THE LABIAL CAUSATIVE IN TRANS-HIMALAYAN[1]

Guillaume Jacques
CNRS-CRLAO-INaLCO-EHESS
rgyalrongskad@gmail.com

Abstract
This paper proposes that the labial causative prefixes found in various Trans-Himalayan languages of North-Eastern India are not innovations as is generally assumed. Instead, it is argued that they are related to labial causative prefixes found in Rgyalrongic languages, whose traces are perhaps attested in other branches of the family, and a bilabial prefix that derived stative verbs into transitive verbs is potentially reconstructible to proto-Trans-Himalayan.

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1 Introduction

Most Trans-Himalayanists since Conrady (1896) agree that a sibilant causative prefix (corresponding to Tibetan s-) is reconstructible to the proto- language (for instance Wolfenden 1929, Matisoff 2003). Direct or indirect traces of a sibilant causative are indeed widespread in most groups of the Trans-Himalayan family (also known as Sino-Tibetan or Tibeto-Burman), though voicing alternations originating from anticausative derivation are often mistaken for traces of the sibilant causative (see Jacques 2015).

In this paper, I argue that another causative prefix might be potentially reconstructible to proto-Trans-Himalayan. This study is divided into four sections. First, I discuss evidence for bilabial stop causative prefixes in languages of North-Eastern India. Second, I describe the uses of labial causative prefixes in Rgyalrongic languages and in Tangut and their reconstruction in proto-Rgyalrongic. Third, I briefly examine data from other groups of Trans-Himalayan.

2 North-East India

Labial stop causatives are attested in at least six groups spoken in North-Eastern India and neighbouring areas, Bodo-Garo, Karbi, Kuki-Chin, Mru, Angami and Tangkhulic languages, with various degrees of productivity.

2.1 Bodo-Garo

Bodo and other Bodo-Garo languages have a non-productive labial prefix, used to derive causative verbs out of adjectives/stative verbs (Mazo 2004:90, DeLancey 2015a, Basumatary 2017:66). Table 1 shows representative examples of the labial causative pʰV- in Bodo.

Table 1: *Example of phV- causative in Bodo, DeLancey (2015a:54)*

Stative verb	Adjective	Causative
dér 'be, get big'	*ge-der* 'big'	*phe-der* 'make big'
sung 'be, get short'	*go-sung* 'short'	*pho-sung* 'shorten'
zam 'become old (of things)'	*gw-zam* 'old, worn out'	*phw-zam* 'wear out'

Bodo-Garo languages have innovated several causative suffixes (see for instance Joseph 2007:192-4 on Rabha, Burling 2004:142 on Garo), but traces of the ancient sibilant causative do exist in Bodo (Basumatary 2017:64) and Rabha (Joseph 2007:196-201), where it presents numerous allomorphs. The sibilant causative, unlike the labial causative, occurs with dynamic verbs.

2.2 Karbi

Karbi has a fully productive *pa- ~ pe-* causative prefix (Grüßner 1978:93-4, Konnerth 2014:238-9) which can be applied to any verb. It can even be doubled, as in *pa-pe-mē* CAUS-CAUS-be.good 'make sb improve smth'. It is phonetically different from the verb *pī* 'give'.

The allomorph *pe-* occurs when preceding a monosyllabic stem (Konnerth 2014:105; the distribution of the allomorphs *pe-* vs *pa-* differs between dialects). Some verbs present unpredictable tonal alternations when causatized with *pa- ~ pe-* (Konnerth 2014:103).

The causative *pa- ~ pe-* occurs in a construction where a causativized adjective describes the manner in which the action takes place, and a complement verb expresses the action itself, as in example (1) (see section 3.1 where a similar construction is described in Japhug in example 5).

