Fossil Nominalization Prefixes in Tibetan and Chinese

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Abstract

This paper shows that both Tibetan and Old Chinese preserve lexicalized traces of several nominalization prefixes which are still productive in morphologically more conservative languages of the Trans-Himalayan family such as Rgyalrongic, which can thus serve as a model for analyzing other languages.

Keywords

Tibetan – Chinese – Rgyalrongic – Kiranti – Nominalization – Prefixation

1 Introduction¹

In the Trans-Himalayan family (TH), the morphologically most complex languages, Rgyalrong and Kiranti, are endangered languages without a written literary tradition. A growing body of evidence suggests that this complex morphology is at least in part archaic (Jacques 2012a, DeLancey 2014, Jacques 2016c, Gong 2017), in particular because affixes that are nonproductive and in some cases only accessible through reconstruction (such as the sigmatic causative) in Tibetan and Chinese are still productive in Rgyalrong languages.

The present paper deals with another comparable case of recessive morphology in the literary languages, the sigmatic and velar nominalization prefixes. These prefixes, which are completely productive in various languages of the TH family, including Rgyalrong, Kiranti, Karbi, Jinghpo and Kuki-Chin (Konnerth 2016) are only attested in a handful of words in Tibetan and Old Chinese. Using evidence from Japhug to ascertain the precise meaning of these prefixes, this study proposes new etymologies and evaluates older proposals.

2 Participles in Rgyalrongic

Rgyalrongic languages have a set of prefixes deriving non-finite verb forms, including participles, converbs and infinitives (Jacques 2014c, Sun 2014a, Jacques 2016b). In the present paper, two sets of participles, the velar (core argument) and sigmatic (oblique) participles are discussed.

¹ The glosses follow the Leipzig Glossing Rules. Other abbreviations used here are: AUTO autobenefactive / spontaneous, DEM demonstrative, EMPH emphatic, INV inverse, LNK linker, PFV perfective, POSS possessor, FACT factual, SENS sensory.

2.1 *Velar Participles*

All Rgyalrong languages (Japhug, Tshobdun, Zbu and Situ) have a set participle prefixes in **kV-** used in particular to build participial relative clauses with subject or object relativization. There are slight differences between the languages (Sun 2006, Sun and Lin 2007, Jacques 2016b, Zhang 2016); this paper only includes data from Japhug, which are sufficient to illustrate the constructions shared by all Rgyalrong languages.²

The core argument participle prefixes in Japhug are **kuu-** for subject (S/A) participle and **kɤ-** for object participle, and can be illustrated by examples (1) (intransitive subject, in a non-restrictive head-internal relative) (2) (transitive subject) and (3) (object and intransitive subject).

- (1) [nuu u-ŋguu ngoena kuu-rɤzi] nuu kuu
DEM 3SG.POSS-inside spider NMLZ:S/A-remain DEM ERG
pjuu-mtsʰɤm tɕe,
IPFV-hear LNK
'The spider, which stays inside, feels it' (26-mYaRmtsaR, 64)
- (2) [tuu-xtsa uu-kuu-tɕuβ] nuu uu-pʰe
INDEF.POSS-shoe 3SG.POSS-NMLZ:S/A-sew DEM 3SG.POSS-DAT
'(He told) the shoe sewer.' (2003tWxtsa, 12)
- (3) [ta-ɣi puu-kɤ-βde] nuunu,
INDEF.POSS-younger.sibling PFV-NMLZ:P-throw DEM
[puu-kuu-si] nuunu pyɤtɕu ci to-sci,
PFV-NMLZ:S/A-die DEM bird INDEF IFR-be.born
'The younger sister, who had been thrown away, who had died, was reborn as a bird' (qaCpa2002, 152)

Adjectival stative verbs need to take the participle **kuu-** prefix to be used as attributes. The noun they modify is the head of the participial relative, which is generally head-internal as **wuma zo kʰa kuu-zru** 'very splendid house' ('house that is very splendid/luxurious') in (4), as shown by the place of the intensifier **wuma zo**.

- (4) [wuma zo kʰa kuu-zru] u-ŋguu nuutɕu
Really EMPH house NMLZ:S/A-be.strong 3SG.POSS-inside DEM:LOC
tó-wy-tsum tɕe
IFR:UP-INV-take.way LNK
'(The bird) took her away to a splendid house (in heaven)' (2003zrAntCW tWrme, 74)

The Japhug examples are taken from a corpus that is progressively being made available on the Pangloss archive (Michailovsky et al. 2014, http://lacito.vjf.cnrs.fr/pangloss/corpus/list_rsc.php?lg=Japhug). Middle Chinese is in Baxter's (1992) transcription but converted to IPA equivalents.

2 The participle prefixes are historically related to generic person and infinitive prefixes (Sun 2012, Sun 2014b, Jacques 2016a, Jacques 2018), but these are not discussed in this paper.

