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Causativisation in Wobzi and other Khroskyabs dialects

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Abstract

Mainly basing on first hand data, this paper deals with the causative constructions in the Khroskyabs language (Rgyalrongic, Sino-Tibetan), focusing on the Wobzi dialect. Causative prefixes, anti-causative, analytic causative and labile verbs are described. In addition, comparative analyses within Rgyalrongic as well as the Sino-Tibetan family are made.

Keywords

causative — Khroskyabs — morphophonology — Rgyalrongic

Résumé

En se basant principalement sur des données de première main, cet article traite des constructions causatives en khroskyabs (langue rgyalrongique, sino-tibétain), en se concentrant sur le dialecte wobzi. Les préfixes causatifs, l'anti-causatif, le causatif analytique et les verbes labiles sont décrits. Des analyses comparatives au sein du rgyalrongique et du sino-tibétain sont également effectuées.

Mots-clés

causatif — Khroskyabs — morphophonologie — rgyalrongique

1 Background

Khroskyabs¹ is a Rgyalrongic language² spoken in the Rngaba Prefecture in Sichuan Province, China (PRC). Previous studies on this language include Huang (2007, Guanyinqiao dialect), Lai (2013a, 2015b, Wobzi dialect), etc.

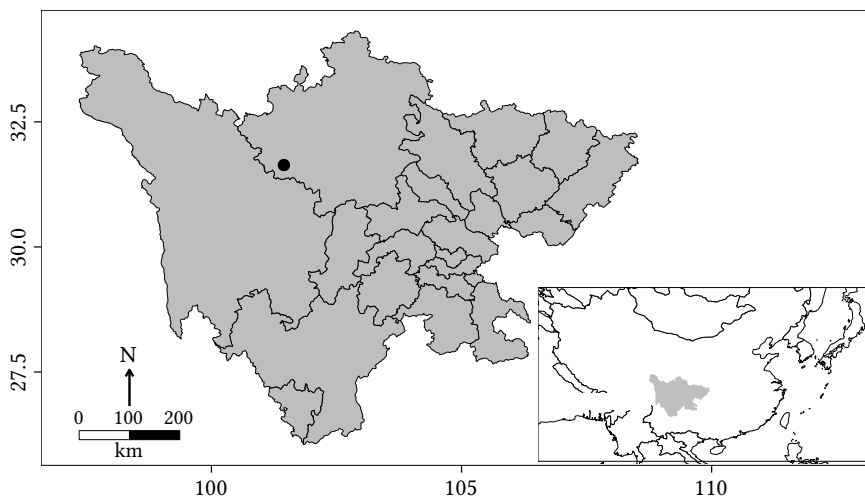


FIGURE 1 Location of Khroskyabs in Sichuan, China

The majority of Khroskyabs speakers live in an area that extends from Thugschen (endonym *grâmde*, 觀音橋鎮 *Guānyīnqiáo Zhèn*), Northwest of Chuchen County, towards 'Brongdzong (*mbrônyrdzoy* 木爾宗鄉 *Mù'ěrzōng Xiāng*), Southern part of 'Barkhams County (*mbærk^hxêm* 馬爾康縣 *Mǎ'ěrkāng Xiàn*), as well as Phosul (*p^hosé* 蒲西鄉 *Púxī Xiāng*) in Eastern Dzamthang County (*ndzæmt^hôŋ*, 壤塘縣 *Rǎngtáng Xiàn*). The total Khroskyabs speaking population is estimated to be less than 10,000 people (Huang 2007). The black circle in Figure 1 shows the approximate location of the Khroskyabs speaking area in Sichuan.

In this paper, I will present new data from one of the Khroskyabs dialects, Wobzi (spoken in Ere Township *érvzi* 俄熱鄉 *Érè Xiāng* in Chuchen County). I additionally make reference to firsthand data from the Siyuewu dialect (*fsajó=vu*

- 1 Local pronunciation *k^hrascæv*. The native name of this language is *bósræi*, literally meaning "Tibetan language". It is previously known as "Lavrung", which was erroneously considered an endonym of the native speakers. In fact, the term "Lavrung" is unknown to most of the inhabitants.
- 2 Rgyalrongic is a sub-branch of the Sino-Tibetan family (since no evidence of any innovation common to all languages beside Chinese has been discovered, I refrain from using the term "Tibeto-Burman"), first proposed by Sun (2000), comprising four Rgyalrong languages, Japhug, Situ, Zbu (*Showu* by Sun 2004), and Tshobdun (Sun 2000, Jacques 2004), and at least three Horpa languages, Stau, Stodsde, and Dgebshes (Jacques et al. forthcoming).