(1) *lapènte*   *menthū=tā*   *ékdóm*   *langpōng*   *tòk*   *pe-mé*
     after.this   dried.fish=add   exclamative   small.bamboo.container   pound   caus-be.good
     'After that, you need to pound the dried fish in the Langpong well.' (Konnerth 2014:124)

The causative *pa- ~ pe-* prefix is related to, and perhaps even synchronically identical to a homophonous prefix, the denominal *pa- ~ pe-*; given the known pathway of grammaticalization from denominal affixes to voice markers (see for instance Jacques 2014a and Jacques 2015), it is possible that the causative use of this prefix derives from the denominal one.[2]

2.3 Kuki-Chin

Labial causative prefixes are found in several Kuki-Chin languages, in particular *pə-* in Maraa (Hartmann 2001:139, Table 2), *p-* in Khumi (Peterson 2010:99) and *pə- ~ pu- ~ pər-* in Lamkang (Chelliah & Thounaojam 2007:52-4).

Note that Khumi has another causative prefix *t-* (So-Hartmann 2013:12). It perhaps originates from the sibilant causative. Although pre-Kuki- Chin *s-* changes to aspirated *th-* in proto-Kuki-Chin (VanBik 2009:16), presyllables have more reduced phonological contrasts and it is thus possible that *th-* lost its aspiration in this position (see Jacques 2012 for examples of this phenomenon elsewhere in Trans-Himalayan). Aspiration alternation in Kuki-Chin languages are explained as traces of the sibilant causative (see VanBik 2009:220;259), and this prefix could have had several allomorphs in the ancestor of Kuki-Chin as it still has in Rgyalrongic languages,[3] yielding radically different reflexes.

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2 Although the main thesis of this article is that some labial causatives in Trans-Himalayan may be archaisms, it is necessary to consider all possible alternatives, including reanalysis from other existing derivations and grammaticalization from a verb.

3 In all Rgyalrongic languages, sibilant causative prefixes present several regular as well as irregular allomorphs, see for instance Sun (2007) on Stodsde, Jacques (2015) on Japhug and Lai (2016) on Khroskyabs. In Japhug, we find both *z-* (before sonorant prefixes) and *su-* (in most contexts).

Table 2: *Examples of the causative prefix pə- in Maraa (pa- in local orthography)*

Base verb	Causative verb
a-rhei 'lives'	*a-pa-rhei* 'causes to live'
a-thi 'dies'	*a-pa-thi* 'causes to die'
a-chi 'is bad'	*a-pa-chi* 'makes bad'

Other Kuki-Chin languages such as Daai Chin and Mro have a causative prefix *m-* in corresponding forms, as shown in Table 3 (data from Hartmann 2001:139).

Table 3: *Labial causative prefixes in several Kuki-Chin languages*

Daai	Mro	Maraa	Meaning
m-thoh	*m-thau*	*(a)pa-thao*	'cause to wake up'
m-thu		*(a)pa-thu*	'cause to rot'
	m-xin	*(a)pa-rhei*	'cause to live'

Since Maraa also has m- prefixes (such as the reciprocal *ma-*, as in *a-thei* 'kills' → *a-ma-thei* 'kill each other'), while Daai Chin lacks *pV-* prefixes (none is mentioned in So-Hartmann 2009), it can be concluded that Maraa is more conservative, and that in Daai Chin and Mro labial stop presyllables have become nasal – a parallel sound change also affecting presyllables is attested in Buyang, a Kra-Dai language of Guangxi (Jacques 2017b). Baxter & Sagart (2014:55) have proposed a volitional prefix in Old Chinese and suggested a comparison with Daai Chin, but this comparison is less problematic (see 4.1). I therefore reconstruct **pV-* for the causative prefix in proto-Kuki-Chin, despite the fact that **p-* corresponds to Daai Chin *p-* in main syllables (see VanBik 2009:84).

2.4 Angami-Pochuri
Angami has a causative prefix *pə-* of great productivity, occurring with both dynamic verbs and adjectives (Matisoff 2003:132-3, Giridhar 1980:66-67), for instance *ŋū* 'see' → *pə-ŋū* 'show'.

2.5 Tangkhul
A non-productive labial causative *mə-* is attested in Tangkhul Naga and its sister languages, as in *kə̀.thaw* 'be fat' *khə̀.mə̀.thaw* 'fatten' and *kə̀.theŋ* 'be dry' *kə̀.mə̀.then* 'make dry' (Mortensen 2003:23).

Mortensen (2003:23) suggests a relationship to the denominal *mə-* (*thèj* 'fruit' → *kə̀.mə̀.thèj* 'bear fruit') and the verb 'give' (Proto-Tangkhul **mi) but also points out the similarity with the Kuki-Chin data mentioned in section 2.3.

