irregular causative allomorph of *su*-, while *nɤ*- is a *tropative* prefix, used to derive transitive verbs out of stative ones, with the meaning ‘to consider as’ (on the tropative derivation, see Jacques 2012c).

Having a cluster *mn*- in the basic root is not a Japhug idiosyncrasy. In Jingpo, we find a similar situation (Xu et al. 1983):

(4) *mǎ-nam*^{33} ‘to have a smell’
mǎ-nam^{55} ‘to smell (tr.)’

While the origin of the tone alternation in Jingpo is unclear (Jingpo still preserves the causative prefix as a distinct syllable), the agreement between Japhug and Jingpo is striking: the *m*- element is not related to transitivity. Rather, it is a part of the verbal root.

This implies that the root of the Tibetan verb *snom*, *bsnams* ‘to smell (vt)’ is |mnam|, not |nam|, and that the corresponding intransitive verb *mnam* is simply unprefixed. Since the cluster *smn- is not allowed in Tibetan, we can propose the following extension to Coblin’s law:

(5) *sNC$_1$ > *sC$_1$*

In other words, within an initial consonant cluster, a nasal element (whether *m*- or homorganic nasal archiphoneme) is deleted when it occurs between *s*- and another consonant. This rule differs from Coblin’s three rules in that the deleted consonant is not the leftmost element of a cluster, and is not necessarily a prefix.

By application of (5), *smn- was simplified to *sn-*. Note that in this verb the causative *s-* is used in a tropative sense: *snom*, *bsnams* does not mean 'to cause to have a smell' like its Japhug equivalent. Such uses of the causative are attested in Japhug, in examples such as *nɤja* 'to be a shame (vi)' > *z-nɤja* 'to regret, to find sth a shame (vt)'.

The verb *snom*, *bsnams* is not the only example of (5). A clear pair of verbs showing the same pattern is *ⁿbrel* 'to be connected' > *sbrel* 'to connect (vt)'.

Outside of the verbal system, examples of rule (5) can be found. For instance, the noun *sbrul* 'snake' < *smbrul < *smrul (cf. Burmese *mrweˡ*) first developed an epenthetic stop between the nasal and the medial *-r-* (Simon's law), and then lost the nasal by rule (5).

5. Conclusion

In this study, we have shown that Coblin's (1976) law constitutes a basis for further research in the historical phonology and morphology of Old Tibetan in a comparative perspective. Its range of application goes largely beyond the verbal system, where it was originally discovered. Any attempt at classifying the Tibetan lexicon and meaningfully comparing Tibetan to other languages must take it into account.

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淺談「科蔚南定律」

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科蔚南定律是藏語歷史語音學最重要的語音定律之一，用該定律可以解釋動詞系統中的許多輔音交替。本文進一步論證，認爲名詞系統中也可以找出該定律的痕跡，並指出複輔音簡化的另一種案例：*sNC- > *sC-*，這個案例可以視爲科蔚南定律的一種延伸。

關鍵詞：藏語，音系，構詞法，異化，複輔音簡化