In addition, there is a handful of lexicalized participles, where the vowel in the prefix has been lost and which appear as fricativized preinitials **x-** or **ɣ-** in Japhug (see Table 1 from Jacques 2014a: 5). Among these, **-ɣɣjuu** ‘opening, orifice’ has cognates in Stau and Khroskyabs (Jacques et al. 2017: 609). Loss of vowel in velar prefixes is a regular sound change that is also observed on some nouns such as **ɣzuu** ‘monkey’ and is conditioned by the absence of clusters on the second syllable (Jacques 2014a: 5). The fact that all non-lexicalized participles have **ku-** in Japhug is due to analogical restoration of the vowel.

The velar participle prefixes found in Rgyalrong languages have cognate prefixes in many Trans-Himalayan languages, including Bodo-Garo, Jinghpo, Kuki-Chin, Karbi and Kiranti (Konnerth 2014, 2016, DeLancey 2015). In some languages, such as Limbu, the velar nominalization prefixes co-occur with a nominalization suffix. The circumfix **ke-...-pa/-ba** serves as active participle (van Driem 1987: 199–202), as in (5), is an example of this type of construction.

- (5) [ke-deŋ-ba te:ʔl-in] thund-u
 NMLZ-tear-NMLZ clothes-ABS mend-3P
 ‘He mends torn clothes’ (van Driem 1987: 201)

Table 1 Irregular nominalizations in **ɣ-** and **x-**

noun	meaning	base verb	meaning
ɣndzɤβ	‘disastrous fire’	ndzɤβ	‘burn’
-ɣpaɤ	‘disaster’	paɤ	‘be black’
-ɣɣjuu	‘orifice’	ɣjuu	‘open (vi)’
-xso	‘empty thing’	so	‘be empty’

2.2 *Sigmatic Participles*

In addition to the velar prefixes, we also find in Rgyalrong languages oblique participle prefixes (in Japhug **sɣ-**, **sɣz-** or **z-**) and related converbial forms (Yanmuchu 2005, Sun 2014a, Jacques 2016b).

The oblique participles are fully productive, and can be applied to any verb, even stative verbs, to build adjunct participial relatives as in (6). They can be converted into nouns (in particular for instruments, such as **sɣcuu** ‘key’ from the verb **cuu** ‘open’) and even place names (there is for instance in Kamnyu village a place called **znɣɣɣma**, a lexicalized locative participle from the verb **nɣɣɣma** ‘to call the rain’).

- (6) **stu** **uu-sɣ-dɣn** **nuu** **stɣmkku** **nuura**
 Most 3SG.POSS-NMLZ:OBLIQUE-be.many DEM grassland DEM:PL
 ɣu-nuu
 be:FACT-PL
 ‘The (places) where they are the most numerous are the grasslands’. (19-qachGa mWntoR, 24)

Lexicalized instrumental or locational nouns derived from a transitive verb are often built from the sigmatic participle of the antipassive **rx-**,³ as in **z-rx-xsur** ‘wok’ (from the verb **xsur** ‘parch, fry’) or **z-rx-rxt** ‘writing implement (paper or pen)’ (from the verb **rxt** ‘write’)

There are several clues indicating that the oblique participle prefixes in Rgyalrong languages are not recently innovated. First, outside of core Rgyalrong, there are fossilized traces of sigmatic nominalization prefixes with instrumental or locative value in Khroskyabs (Lai 2017: 511) and Tangut (Jacques 2014b: 256–257). Second, within Rgyalrong, these prefixes have many allophones and there are several lexicalized nouns derived from oblique participles, even as first element of compounds, like **sxqrxc^{ha}** ‘alcohol to treat the guests’ from **c^{ha}** ‘alcohol’ and **sxqrxc-**, the status constructus of the oblique participle **sx-qru** of the verb **qru** ‘meet, greet (迎接)’. Third, there is no plausible source for this prefix, as if it were from a relator noun meaning ‘place’ for instance, it should have been grammaticalized as a suffix.

2.3 Sigmatic Converbs and Gerunds

Other non-finite verb forms in **sx-** include purposive converbs, which combine an imperfective orientation prefix (12) and gerunds, with reduplicated verb stem and no possessive or orientation prefixes (13 and 14). They are formally identical to reduplicated participles and are transparently grammaticalized from them (Jacques 2014c: 272–273, Grossmann et al. 2018).

- (12) [kuu-lxy acxβ nuu kuu uu-mx-sx-jmuu~jmut,]
 NMLZ:S/A-herd Askyabs DEM ERG 3SG-NEG-PURP:CONV-forget
 uu-phunggu nuu tēu rdxtax-pupuu tē^hurdu ci
 3SG.POSS-inside.clothes DEM LOC stone-little pebble INDEF
 jx-rku,
 IFR-put.in
 ‘The shepherd Askyabs put a little pebble inside his clothes so that he would not forget it.’ (qaCpa, 166)

The gerund generally means simultaneous action, without any obligatory argument coreference between the gerund clause and the main clause, as shown by (13), where the verb in the gerund clause is intransitive, and its subject **uu-qom** ‘her tears’ is not even an argument of the main clause (however, the transitive subject of the main clause is coreferent with the third person possessor of **uu-qom**).