2.6 Mru
Mru is the only one among Trans-Himalayan languages spoken to the West of Burma with SVO basic word order (Peterson 2005). It has a rich array of prefixes (Williams 2008), including a causative prefix p'- which can be added to transitive verbs, as in (2).[4]

(2)   *öta=mi=pe*   *rik-tüng*   *o*   *öpa=pe*   *p'-rik-tüng='ö'*
     older.brother=dem-evidential   first-cut   interjection   father=evidential   aus-first-cut-??
     'Then they let the elder brother cut first, er, they let the father go first.' (Williams 2008:52)

2.7 The labial causative: innovation or archaism
Previous authors have interpreted the presence of labial stop causative pre- fixes in various Trans-Himalayan languages of North-Eastern India as grammaticalization from the root of the verb 'to give',

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[4]   In this transcription, *p'-* represents a reduced syllable [*pə-*]. The clitic *='ö'* is glossed as emot in the source, but no explanation is given for this abbreviation.

which has a labial initial in most of these languages as indicated in Table 4 (Matisoff 2003:132, Jenny 2015) or as borrowing from some Austroasiatic language (Maspéro 1946, Diffloth 2008, Konnerth 2015, DeLancey 2015a). Both hypotheses are problematic.

Table 4: *Comparison of the labial causative prefix and the verb 'give' in several languages of North-Eastern India*

Language	'give'	causative	reference
Boro	*hór*	*phV-*	
Proto-Kuki-Chin	**pia*-I, **piak*-II	**pə-*	VanBik (2009:89)
Angami	*piê*	*pə-*	Giridhar (1980:77)
Karbi	*pī*	*pa-/pe-*	Konnerth (2014)
Mru	*pe*	*p'-*	Williams (2008)
Tangkhul	*khà.mì*	*mə-*	Mortensen (2003:37)

First, since all languages in question (except Mru) are strictly verb-final, grammaticalization of a causative construction with the verb 'to give' into a causative affix would be expected to yield a suffix, like the causative/passive suffix -*bu* from *bu*- 'give' in Manchu (Zaxarov 2010[1879]). Exceptions to this well-known tendency are attested in the Trans-Himalayan family (see in particular Jacques 2013), and one cannot exclude the possibility that some of the labial causative prefixes are indeed grammaticalized from a verb. Indeed, such a grammaticalization is clearly attested in modern spoken Burmese, where the verb *pè* 'give' can be used as a permissive causative marker prefixed to the verb, as in example (3).

(3)   *əpʰe*   *θà-go*   *pwè*   *pè-θwà-dɛ*
       Father   son-OBJ   event   give-go-N.FUT
       'The father lets his son go to the fair.' (Jenny & Hnin Tun 2016:196)

The verb 'give' would not be the only possible source for the labial causative prefixes in languages of North-Eastern India. An alternative would be a verb 'to do' (found in Japhug *pa* 'make, do, open' and Tibetan *bʲed*, *bʲas*, *bʲa* 'do'), for instance, but this verb root is not attested in the languages of this area.

However, since Bodo-Garo, Karbi, Angami-Pochuri, Tangkhul and Kuki- Chin belong to different branches of Trans-Himalayan (Post & Blench 2014),[5] the hypothesis of such an unusual grammaticalization process independently occurring five times is hardly tenable. Moreover, Bodo-Garo languages, as well as other Sal languages (such as Jinghpo, which has *yā* 'give', and Kadu which has *ī* 'give', see Xú et al. 1983 and Sangdong 2012), lack a cognate of the root reflected in Japhug *mbi* 'give' and Tibetan *sbʲin* 'give' (see Table 4) which further weakens the grammaticalization hypothesis at least for this branch of the family.

As for the second hypothesis, borrowing of derivational morphology is attested, but only occurs in cases of extreme contact situations involving heavy lexical borrowing. Since Austroasiatic lexical influence on Trans-Himalayan languages of North-Eastern India has never been systematically documented and appears to be marginal, it is unlikely that the labial stop causative prefix in these languages could be borrowed.