sharpening.stone=LOC ‘under the sharpening stone’), spoken in Siyuewu village 斯躍武村 Sīyuèwǔ Cūn in ’Dzamthang County) and the ’Brongrdzong dialect (spoken in ’Barkhams County), as well as data published by other scholars. Except for the Njorogs dialect (Yin 2007), which might be better treated as a distinct language, Khroskyabs dialects share a relatively high degree of intelligibility.

1.1 Syllable structure

Presenting the syllable structure of the Khroskyabs language gives us better access to the understanding of its causative morphophonology. Each core Khroskyabs dialect has a similar syllable structure. I herewith present the syllable structure of the Wobzi dialect. The syllable in Wobzi Khroskyabs is comprised of an onset that is only absent in several affixes and ideophones, an obligatory nucleus, and a coda. In Wobzi, the coda is always mono-consonantal, while in Siyuewu and other dialects, complex codas with two consonants are attested. Onsets can be comprised of a single consonant or a consonant cluster (hereafter a complex onset):

$$(1) \quad (C)(C)(C)(C)(C)V(C)$$

A complex onset is divided in three parts, an obligatory INITIAL, one or several optional PREINITIAL(s), and an optional MEDIAL. Any consonantal phoneme can be initial, while only sonorants and fricatives can be preinitials, and only non-nasal sonorants can be medials. In order to recognise these three onset positions, the consonantal reduplication test can be applied (Lai 2013c):

$$(2) \quad \begin{array}{l} \text{a. } C_p C_i C_m VC \rightarrow C_p C_i C_m VC \sim (C_p) C_i (C_m) a/u \\ \text{b. } mbr\hat{x} \text{ ‘rice’} \\ \quad \text{i. } \rightarrow mbr\hat{x} \sim mbru \\ \quad \text{ii. } \rightarrow mbr\hat{x} \sim bru \\ \quad \text{iii. } \rightarrow mbr\hat{x} \sim mbu \\ \quad \text{iv. } \rightarrow mbr\hat{x} \sim bu \end{array}$$

The process is done by reduplicating the onset and replacing the rhyme with *-a* or *-u*. Some elements in the onset can be omitted in the reduplicated syllable, but one of them must be present. The initial of the onset is always reduplicated, while the consonants that precede (i.e. preinitials) and follow (i.e. the medial) it can either be preserved or deleted in the reduplicated syllable, as in the four possibilities in (2).

Elements in the preinitial part of an onset strictly follow the order indicated in Example (3) below (Lai 2013b):

(3) \mathcal{K} - > j - > NASALS > ν - > r -, l - > s -, z - > INITIAL > MEDIAL

1.2 Tone

Khroskyabs is a tonal language. In Wobzi Khroskyabs, there are two distinctive tonemes attested, a high tone ($\acute{\sigma}$) and a high-falling tone ($\hat{\sigma}$). Only one tone bearing syllable is allowed in a single phonological word, of which the position is not predictable. The surface tones of toneless syllables are derivable according to the tone of the tone-bearing syllable (Lai 2015a). Minimal pairs in Wobzi Khroskyabs are listed in Table 1.

TABLE 1 *Wobzi tones*

H	Gloss	HL	Gloss
<i>jlé</i>	'rabbit'	≠	<i>jlê</i> 'flute'
<i>ɛbáy</i>	'to explode'	≠	<i>ɛbâý</i> 'to be many'
<i>vlé</i>	'to be slow'	≠	<i>vlê</i> 'to care for (child)'
<i>záý</i>	'to be sharp'	≠	<i>zâý</i> ' <i>potentilla anserina</i> '

1.3 The verb

A verb in Khroskyabs can have one, two, or three stems: a non-past stem (stem 1), a past stem (stem 2), and an irrealis stem (stem 3) (Yi & Lai 2015, Sun 2000). Most of the verbs have stem 1 and stem 2 only, and stem 1 covers the functions of stem 3 in these cases. One-stem verbs are formally invariable in all contexts.