- (13) [uu-qom sx-tuu-tok] kuu jx-mja tēe
 3SG.POSS-tear GERUND-come.out ERG IFR-take LNK
 ‘She took it (from hear mother’s hand) while her tears flowed’ (140428 mu e guniang, 31)

Most commonly however, the subject of the gerund clause is coreferent with that of the finite verb in the main clause, as in (14). Note the absence of 1SG person indexation on the gerund, as opposed to the finite verb **ku-rxzit-a**.

3 This antipassive prefix originates from the reanalysis of the denominal **rx-** derivation of deverbal nouns (Jacques 2014a).

- (14) **kutɕu** [sɤ-**mtsui~mtsur**] **ku-rɤzit-a** **tɕe**, **jisɲi** **ndɤ**
 here GERUND-be.hungry IPFV-remain-1SG LNK today however
tumukumpɕi **ku** **pú-wy-nu-mbi-a** **ɕti**
 heavens ERG PFV:DOWN-INV-AUTO-give-1SG be.AFFIRM:FACT
 ‘While I am staying here in hunger, today heavens have sent it (down) for me (to eat).’ (Norbzang 2005, 253)

The gerund is also used to describe a background situation, as in (15).

- (15) [**nuu** **sɤ-rku~rkun**] **zo** **tɤ-pɤtso** **ɕʰú-wy-tɕɤt**
 DEM GERUND-be.few EMPH INDEF.POSS-child IPFV-INV-take.out
pjɤ-ra **tɕe**
 IFR.IPFV-have.to LNK
 ‘One had to raise children with little (while food and clothes were few).’ (140426 tApAtso kAnWBdaR, 5)

The gerund also occurs in a lexicalized expression with a specific meaning, for instance the gerund **sɤ-xtɕu-xtɕi** from **xtɕi** ‘be small’ can mean ‘when X was young, since childhood’.

3 Tibetan

Tibetan,⁴ like Khroskyabs, is a language where the prefixes corresponding to syllabic prefixes in core Rgyalrong languages have become simple consonants, without a phonemic vowel. As a result of the dramatic syllabic contraction that occurred in proto-Tibetan, much of the archaic morphology has become obscured.

3.1 Velar Nominalization

The complementary distribution of velar **g-** and dental **d-** preradicals in Tibetan, an observation which Hill (2011) ascribes to Saskya Paṇḍita but which was first pointed out in modern scholarship by Li (1933), suggests that velar presyllables have been dissimilated to dentals (***kə-** → **d-**) before velars and labials, and that dental presyllables have been dissimilated to velars (***tə-** → **g-**) before dentals. There is no way to distinguish between ***kə-** and ***tə-** presyllables from Tibetan alone, except before initial **r-** (and perhaps **l-**), where no dissimilation took place.⁵

A certain number of examples of **g-** or **d-** preinitials, often together with a **-n**, **-d** or **-s** suffix (forming a circumfix like the active participle in Limbu, example 5 in §2.1) derive nouns from verbs or adjectives, with either action nominal or subject nominal meaning (Jacques 2014d).

Examples with the **g-** allomorph include the following:⁶

- 4 This section presupposes accepted knowledge concerning Tibetan historical phonology and morphology (Li 1933; Coblin 1976; Hill 2011, 2014a), and obvious alternations (such as aspiration) are not commented on. The transcription of Tibetan adopted follows Jacques (2012d).
- 5 As a consequence, it is possible that the prefix **d-/g-** in some of the examples below alternatively reflects the cognate of the action nominalization / degree nominalization **tu-** prefix in Japhug, on which see Jacques (2014a) and Jacques (2016a: 233–236), found in the form **u-tu-rnaɣ** ‘its depth’ in example (11).
- 6 Of these examples, since Japhug cognates of Tibetan ནག་པོ་ **nag.po** ‘black’ and རྩ་ **za** ‘eat exist’ (**naɣ** ‘be black’ and **ndaɣ** ‘eat’ respectively), the velar nominalized forms ནག་པ་ **gnag.pa** ‘black ox’ and རྩ་ན་ **gzan** ‘food (for animals)’ have Japhug

- ཀག་པོ་ **nag.po** ‘black’ (root |**nag**|) → ཀག་པ་ **gnag.pa** ‘black ox’
- ལྷ་ **blu, blus** ‘buy off, ransom’ (root |**lu**|) → ལྷ་ **glud** ‘ransom ritual’⁷
- ཡོ་ **jo** ‘crooked’ (root |**jo**|) → གཡོ་ **gjo** ‘deceit’
- ཉེ་ **je** ‘near’ (root |**n(j)e**|) → གཉན་ **gnen** ‘relative; friend’⁸
- རྩ་ **jo** ‘buy’ (root |**jo**|) → གཉན་ **gnod** ‘price (of a bride)’
- ཟ་ **za** ‘eat’ (root |**za**|) → གཟན་ **gzan** ‘food (for animals)’
- འཛིན་ **dzin, bzun** ‘seize, hold’ (root |**zun**|) → གཟུངས་ **dhāraṇī**
- ཞིབ་ **zib** ‘fine, subtle’ (root |**zib**|) → གཞིབ་ **gzib** ‘(finely ground) flour’⁹

The example གཟུངས་ **gzuṃs** ‘dhāraṇī’ is evidence that the **d/g...-s** circumfix was still marginally productive in the imperial period, as it is a calque from the Sanskrit **dhṛ** ‘hold’ (the root from which **dhāraṇī** derives), and must postdate the introduction of Buddhism.