Both hypotheses depart from the common assumption that the labial stop causative prefix is an innovation. Yet, labial causative prefixes are found in Trans-Himalayan languages outside of North-Eastern India.

2 Macro-Rgyalrongic
Labial causative prefixes are well-attested in Rgyalrongic languages and Tangut, where they coexist with sibilant causative prefixes.

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5   DeLancey (2015b) has suggested, on the basis of morphological evidence, for a close relationship between Kuki-Chin and Jinghpo (together with other Sal languages, Burling 1983); this hypothesis remains to be confirmed by evidence from lexical innovations.

2.1 Rgyalrong

All Rgyalrongic languages[6] have at least two causative prefixes, a sibilant prefix and a labial prefix whose form goes back to proto-Rgyalrong *wɐ-.

The labial causative only has limited allomorphy. In Japhug a few verbs with nasal initial have a causative allomorph in m-, for instance *mɲo* (*w-ɲaŋ) 'prepare' from *ɲo* 'be ready, be prepared'.[7] Another irregular labial causative is *βri* 'protect' from the intransitive *ri* 'remain'.

The labial causative is only used to derive stative verbs, including adjectives. It can be considered to be productive at least in Japhug, since it can be applied to adjectives of Tibetan origin, such as *dɤn* 'be many' (from ldan 'having X') *ɣɤdɤn* 'increase the number of' or *βdi* 'be good, be well' (from *bde* 'good, well, peaceful') *ɣɤβdi* 'repair, fix, make better'.

In addition to its use as a plain causative (example 4), the prefix *ɣɤ-* occurs in a manner construction, where a causativized adjective expressing the manner takes a complement verb in infinitival form describing the action (example 5). Note that a similar construction involving a labial causative prefix has been described in Karbi (see section 2.2).

(4)   *a-ʁi*   *ku*   *nu*   *ma*   *spe*
     1sg.poss-younger.sibling   ERG   DEM   apart.from   be.able[III]:FACT

     me   *ri,*   *<tuolaji>*   *ku-fse,*   *mkʰurlu*
     not.exist:FACT   but   tractor   NMLZ:S/A-be.like.this   machine

     nura   *tu-ɣɤ-βdi*   *spe*
     DEM:PL   IPFV-CAUS-be.well   be.able[III]:FACT
     'My brother is only able to do one thing, repair tractors and cars.' (14-tApitaRi, 166)

(5)   *kʰa*   *u-ʁɤri*   *nutɕu*   *u-fkrɤm*   *a-kɤ-tu-ɣɤ-βdi*
     House   3SG.POSS-front.of   DEM:LOC   3SG.POSS-BARE.INF:place   IRR-PFV-2-CAUS-be.well

     tɕe,   *ɕ-pɯ-sɤtse*
     LNK   TRANSLOC-IMP-stick.into[III]
     'Place these in front of your house in orderly fashion and stick them (into the ground).'
     (Smanmi 2003:129)

Some stative verbs take the sibilant causative (for instance adjectives of colour, Jacques 2015:183), and quite a few stative verbs can have both sibilant and labial causatives. In Tshobdun, Sun (2006, 2014) reports a difference of meaning between the two, as illustrated by examples (6) and (7).

(6)   *cʰɛ́ɹi*   *ne-kɐ-səɣ-cʰiʔ=nəʔ*   *mimʔ=cə*
     beer   IPFV-GENR-CAUS-be.sweet=SUBORD   be.tasty=MEDIATIVE
     'Beer is tasty when one allows it to sweeten (naturally and gradually).'

(7)   *cʰɛ́ɹi*   *ne-kɐ-wɐ-cʰiʔ=nəʔ*   *mimʔ=cə*
     beer   IPFV-GENR-CAUS-be.sweet=SUBORD   be.tasty=MEDIATIVE
     'Beer is tasty when one sweetens it (e.g. by adding sugar).'

As shown by this minimal pair, in Tshobdun the sibilant causative *sə(ɣ)-* implies 'an increase in the degree of the predicated state' (e.g., 'make some- thing sweeter'), while the labial causative *wɐ-* is used to express the 'causation of a changed state' (e.g. 'make something sweet').