Like other Rgyalrongic languages (Jacques 2013: 195), Khroskyabs exhibits templatic morphology with a long prefixal chain. Again, the verbal template is more or less the same within the core dialects. The Wobzi verbal template is shown in Table 2, and the affix list is shown in Table 3.

TABLE 2 *Wobzi verbal template*

-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2
	\mathfrak{x} -	u -	$m\mathfrak{a}$ -										
$s\hat{\sigma}$ -	$n\mathfrak{x}$ -	$\hat{\sigma}$ -	$t\mathfrak{a}$ -/ $t^h\mathfrak{x}$ -	$z\mathfrak{a}$ -	\mathcal{K} -	N -	ν -	s -	$\mathfrak{E}j\mathfrak{x}$ -	Noun	Verb		
	etc.		$\hat{\sigma}$ -/ $\mathfrak{E}\mathfrak{a}$ -										
Inflection				Derivation					Stem		Infl. Redup.		

TABLE 3 *Affixes in the verbal template*

Position	Affixes
-11	Progressive $s\hat{\sigma}$ -
-10	Directional prefixes ε -, $n\varepsilon$ -, $k\varepsilon$ -, $n\varepsilon$ -, $l\varepsilon$ -, $v\varepsilon$ -, $r\varepsilon$ -
-9	Inverse u -, irrealis \hat{a} -
-8	Negative $m\varepsilon$ -/ $m\varepsilon$ -/ ma -, prohibitive $t\varepsilon$ -/ $t^h\varepsilon$ -, interrogative \hat{a} -/ $\varepsilon\varepsilon$ -
-7	Irrealis $z\hat{\sigma}$ -
-6	Intransitive \varkappa -
-5	Autobenefactive N -
-4	Causative ν -
-3	Causative s -
-2	Reflexive $\varkappa j \hat{\varepsilon}$ -
-1	Noun incorporation
1	Person endings $-ij$, $-j$, $-n$
2	Reduplicated syllables

1.4 *Argument flagging and indexing*

Case markers in Khroskyabs are listed in Table 4.³ In the intransitive conjugation, person markers are coreferent with S.⁴ The transitive conjugation follows a hierarchical alignment (Lai 2015b), person markers follow the empathy hierarchy (1>2>3, Silverstein 1976), and the inverse direction (u - in Wobzi, ε - in Guanyinqiao) is also indexed on the verb.⁵ The intransitive and transitive paradigms in Wobzi Khroskyabs is illustrated in Tables 5 and 6.

TABLE 4 *Wobzi Khroskyabs case markers*

Functions	Markers
ergative	$=\gamma\varepsilon$
dative/ablative	$=k^h\varepsilon$
possessive/dative	$=ji$
locative	$=t^ha$, $=g\varepsilon$, etc.

Transitivity is morphologically marked in an unambiguous way in Khroskyabs. Inverse constructions have the A marked by the ergative $=\gamma\varepsilon$ and the

3 In Wobzi Khroskyabs, there is a set of locative markers, expressing different spatial relations: $=t^ha$ 'on the surface of', $=g\varepsilon$ 'inside', $=vi$ 'under, at the bottom of', $=\varepsilon a$ 'in an unspecified space', etc.

4 A: transitive agentive, P: transitive patientive, S: intransitive subjective, T: ditransitive theme, R: ditransitive recipient

5 $2 \rightarrow 1$, $3 \rightarrow 1$, $3 \rightarrow 2$, and all $3 \rightarrow 3$ directions; c.f. Zúñiga (2006)

TABLE 5 *Wobzi intransitive paradigm*

Person endings		Pronouns
1SG	STEM- <i>ŋ</i>	<i>ŋô</i>
1DU	STEM- <i>j</i>	<i>ŋgâne</i>
1PL	STEM- <i>j</i>	<i>ŋgâŋji</i>
2SG	STEM- <i>n</i>	<i>nû</i>
2DU	STEM- <i>n</i>	<i>nêne</i>
2PL	STEM- <i>n</i>	<i>nêŋji</i>
3SG	STEM	<i>ætâ</i>
3DU	STEM	<i>ætâne</i>
3PL	STEM	<i>ætâji</i>