In addition, Tibetan གཞོབ་ **gzob**, translated in Zhang (1993) as 烧焦；火烧的恶臭 ‘burn; smell of singeing’, could be cognate with the Japhug irregular velar nominalization **yndzɤβ** ‘disastrous fire’ (Table 1). Note however the attestation of གཞོབ་ **gzob** in the glossary studied by Li (1962) in (16) corresponding to Chinese 皆被焚燒火災滅後灰燼不現及至餘影亦不可得.

- (16) བསྐྱེད་ཤིང་གཞོབ་ཏུ་ཆགས་ནས་དུ་བ་ཡང་ཕྱེད་ཐལ་བའི་ལྷག་མ་ཕྱེད་པ་

bsregs.cin gzob.tu rlags.nas du.ba jan mjed tʰal.bafi lhag.ma mjed.pʰa
 ‘(completely) burnt and destroyed in a fire, not even leaving smoke or ashes’

In this passage, གཞོབ་ **gzob** corresponds to 火災, with exactly the same meaning as the Japhug noun. The meaning ‘burning smell’ might be due to an abbreviation of the compound གཞོབ་དྲི་ **gzob.dri** ‘burning smell’ in compounds. If this etymology is correct, the use of གཞོབ་ **gzob** as a verb is due to zero conversion.

Examples of the **d-** allomorph (with verb roots in velar and labial initials) include the following:

- ཏུ་ **ju, jus** ‘cry’ (root |**ju**|) → དཏུང་མོ་ **dgud.mo** ‘sob, wail (n)’
- དན་ **jan** ‘evil’ (root |**jan**|) → དངན་པ་ **djan.pa** ‘sorcery, evil’
- འཁྱེལ་ **kʰjil** ‘gather (of water), whirl, twist round’ (root |**jan**|) → དཀྱིལ་ **dkil** ‘center’¹⁰

counterparts (**ku-paṣ** ‘black one, the one which is black’ / **-yṇaṣ** ‘disaster’ and **kɤ-ndza** ‘eating; food’). These are however parallel formations, and do not reflect common inheritance.

7 Concerning this ritual, see Karmay (1991).

8 Note the exact Japhug cognate **tui-yṇi** ‘friend, ally’; the verb root ཉེ་ **je** ‘near’ does not exist in Japhug, and only the derived noun has been preserved.

9 Attested in PT 977, གཞིབ་བྲེ་གང་ཁྱིལ་ལྷ་ཉིག་བྲེ་གང་མཇལ་པ་དང་ **gzib bre gan gis mu tig bre gan mdzal pa dan** ‘A *bre* of flour was traded for a *bre* of pearls’ (Silk 2018: 430).

10 The meaning ‘center’ would be derived from a older meaning ‘confluence’. The verb འཁྱེལ་ **kʰjil** ‘gather, whirl’ is used for instance to refer to water gathering into a pond.

- མང་ **maṅ** ‘many’ (root |**maṅ**|) → དམངས་ **dmangs** ‘people’
- འཇུ་ **nk^hu** ‘offend, contend with, turn against’ (root |**k^hu**|) → དུལ་ **dku** ‘trickery, deceit’¹¹

It is conceivable that some of the **g-/d-** prefixes found in the Tibetan verbal system, in particular in the future tense, may be participial form that entered the finite system. This question goes however beyond the scope of this paper.

3.2 *Sigmatic Nominalization*

Examples of oblique nominalization by sigmatic prefix in Tibetan are not many. The clearest ones, unsurprisingly, involve the instrumental nouns (the function illustrated by 7 in Japhug). As in the case of the velar nominalization prefix, as noted above, the sigmatic nominalization prefix generally occurs together with a suffix **-d** or **-s**, as in སྒོ་ **s-no-d** ‘vessel’.¹²

- སྒོ་ **nod**, **mnos** ‘receive’ (root |**no**|) → སྒོ་ **snod** ‘vessel’
- འབྲུ་ **“bud**, **bus** ‘blow’ (root |**bu**|) → སྒུ་པ་ **sbud.pa** ‘bellows’
- འགེལ་ **“gel**, **bkal** ‘load on’ (root |**gal/kal**|) → སྒལ་ **sgal** ‘load, back’
- ཉན་ **jan** ‘hear’ → (root |**jan**|) སྒན་ **span** ‘ear (honorific)’

The examples above are not problematic; note that in the case of the honorific noun སྒན་ **span** ‘ear’, we possibly have a calque from Sanskrit *śrava-* ‘hearing’, which is attested in the sense of ‘ear’ in Classical Sanskrit. The adjective སྒན་ **span** ‘euphonious’ is also derived from ཉན་ **jan** ‘hear’, but through another **s-** prefix, the cognate of the propriative prefix **s-** in Japhug, which is found in examples such as **mts^hɿm** ‘hear’ → **sɿ-mts^hɿm** ‘audible’ (Jacques 2012b).