Although a cognate pair exists in Japhug *suɤ-cʰi* vs *ɣɤ-cʰi* 'sweeten', no semantic contrast could be ascertained with my Japhug consultants. The only minimal pair in Japhug with an observable meaning is that between *su-mto* 'cause to see, show' (example 8) and *ɣɤ-mto* 'cause to recover sight (of the eyes of a blind

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man)' (example 9), which derive from the labile verb from mto 'see' (meaning 'have clear sight (of eyes)' when used as an intransitive stative verb).

(8) *muntoʁ*   *nustʰuci kɯ-mpɛʁr*   *nu,*   *nu*   *mʁɛtʂa*   *kɤ-mto*
     Flower   so.much   NMLZ:S/A-be.beautiful   DEM   DEM   until   INF-see

     mɯ-pɯ-rŋo-j   *ri,*   *pɯ-kɯ-sɯ-mto-j*   *tɕe,*
     NEG-PFV-experience-1PL   but   PFV-2→1-CAUS-see-1PL   LNK
     'We had never such a beautiful flower, but you showed it to us.' (150824 yuanding, 179)

(9) *nɯnɯ*   *ɛquwa*   *nɯra*   *nɯ-mɲaʁ*   *ɯ-taʁ*   *nɯtɕɯ,* *si*
     dEM   blind.person   DEM:PL   3PL.POSS-eye 3SG-on   DEM:LOC   tree

     kɯ-xtɕi   *ɣɯ*   *ɯ-jwaʁ*   *nɯnɯ a-pɯ-tu*   *tɕe,*
     NMLZ:S/A-be.small   GEN   3SG.POSS-leave   DEM IRR-IPFV-exist LNK

     nɯnɯ   *kɯ*   *maka*   *nɯ-mɲaʁ*   *tɯ-ɣɤ-mtɤm*   *cʰa*   *ri*
     DEM   ERG   at.all   3PL.POSS-eye   IPFV-CAUS-have.sight[III]   can:FACT   but
     'If one (puts) leaves of the small trees on the eyes of these blind people, it can cause their eyes
     to recover sight.' (hist140517 mogui de jing, 82-4)

While it is yet unclear whether the subtle semantic contrast observed in Tshobdun is an archaism or an innovation of this language, there is no doubt that a labial causative *wɐ- of stative verbs has to be reconstructed to proto-Rgyalrongic.

2.2 Tangut

Evidence for a labial causative is also found in Tangut as a -*w*- infix. As shown in Table 5, Tangut -*w*- corresponds in several examples to a preinitial (from *p-) in Japhug and other modern Rgyalrongic languages; a regular sound change *pC- → *-Cw- (Jacques 2014b:253-4).

Table 5: *Tangut -w- from *p- preinitial*

	Tangut			Japhug	Meaning
3869	誂	*kjwị*	1.67	*fka*	'be full'
1670	茷	*sjwij*	1.36	*fse*	'whet'
3929	譺	*tśhjwi*	1.10	*ftʂi*	'cause to melt'
5120	傷	*swew*	1.43	*fsoʁ*	'clear, bright'
2134	綫	*zjwị*	1.67	*tɯ-ftsa*	'nephew'

Table 6 provides the clearest examples (from Gong 1988:45-6) of causative -*w*- in Tangut.[8] Tangut causative -*w*- probably reflects the fused allomorph of the causative (as in β-*ri* 'protect' and *m-ɲo* 'prepare', see above).

Table 6: *The causative -w- infix in Tangut*

	Base	verb			Causative	form	
�冬	*dzji*	1.11	'be calm'	傽	*dzjwi*	1.11	'make calm'
諺	*tshja*	1.20	'hot, burn'	後	*tshjwa*	1.20	'roast'
撌	*dzjij*	2.32	'be cold'	薇	*dzjwij*	1.35	'make cold'

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8   Note that the character 薇 *dzjwij¹* 'make cold' is incorrectly reconstructed as *dzjij¹* in Li (1997:144); that a -*w*-medial must be restored is proven by the *fanqie* 鑾貋 *dzjwi²tśjwij¹* in the Wenhai dictionary, both of whose characters have -*w*- medial.