TABLE 6 *Wobzi transitive paradigm*

		A			
		1SG	1PL	2	3
P	1SG			STEM- <i>n</i>	STEM- <i>ŋ</i>
	1PL			STEM- <i>n</i>	STEM- <i>j</i>
	2	STEM- <i>ŋ</i>	<i>u</i> -STEM- <i>j</i>		STEM- <i>n</i>
	3	<i>u</i> -STEM- <i>ŋ</i>	<i>u</i> -STEM- <i>j</i>	<i>u</i> -STEM- <i>n</i>	(<i>u</i> -)STEM

verb indexed by the inverse prefix *u-*. As for direct constructions, the transitive verb agrees with A in SAP⁶→3 situations, otherwise it agrees with P.

(4) a. Direct

nû câ næ-sá-n
 2SG 3SG PFV-kill-2
 ‘You killed him.’

b. Inverse

nû γə ŋô n-u-sá-ŋ
 2SG ERG 1SG PFV-INV-kill-1SG
 ‘You killed me.’

There are two types of alignment in ditransitive constructions: indirective and secundative (Lai 2015b, Haspelmath 2005, Malchukov et al. 2010). From the perspective of person marking, in the secundative alignment, the recipient

⁶ Speech-act participant, referring to first or second person.

is treated as P (recipient = P), while in the indirective alignment, the theme is treated as P (theme = P). Secundative verbs in Wobzi include *ldzê* ‘teach’, *bâ* ‘give (food)’ and *syí* ‘lend’, etc.; indirective verbs include *k^hâ* ‘give’, *rŋí* ‘borrow’, *fsé* ‘lead’ and *ræ* ‘say’, etc.

(5) a. Secundative

nû=γə ŋâ=k^he bódzədə n-u-ldz-áy
2SG=ERG 1sg=dat Tibetan PFV-INV-teach-1SG

‘You taught me Tibetan.’

b. Indirective

nû ŋæ=ji ɣovzî rə-vâ=ri tɕ^hî=tə næ-fsê-n
2SG 1SG=DAT ‘Obzi IPFV-go=NMLZ way=DEF PFV-lead-2

‘You showed me the way to ‘Obzi.’

2 Case marking

A causative construction introduces a new argument (CAUSER, A of the causative sentence, opposed to CAUSEE, A of the non-causative and O of the causative sentence) to the construction and triggers a remapping of grammatical relations of the arguments. The process is examined by Comrie (1976) who proposes the term “paradigm case”. This principle is based on the case hierarchy:

(6) Subject > Direct object > Indirect object > Oblique object

Once the causer occupies the subject position, the causee must be demoted to the highest unoccupied position. Therefore, from a case-marking point of view, in a causative construction, the causee stands in the direct object position if the base verb is intransitive, in the indirect object position if the base is monotransitive, and in the oblique object position if the base is ditransitive.

Example (7) shows the causativisation of the Wobzi intransitive verb *gáy* ‘to bow’, in which its S, the causee, *ɣû* ‘head’, occupies the direct object position in the causative construction.

(7) a. *ɣû=tə næ-gáy*
head=DEF PFV-bow
‘The head is bowed.’

b. *cə=γə ɣû=tə n-u-z-gáy*
3SG=ERG head=DEF PFV-INV-CAUS-bow
‘He lowered his head.’

Causative derivation turns a monotransitive verb into a ditransitive one. As mentioned in Section 1.4, indirective and secundative alignments are attested in ditransitive constructions. The derived causative verb is always secundative (recipient = P), that is, the causee is regarded as the recipient. In Wobzi, the causee can be left unmarked, or marked with the dative =*k^he*.

- (8) a. *cə̌=γə srú=tə n-u-rvæjí*
 3SG=ERG meat=DEF PFV-INV-chop
 ‘He chopped the meat.’
 b. *tʂaɕí=γə ɲâ=k^he/ɲô srú=tə n-u-s-væj-áɲ*
 Bkrashis=ERG 1SG=DAT/1SG meat=DEF PFV-INV-CAUS-chop=1SG
 ‘Bkrashis made me chop the meat.’