Nouns of location derived by the prefix **s-** (corresponding to Japhug examples such as 6 and 11) include the following:

- འདྲི་ **“diṅ**, **btṅ** ‘lay out, spread out’ (root |**diṅ/tiṅ**|) → སྒྲི་ **sdiṅs** ‘flat surface’
- འཁར་ **dgar**, **bkar** ‘pitch (tent)’ (as in **gur bkar** ‘pitch a tent’, root |**gar/kar**|) → སྒར་ **sgar** ‘encampment’
- འཆར་ **“tḥad**, **tḥad** ‘be cut, be broken off’ (root |**tḥad**|) → འདྲ་ **cad** ‘division stroke’
- འཁོར་ **“k^hor** ‘turn, circumambulate’ → སྒོར་ **skor** ‘circle’
- དམའ་ **dma** ‘low’ → སྒྲའ་ **smad** ‘lower part’¹³
- མཐོ་ **mt^ho** ‘high’ → སྒྲོ་ **stod** ‘upper part’¹⁴
- འབྲུ་ **“drub**, **“drubs** ‘sew’ → སྒུ་ **srubs** ‘gap, fissure’

11 See Bialek (2016: 150–1) for the philological study of this noun in Old Tibetan texts and the proposal of a derivation from the verb འཇུ་ **“k^hu** ‘offend, contend with, turn against’, though she analyzes the **d-** prefix as a transitivizer, and postulates that the noun derives from an unattested transitive verb ***dku** ‘bend, make crooked’.

12 Another type of derivation involving **s-...-d** circumfixes is found in Tibetan: the collective noun derivation found with kinship terms such as སྒྲོ་ **skud** ‘husband’s male relatives’ from སྒུ་ **k^hu** ‘father’s brother’ and སྒུ་ **spun** ‘brothers’ from སྒུ་ **p^hu.nu** ‘elder and younger brothers’ (Nagano 1994). This formation is unrelated to the sigmatic nominalization described in this section.

13 In this example, the base adjective དམའ་ **dma** ‘low’ contains a **d-** from a velar presyllable ***kə-** which underwent dissimilation. Note also the adverb མར་ **mar** ‘down’ from the same root, with a terminative **-r** suffix.

14 This example suggests that the pre-Tibetan cluster ***smt-** was simplified as **st-**.

In this list, note that the noun སྐར་ *skor* ‘circle’⁷ may be derived from the causative སྐར་ *skor* ‘cause to turn, surround, circumambulate’ and therefore not be an example of a sigmatic nominalization prefix. The same explanation is not possible for the other examples, however.

The derivation of རྩ་ *cad* ‘division stroke’ from རྩ་ *tc^had*, *tc^had* ‘be cut, be broken off’ as proposed by Li (1933: 141)¹⁵ with a proto-form **s-tcad* → *cad* is a non-trivial example of sigmatic nominalization; this word would mean literally ‘breaking place (when reading)’.

In addition to these two main categories, there are two potential isolated examples of sigmatic nominalization. First, the noun སྦྱོན་ *skjon* ‘fault’ is clearly derived from the verb བྱོན་ *bkjon* ‘scold, reprimand’ (whose *b-* may be a frozen past tense prefix); the semantic relation between the verb and the noun may be that of cause, a type not attested in Japhug.

Another example is སྐག་ *skag* ‘(astrological) hindrance, obstacle’, which could derive from the verb འགྱུག་ *gog*, *bkag* ‘hinder’;¹⁶ a temporal nominalization, like the Japhug example (10). This is the only example from verbs with voicing alternation (on which see Hill 2014b) where the oblique nominalization is based on the unvoiced alternant (the base form according to Jacques 2012c).

4 Old Chinese

Reconstruction of morphology in Old Chinese (OC) is a much more delicate enterprise than in Tibetan, since even the mere existence of clusters has to be reconstructed (Gong and Lai 2017). Nevertheless, there are potential cases of nominalization prefixes in Old Chinese, whose interpretation depends on the reconstruction system followed.