Although text examples of these pairs have not yet been identified, the definitions in the Wenhai monolingual dictionary (though not in the Chinese and English glosses in Li 1997) clearly indicate that these verbs are causative forms, as their definitions include a stative verb followed by the causative 祇 *phji¹*, as shown below.

- 犂 *dzjwi¹*: 絳綫祇 *njiij¹djij²phji¹* 'cause to the mind to settle'
- 諼 *tshjwa¹*: 諼祇 *tshja¹phji¹* 'cause to become hot'
- 薇 *dzjwij¹*: 掫祇 *dạ²phji¹* 'cause to become cold'

As with the previous examples from Bodo-Garo and Rgyalrongic, the labial causative in Tangut is restricted to causativization of stative verbs.

2.3 Stop lenition

The labial causative prefixes found in Macro-Rgyalrongic presents one important commonality with Bodo-Garo: they are specifically used to derive causative forms of adjectives and other stative verbs.

On the other hand, they differ from the causative prefixes found in languages of North-Eastern India by having labial approximants (or segments regularly originating from labial approximants such as ɣ in Japhug).

Although this phonological difference could appear to be an insuperable obstacle to comparison between the labial causative prefixes of Bodo-Garo and Rgyalrongic, we have to take into account phonotactics.

There is a strong phonological constraint on the shape of derivational prefixes in Rgyalrong languages. Despite the richness of derivational prefixes (see Sun 2014, Jacques 2014a), they are all built from a restricted section of the phonological inventory.

In Japhug for instance, out of 50 consonantal phonemes, only nine of them can occur in derivational prefixes in Japhug (m, n, r, j, ɣ, s, z, ɕ and ʑ):[9] some sonorants and fricatives (all continuant consonants). Stops prefixes are found in person indexation, TAM and participle prefixes, in other words all prefixes outside of the verb stem.

It is thus possible to propose that stops systematically underwent lenition in derivational prefixes already in proto-Rgyalrongic (including *p/b *w). This lenition does not need to be formulated as a grammatically conditioned sound change (which is not acceptable in a Neogrammarian approach, see Hill 2014).

Prefixes (and all syllables but the last of the verb stem) rarely receive stress and never have tonal contrasts (see Sun 2005) in Rgyalrongic languages. Derivational prefixes, unlike person and TAM prefixes, are very rarely word-initial (since they occur between TAM affixes and the verb root, see the verbal templates of Japhug and Khroskyabs in Jacques 2013 and Lai 2015 respectively). Thus, lenition of stops can be defined as having happened to intervocalic stops in unaccented position at the proto-Rgyalrongic stage.[10] There is thus no phonological obstacle against comparing Rgyalrongic *wɐ- to labial stop prefixes in other languages.

4 Other Trans-Himalayan languages

Evidence for a labial stop causative prefix in Trans-Himalayan languages outside of Macro-Rgyalrongic and North-Eastern India exist, but are less compelling.

4.1 Chinese

Maspéro (1952:593) proposed to reconstruct a prefix *p- in Old Chinese, and postulated causative as one of its values. However, while there is some evidence for the existence of *p- prefixes in Old Chinese, their grammatical function are still poorly understood (Sagart 1999:87-9, Behr 2010).

Baxter & Sagart (2014:154) cite one potential example of causative *p- prefix in Old Chinese 廢 *[p-k]aps → *pjojH* (fèi) 'cast aside', if derived from 去 *kʰ(r)ap-s → kʰjoH* (qù) 'depart'.[11] This tantalizing hypothesis needs to be confirmed by philological investigations and by more examples of this putative prefix.

Another candidate for comparison with the labial causative in Rgyalrongic is the 'volitional' *m- reconstructed by Baxter & Sagart (2014:55;131-5). They propose that the voice alternation found in some

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[9]   Moreover, voicing in fricative prefixes is always predictable from the phonological context, so that strictly phonologically speaking, only seven distinct phonemes are used to build derivational prefixes in Japhug.
[10] This sound law would have created some degree of allomorphy, soon suppressed by analogy.
[11] Baxter & Sagart (2014:153) suggest a dialectal development *-ps → *-ks instead of regular *-ps → *-ts in this word.

Middle Chinese verb pairs had the function of deriving a volitional verb from a non-volitional one, on the basis of the example in Table 7, which include some pairs with voiced aspirates in Min.[12]

Table 7: Voicing alternation and transitivity/volition?