In the Siyuewu dialect, the causee must be marked with dative =*ɲk^he*, as in Example (9):

- (9) a. **tʂaɕí=γə ɲâ bjæní=tə n-u-t-ts-iâɲ*
 Bkrashis=ERG 1SG/1SG=DAT meat=DEF PFV-INV-CAUS-chop=1SG
 ‘Bkrashis made me chop the meat.’
 b. *tʂaɕí=γə ɲâ=ɲk^he bjæní=tə n-u-t-ts-iâɲ*
 Bkrashis=ERG 1SG/1SG=DAT meat=DEF PFV-INV-CAUS-chop=1SG
 ‘Bkrashis made me chop the meat.’

Causativisation of ditransitive verbs is rarer in Khroskyabs. The causative verb takes four participants, the causer, the causee, the theme, and the recipient. The alignment is still similar to a secundative one: when the causee and the recipient are both SAP arguments, the causee is treated as P; while in the presence of a non-SAP argument and an SAP argument (no matter which one appears as the causee), the SAP argument is treated as P.

As in Example (10a), the causee *nû* (2SG) and the recipient marked by dative *ɲâ=k^he* (1SG=DAT) are both SAP arguments. In this case, the causee *nû* (2SG) is treated as P, with which the main verb agrees: *n-u-s-k^há-n* (PFV-INV-CAUS-give-2). While in Example (10b), only the recipient *ɲâ=k^he* (1SG=DAT) is an SAP argument, the verb must therefore agree with it, despite its dative marking: *n-u-s-k^há-ɲ* (PFV-INV-VAUS-give-1SG).

- (10) a. SAP causee & SAP recipient (causee = P)
tʂaɕí=γə nû(=k^he) ɲâ=k^he kapâ ráɲ n-u-s-k^há-n
 Bkrashis=ERG 2SG(=DAT) 1SG=DAT book one PFV-INV-CAUS-give-2
 ‘Bkrashis made you give me a book.’

b. non-SAP causee & SAP recipient (SAP = P)

tʂaɕí = $\gamma\partial$ *dzomá* (= $k^h e$) *ŋá* = $k^h e$ *kapá ráγ*
 Bkrashis=ERG Sgrolma(=DAT) 1SG=DAT book one
n-u-s-k^há-ŋ
 PFV-INV-CAUS-give-1SG
 ‘Bkrashis made Sgrolma give me a book.’

3 Causative prefixes

3.1 *S-causative*

It is common among Sino-Tibetan languages to find a causative morpheme with the form *s-*, see Sun (1999: 184-185) for a general discussion on Rgyalrong and Dulong, Sun (2007: 214-224) for Horpa, and Sagart & Baxter (2012) for Old Chinese. Similarly, in Khroskyabs dialects, we find a sibilant prefix on verbs used to mark a causative. In this section, I focus on the morphophonology of this prefix in Wobzi Khroskyabs.

The causative prefix *s-* in Wobzi exhibits richer morphophonological properties than the other prefixes in the verbal template. There are six categories of phonological processes: voicing assimilation, lateral dissimilation, lateral assimilation, affrication, metathesis, and cluster reduction.

3.1.1 Voicing assimilation

When followed by a voiced stop (*b-*, *d-*, *f-* *g-*), the causative prefix *s-* undergoes assimilation and becomes a voiced *z-* (for affricates and fricatives, see Section 3.1.2). However, voiced sonorant consonants (*ʁ-*, *v-*, *j-*, *r-*, *l-*, and nasals) do not trigger the assimilation process. Example (11) illustrates the phenomenon. Dissimilated *s-*-causative also undergoes voicing assimilation (see examples in Section 3.1.2).

(11) *S-causative voicing assimilation*

- a. *s-* + *q^hrá* ‘to be big’ → *s-q^hrá* ‘to cause to be big’
- b. *s-* + *gí* ‘to put on (clothes)’ → *z-gí* ‘to cause to put on (clothes)’
- c. *s-* + *rǎ* ‘to write’ → *s-rǎ* ‘to cause to write’

3.1.2 Lateral dissimilation

The causative prefix *s-* is lateralised into *l-* or *ʎ-* depending on the voicing of the initial consonant, when preceding coronal affricates and fricatives *s-*, *z-*, *ts-*, *ts^h-*, *dz-*, *ɕ-*, *ʂ-*, *tɕ-*, *tɕ^h-*, *dz-*, *tʂ-*, *tʂ^h-*, and *dz-*.

Similar to the fricative variant present above, it is voiceless when preceding voiceless consonants and voiced when preceding voiced ones. See the examples in Example (12).