4.1 Velar Nominalization

Evidence for velar nominalization in Old Chinese is slim, but not nonexistent. Baxter and Sagart (2014: 57) suggest the following possibilities:

- 方 *pjag* ‘square’ (**C-pag*) → 匡 *k^hjwan* ‘square basket’ (**k-p^han*)
- 明 *mjæŋ* ‘bright’ (**mraŋ*) → 罔 *kjwæŋX* ‘bright window’ (**k-mraŋ?*)
- 威 *ʔwɨj* ‘awe-inspiring’ (**ʔuj*) → 鬼 *kjwɨjX* ‘ghost’ (**k-ʔuj?*)

15 Note that while Li Fang-kuei’s sound law **s-tc* → *tc* is certainly correct (as pointed out by Abel Zadoks in an unpublished manuscript for instance, the numeral *pi.cu* ‘twenty’ can be explained as an instance of this sound change, the proto-form being **pis-tcu*, perfectly parallel to *sum.tcu* ‘thirty’), some of his examples have to be abandoned. For instance, he argues that གཤམ་ *gcam* ‘lower part, under’ derives from *tc^ham* in the expression ཆས་ལ་འབེབས་ *tc^ham-la^h bebs* ‘defeat completely’, a collocation containing the verb འབེབས་ *bebs*, *p^hab* ‘cast down’. However, the syllable *tc^ham* here is more plausibly related to the verb འཛོམས་ *ndzoms*, *btcoms* ‘subdue, destroy’. The noun གཤམ་ *gcam* ‘lower part, under’ is more likely to be the exact cognate of Japhug *tx-zrɨm* ‘root’ and Chinese 參 *sim* ← **srəm* ‘plant root’ (see Jacques 2015), with the sound laws **sr* → *tc* and **tə* → *g* before coronal consonants (on the latter, see the discussion in § 3.1); the *g*- would reflect the indefinite possessor prefix (the noun ‘root’ being an inalienably possessed noun).

16 Another possibility would be the adjective འག་པོ་ *k^hag.po* ‘difficult, hard’, if ancient attestations can be brought to light. Uebach (2006: 109) provides numerous attestations of ཀེག་ *keg*, ཀག་ *kag*, སྐེག་ *skeg*, སྐག་ *skag*, སྐེག་ *sk^heg* ‘kalendarisch ungünstige, gefährliche Zeit, Hindernis, drohendes Unglück’. The *s*-less forms are found as second members of compounds, as in འགྱུག་ཀེག་ *dgug.keg* ‘(astrological) hindrance (honorific)’. Uebach cites གླི་ *giH* ‘taboo, abstain from apparently suggesting that the Tibetan word could be related; this is impossible for phonological reasons (voiced initial and absence of coda).

It is however likely that some Old Chinese *kə- presyllables disappeared without observable traces in Middle Chinese, as shown by the data in Table 4.47 in Baxter and Sagart (2014: 153), where data from ancient loanwords into Vietic and Lakkia demonstrate the presence of a velar preinitial element in words such as 賊 *dzok* ‘bandit’ (Ruc *kəcək*). As a consequence, most potential traces of velar nominalization prefixes may have been lost by the effects of sound change, though the study of OC loanwords in Kra-Dai, Vietic and Hmong-Mien may provide further examples.

4.2 Sigmatic Nominalization

Sagart (1999: 73) proposed the following examples of the *s- nominalization prefix (here I keep the original reconstruction,¹⁷ without conversion to the system of Baxter and Sagart 2014, as none of these examples has become invalid in the new reconstruction).

- 蒸 *tɕiŋ* ‘to steam’ (*b*tɕiŋ*) → 甑 *tɕiŋH* ‘earthenware pot for steaming rice’ (*b*s-tɕiŋ-s*)
- 扯 *jet*, *jejH* ‘to pull’ (*b*lat(-s)*) → 革世 *sjet* ‘leading string’ (*b*s-lat*)
- 嚙 *ŋet* ‘to bite, gnaw’ (*a*ŋet*) → 楔 *set* ‘wedge, piece of wood between the teeth of a corpse’ (*a*s-ŋet*)
- 身寸 *zek*, *zæH* ‘to shoot’ (*b*m-lak(-s)*; the *-s suffix here has an antipassivizing function, see Jacques to appear) → 榭 *zjæH* ‘open hall for archery exercises’ (*b*s-lak-s*)¹⁸
- 侍 *dziH* ‘to accompany, wait upon’ (*b*di(?)*-s) → 寺 *ziH* ‘servant, eunuch’ (*b*s-di(?)*-s)
- 食 *zik* ‘to eat’ (*b*m-lik*) → 食 *ziH* ‘food’ (*b*s-lik-s*)

Additional examples are presented in Baxter and Sagart (2014: 56) and Sagart and Baxter (2012). Some of these nouns, for instance 星 *sej* ‘star’ and 席 *zjek* ‘mat’, are derived from a root that is only attested in derived verbal forms.