Unvoiced form	Meaning	Voiced form	Meaning
覺 *kæwH* （見）	awaken	學 *ɣæwk* （匣）	study, imitate
見 *kenH* （見）	see	見 *ɣenH* （匣）	cause to appear
晶 *tsjeŋ* （見）	bright, limpid	淨 *dzjeŋH* （匣）	cleanse
平 *bjæŋ* （並）	be flat, be even	平 *bjæŋ* （並）	make even
Xiamen *pĩ²* (pMi. *b-)		Xiamen *pʰĩ²* (pMi. *bh- ← *m-b-)	
上 *dzaŋX* （禪）	ascend	上 *dzaŋX* （禪）	put up
Xiamen *tsiũ⁶* (pMi. *-dž-)		Xiamen *tsʰiũ⁶* (pMi. *džʰ- ← *m-b-)	

This list is highly heterogeneous; it mainly includes pairs of verb with a transitivity alternation (the transitive counterpart having a voiced initial), and it is not obvious that the alternation has anything to do with volition: there is no pair of verb with the same argument structure, and a purely volitional/n-volitional alternation. In this list, the reading 見 *ɣenH* is often considered to reflect a zero-derivation causative use of 現 *ɣenH* (Wang 2014:282-4).

Japhug has a *mu-* prefix attested in only one example (*nmu* 'shake (of earthquakes)' and *munmu* 'move (intr)') which could be interpreted as volitional (Jacques 2017a), but which does not influence the valency of the verb.

It is possible that some of the examples in Table 7 reflect a valency-increasing nasal prefix, but the evidence for reconstructing it as *m-* rather than some other nasal consonant is very tangential. The causative *m-* prefix in Daai Chin is better analyzed as originating from the labial stop causative through a conditioned sound change (2.3).

3.2 Tibetan

A few apparent examples of *b-* causative prefixes are found in Tibetan, such as for instance *ɴgril* 'roll down (it), gathered together' *bgril* 'cause to roll down' ('*ɴgril-du ɴdzug.pa*' in Zhang 1993), alongside the sibilant causative *sgril* 'roll up, wrap, combine'.

While such examples could be interpreted as traces of a Trans-Himalayan labial causative, it is necessary to take into account an alternative possibility. Past and future tense can be marked with a transitive *b-* prefix in Old and Classical Tibetan (using the traditional terminology, regardless of its actual TAM value), and cases have been documented of past prefixes being reinterpreted as part of the stem (especially verbs whose stem starts with *r-* or *l-*, see Hill (2005), Jacques (2010), Hill & Zadoks (2015)).

It is therefore conceivable that *bgril* is the generalized past tense of a transitive verb whose present could be either *ɴgril* or *dgril*;[13] this verb would be related to *ɴgril* 'roll down (it)', but the *b-* would not have a derivational function.

For this reason, Tibetan evidence should be used with circumspection, and thorough philological studies of the use of verb stems in Old Tibetan texts must be undertaken before any such forms is adduced as a an example of labial causative in Tibetan.

4 Conclusion

Given our imperfect understanding of sound laws in Trans-Himalayan, this research is inevitably of a preliminary nature. I argued that the labial stop causative prefixes found in languages of North-Eastern India are unlikely to be parallel developments in every one of these highly diverse branches, and that a historical relationship with labial causative prefixes in Rgyalrongic languages should be considered. Evidence from other languages is more difficult to interpret, in particular in Tibetan, due to the confusion with the past *b-* prefix in many paradigms.

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[12] Some scholars, such as Handel (2010), do not agree that the series reconstructed as voiced aspirates in proto-Min directly reflect an Old Chinese category, but the fact that these alternations appear to have a morphological function in Min is not compatible with the assumption that this category results from dialect mixture.

[13] Philological research is needed to ascertain whether such forms are attestable.

If the hypothesis that a labial causative prefix does go back to proto-Trans-Himalayan is valid, indirect evidence should be found in less conservative languages where prefixes are only recoverable through reconstruction. In Tibetan, detailed philological studies of verb paradigms should be undertaken to evaluate whether genuine examples of b- causatives exist.

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