- (12) S-causative lateral dissimilation
- a. $s-$ + $ts^h\hat{a}$ 'to hit' → $\text{t-}ts^h\hat{a}$ 'to cause to hit'
 - b. $s-$ + $t\epsilon^h\hat{a}ra$ 'to stand up' → $\text{t-}t\epsilon^h\hat{a}ra$ 'to cause to stand up'
 - c. $s-$ + $t\text{ʂ}\hat{a}l\acute{e}$ 'to fold' → $\text{t-}t\text{ʂ}\hat{a}l\acute{e}$ 'to cause to fold'
 - d. $s-$ + $dz\acute{e}v$ 'to bark' → $l\text{-}dz\acute{e}v$ 'to cause to bark'
 - e. $s-$ + $dz\acute{e}$ 'to hold' → $l\text{-}dz\acute{e}$ 'to cause to hold'
 - f. $s-$ + $dz\acute{e}n$ 'to recall' → $l\text{-}dz\acute{e}n$ 'to cause to recall'

3.1.3 Affrication

An epenthetic stop consonant ($t-$ or $d-$) is inserted between the causative prefix, dissimilated into $l-$ or t- , and the initial consonant of the base verb. Affrication is not restricted to word-internal sandhi, it also occurs with some enclitics, such as the inferential marker $=si$ (→ $=ts^hi$) and the yes-no question marker $=\epsilon\theta\gamma$ (→ $=t\epsilon^h\theta\gamma$) when preceded by a coronal nasal. While affrication must be present with such enclitics, it is unproductive in morphological causatives in Wobzi. Only one example is found in our Wobzi data, shown in Example (13).

- (13) $s\text{-}r\text{ʂ}\hat{a}$ (CAUS-wash) → $l\text{-}d\text{-}\text{ʂ}\hat{a}$ → $l\text{-}dz\hat{a}$ 'cause to wash'⁷

Other verbs with initial coronal fricatives do not undergo this process: $s\text{-}s\hat{a}$ (CAUS-to kill) → $\text{t-}s\hat{a}$ 'cause to kill'. As far as I know, in Siyewu Khroskyabs, there are more examples of affrication, see Section 3.1.9.

3.1.4 Metathesis

Two types of metathesis are presented in this section: preinitial ordering metathesis together with cluster reduction, and νCVr metathesis.

First, preinitial ordering metathesis and cluster reduction is related to the ordering of the preinitials presented in (3), repeated in Example (14).

- (14) $\mathcal{B}\text{-} > j\text{-} > \text{NASALS} > \nu\text{-} > r\text{-}, l\text{-} > s\text{-}, z\text{-} > \text{INITIAL} > \text{MEDIAL}$

The prefixation of causative $s-$ is restricted to the preinitial domain of the syllable onset. Therefore, causative $s-$ cannot occur on the right-hand side of the initial or the medial. When the verb contains a complex onset, the placement of the causative prefix must not violate the pre-determined ordering. Automatic metathesis prevents any violation of this ordering, as shown in Example (15). As $\mathcal{B}\text{-}$, $j\text{-}$, and $\nu\text{-}$ rank higher in the hierarchy, $s-$ must be placed after them.

⁷ For the deletion of the preinitial $r-$ see Section 3.1.4.

(15) Preinitial ordering metathesis

- a. $s-$ + $\nu b\acute{a}y$ ‘to explode’ \rightarrow $\nu < z > b\acute{a}y$ ‘to cause to explode’
- b. $s-$ + $jd\acute{a}$ ‘to buy’ \rightarrow $j < z > d\acute{a}$ ‘to cause to buy’
- c. $s-$ + $\nu j\acute{e}$ ‘to be true’ \rightarrow $\nu < z > j\acute{e}$ ‘to correct’

When a verb takes both the causative $s-$ and the reflexive $\nu j\acute{a}l-$, $s-$ is inserted between $\nu-$ and $j\acute{a}l-$: $\nu j\acute{a}l s a$ ‘to commit suicide’ \rightarrow $\nu < s > j\acute{a}l s a$ [$\chi s j \acute{a} l s a$] ‘to cause to commit suicide’.

Except for $\nu-$, the nasal preinitials, in Wobzi $r-$ and $l-$ obligatorily drop after metathesis. This process may be called the CLUSTER REDUCTION, shown in (16).