- 𠂔 *ŋjæk* ‘go against, reverse’ (**ŋrak*) → 朔 *sæwk* ‘first day of month’ (**s-ŋrak*)
- 通 *thuj* ‘penetrate’ (**lʰoŋ*) → 窗 *tɕʰæwŋ* ‘window’ (**s-lʰ<r>oŋ*)
- 亡 *mjaŋ* ‘flee; disappear; die’ (**maŋ*) → 喪 *saŋ* ‘mourning, burial’ (**s-mʰaŋ*)
- 以 *jiX* ‘take, use’ (**ləʔ*) → 鋤 *ziX* ‘handle of plow or sickle’ (**sə.ləʔ*)
- 晴 *dzjeŋ* ‘clear (weather)’ (**N-tsʰeŋ*), 清 *tɕʰjeŋ* ‘clear’ → 星 *sej* ‘star’ (**s-tsʰeŋ*, Baxter and Sagart 2014: 139)¹⁹

¹⁷ One difference between Sagart (1999) and Baxter and Sagart (2014) is the way A- type (division I, II and IV) and B-type (division III and a few division II) syllables are represented: in the former the superscript *a* and *b* are added before the main syllable, while in the latter, following Norman (1994), A-type syllables are reconstructed with pharyngealization and B-type syllables without pharyngealization.

¹⁸ Note that the locative noun 榭 *zjæH* is based on the antipassive form of the verb, as we find in Japhug (§ 2.2).

¹⁹ Even if one accepts the sound change **s-tsʰ- → s-*, analyzing 星 *sej* ‘star’ as a locative nominalization **s-tsʰeŋ* from a root **tsʰeŋ* attested by 晴 *dzjeŋ* ‘clear (weather)’ and 清 *tɕʰjeŋ* ‘clear’ is problematic. Although the graphs belong to the same phonetic series and the affricate onset is supported by Min data, the semantic difference is considerable, since these adjectives never mean ‘bright’ and are not associated with stars. The only way to salvage the hypothesis would be to suppose a locational/temporal noun ‘clearing (in the night sky)’ ⇒ ‘starry sky’ (night sky without any cloud), from which ‘star’ would be a singulative. The meaning ‘starry sky’ for 星 *sej* may be attested, as in the following passage from the poem 定之方中 Ding Zhi Fang Zhong (50) in the Shijing: 靈雨既零、命彼倌人。星言夙駕、說于桑田。 ‘When the good rains had fallen, He would order his groom, By starlight, in the morning, to yoke his carriage, And would then stop among the

- 署 **dzoH** ‘toplace; position’ (***m-taʔ-s**), 緒 **zjoX** ‘arrange in order’ (***s-m-taʔ**), 著 **tjak** ‘to place’ (****t<r>ak**) → 席 **zjek** ‘mat’ (***s-m-tAk**, Baxter and Sagart 2014: 61)
- 除 **djo** ‘remove’ (***[l]<r>a**) → 鋤 **dzjo** ‘hoe’ (***s-[l]<r>a**, Baxter and Sagart 2014: 81)
- 勻 **jwin** ‘even, uniform’ (***[N-q]wi[n]**) → 旬 **zwin** ‘ten-day cycle’ (***s-N-qwi[n]**, Baxter and Sagart 2014: 127)
- 處 **tcʰoX** ‘be at’ (***t.qʰaʔ**) → 所 **gjoX** ‘place, nominalizer’ (***s-qʰ<r>aʔ**, Baxter and Sagart 2014: 130)
- 圓 **hjwen** ‘round’ (***Gʷ<r>en**) → 旋 **zjwenH** ‘whorl of hair on the head’ (***s-Gʷen-s**, Baxter and Sagart 2014: 141)²⁰
- 尼 **nejX** ‘to stop’ (***nʰərʔ**) → 西 **sej** ‘west’, 棲 **sej** ‘bird’s nest’ (***s-nʰər**, Baxter and Sagart 2014: 147)²¹

While some of sound changes involved are not universally accepted, in particular ***s-tsʰ** → **s-** and Li Fang-Kuei’s (Li 1971) idea of ***sN** → ***s-** (see the debate between Mei 2012 and Sagart and Baxter 2012), the change ***sl** → **z-** in B type syllables is least controversial.²² Even if we exclude all examples with controversial onsets for the sake of argument, we still have good examples of locative (榭 **zjæH**), comitative (寺 **ziH**) and instrumental (鉛 **ziX**) nominalizations, comparable to Japhug examples (6, 11), (9) and (7) respectively. The case of 食 **ziH** ‘food’ is more doubtful because there is a causative 食 **ziH** ‘feed’ from which it could derive by zero derivation, and also because an oblique nominalization of ‘eat’ should rather mean ‘eating place’ or ‘instrument used for eating’, not ‘food’.

These three examples of sigmatic nominalization (榭 **zjæH**, 寺 **ziH**, 鉛 **ziX**) are not the only ones that seem relatively straightforward. Without committing to a particular reconstruction system, if we accept Li Fangkuei’s (Li 1971) reconstruction of **s** + nasal onsets, and Bodman’s (1969) hypothesis of OC dental affricates originating from clusters in ***s-** (***s-T** → ***TS-**), three examples of instrumental nominalization (楔 **set** ‘wedge’, 曾瓦 **tsigH** | earthenware’ and 鋤 **dzjo** ‘hoe’) and three examples of temporal/locative nominalization (朔 **sæwk**, 喪 **sag**, 棲 **sej**) are fairly convincing.

A possible example of sigmatic converb (parallel to the gerund in Japhug, § 2.3 in examples such as 13 to 15) in Old Chinese is the conjunction 雖 **swij** ‘although’. This conjunction is already attested in the Shijing as in (17), where it occurs in opposition to the copula 維 **jwij** in the main clause.

(17) 周雖舊邦, 其命維新

mulberry trees and fields.’ (translation by Legge). Karlgren (1974: 33) translates it as ‘when it cleared during the night, early he yoked his carriage’.

From a phonological point of view, reconstructing ***s-tsʰ** is not the only logical possibility to account for the **s-** to ***tsʰ**- correspondence between MC and proto-Min, and the *xiesheng* contacts with words in affricates. For instance, a reconstruction ***tə-sʰej** with a dental presyllable, fusing with the main syllable in the ancestor of Min, could also be considered. In this hypothesis, an etymological relationship with the words meaning ‘clear’ would have to be abandoned.

- 20 The word 旋 **zjwenH** is more likely to be a nominalization by *qùshēng* from the verb 旋 **zjwen** ‘revolve, turn’ (on which see Downer 1959, Jacques 2016c).
- 21 This example, also discussed in Sagart (2004) and Nohara (2018), would have a direct Japhug equivalent **sɿz-nuuna** ‘resting place’. These are however not real cognate, since the Japhug word can be productively formed from the verb **nuuna** ‘to rest’.
- 22 On the voicing of preinitial ***s-** in contact with a voiced lateral, see the typological discussion in Gong (2016), with evidence from Rgyalrongic and Tibetic languages.

'Though Chow is an old state, its (heavenly) appointment is new.' (235; Daya, Wenwang, Karlgren 1974: 185)

An etymological relationship between 雖 *swij* 'although' and 維 *jwij* 'be' is likely given their occurrence in the same phonetic series.²³ A copula with a converbial **s-* prefix would mean 'while being xxx', a form that can have a concessive meaning in appropriate contexts (in the same way that English 'while', originally a temporal conjunction, has also become concessive) and could have become restricted in this usage.

Baxter and Sagart reconstruct 雖 *swij* as **s-q^wij* and 維 *jwij* as **G^wij*, and do not imply a morphological relationship between the two; in their system, the expected outcome of **s-g^wij* would be *†zwij*. There are several ways around this problem; Jacques (2000) reconstructs 雖 *swij* as **s-tə-wuj* and 維 *jwij* as **tə-wuj*, using a system based on Sagart (1999); in this hypothesis, the presence of a **tə-* preinitial, reconstructed here to account for the xiesheng relationship with 推 *t^hwoj* (from **t^hu^j*), accounts for the absence of voicing. If the reconstruction of a preinitial in this word is not accepted, it remains possible to suppose that, given the fact that this converbial prefix was probably not lexicalized at the same time as the other **s-* prefixes, different sound laws apply.

Although the existence of sigmatic nominalization in Old Chinese is less immediately obvious than in Tibetan, the number of examples is of a comparable order.

5 Conclusion

The Tibetan and Chinese data presented in this paper support the idea that the sigmatic prefixes of Rgyalrong languages are not a Rgyalrongic innovation, but rather the preservation of prefixes that used to exist in the literary languages, but of which only fossil traces remain in the earliest attested stages of these languages. It is likely that traces of the same prefixes can be found elsewhere in the Trans-Himalayan family, though only few branches preserve unequivocal traces of the preinitials.²⁴

It is hoped that the Japhug data provided in this paper will be useful to researchers of Old Chinese and Tibetan to look for additional examples of sigmatic oblique nominalization, and better evaluate the precise semantics of proposed etymologies: since the sigmatic participles are fully productive in Japhug, this language allows a finer-grained understanding of the use of this derivation than languages where only fossilized remnants can be identified.

The morphology-rich Rgyalrong languages have a role in the reconstruction of Trans-Himalayan morphology comparable to that of Sanskrit in IndoEuropean and Arabic in Semitic: their exuberant productivity offers an living model to build hypotheses on the traces of morphology in lesser-endowed languages.

23 See also Behr (2006) for further philological evidence for an etymological relationship between 雖 *swij* and 維 *jwij*. Behr views the **s-* prefix as a causative, an interpretation that is not impossible, but is more complex than that proposed here.

24 In particular, a possibly related nominalization prefix, which has the allomorphs *chya-*, *sha-* and *sa-*, is found in Jinghpo (Dai 1990: 3–4). However, it does not derive oblique nominals, and this comparison requires more investigation.

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原始名物化前缀在藏语和上古汉语中的痕迹

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提要

本文指出藏语和上古汉语中存在着原始名物化前缀的一些词汇化的例子，这些前缀虽然在汉语和藏语中没有清楚的语法功能，但是在形态存古的嘉绒语支语言当中还保留着能产性，因此嘉绒语支语言给我们提供了分析其他语言的研究框架。

关键词

藏语、上古汉语、嘉绒语支、基兰提语支、名物化、前缀