- (16) a. $s-nt^h\acute{a}mr\acute{a}$ (CAUS-paralysed) \rightarrow $*n < s > t^h\acute{a}mr\acute{a} \rightarrow s-t^h\acute{a}mr\acute{a}$ ‘to cause to be paralysed’
- b. $s-mk^h\acute{x}$ (CAUS-intelligent) \rightarrow $*m < s > k^h\acute{x} \rightarrow s-k^h\acute{x}$ ‘to cause to be intelligent’
- c. $s-rl\acute{x}$ (CAUS-peel) \rightarrow $*r < s > l\acute{x} \rightarrow s-l\acute{x}$ ‘to cause to peel’
- d. $s-tq^h\acute{x}l$ (CAUS-dirty) \rightarrow $*t < s > q^h\acute{x}l \rightarrow s-q^h\acute{x}l$ ‘to cause to be dirty’

The cluster reduction rule is optionally applied to preinitials $j-$ and $\nu-$. In the variety of Wobzi spoken by younger speakers, $j < z > d\acute{a}$ ‘cause to buy’ and $\nu < z > j\acute{e}$ ‘cause to be slow’ are more often simplified to $z-d\acute{a}$ and $z-j\acute{e}$, respectively. However, when a syllabic prefix (e.g. directional-TAM prefixes, inverse, etc.) is present, more often than not, $j-$ and $\nu-$ are still produced, as is shown in (17).

- (17) a. $n-u-(j) < z > d\acute{a}$
PFV-INV < CAUS > buy
‘He caused to buy.’
- b. $n-u-(\nu) < z > j\acute{e}$
PFV-INV < CAUS > be.correct
‘He corrected.’

The other type of metathesis is νCVr metathesis. When a base has $\nu-$ as preinitial and $-r$ as coda, the use of $s-$ causative yields νCVr metathesis, as is shown in (18).

(18) νCVr metathesis

- a. $s-$ + $\nu d\acute{a}r$ ‘to open eye’ \rightarrow $z-d\acute{a}r\nu$ ‘to cause to open eye’
- b. $s-$ + $\nu d\acute{a}r$ ‘to be flat’ \rightarrow $z-d\acute{a}r\nu$ ‘to flatten’
- c. $s-$ + $\nu z\acute{a}r$ ‘to be spicy’ \rightarrow $l-z\acute{a}r\nu$ ‘to cause to buy’

The base νCVr first metathesizes its preinitial and coda, and the new base $rCV\nu$ undergoes normal s -causative processes presented above. See (19) for the steps of νCVr metathesis.

- (19) a. $*s-\nu z\acute{a}r$ (CAUS-to be spicy)
 b. $\rightarrow *s-rz\acute{a}\nu$ (νCVr metathesis)
 c. $\rightarrow *r-s-z\acute{a}\nu$ (preinitial ordering metathesis)
 d. $\rightarrow *s-z\acute{a}\nu$ (cluster reduction)
 e. $\rightarrow l-z\acute{a}\nu$ (lateral dissimilation, voicing assimilation) ‘cause to be spicy’

This process is a Wobzi-specific innovation. Consider the cognates in other Khroskyabs dialects in Table 7. The verbs $\nu d\acute{a}r$ ‘to open (one’s eye)’ and $\nu d\acute{a}r$ ‘to be flat’ do not seem to have a cognate in Rgyalrong dialects, while $\nu z\acute{a}r$ ‘spicy’ corresponds to Japhug Rgyalrong $m\bar{x}-rtsa\beta$ ‘to be spicy’. We can therefore conclude that $*rCV\nu$ should be closer to the proto language (although the irregularity of $-r$ vs. γ - in $\nu d\acute{a}r :: \gamma d\acute{a}\nu^{55} :: \gamma d\acute{a}p^{55}$ is yet to be explained), and that syllables with a structure $*rCV\nu$ have undergone a metathesis to νCVr . The causative derivation of the ancestor of Wobzi, $z-d\acute{a}\nu$ ‘to flatten’ and $l-z\acute{a}\nu$ ‘to cause to be spicy’, predates and bleeds this metathesis.

TABLE 7 νCVr cognates

Wobzi	Guanyinqiao	Siyuewu	Njorogs	Gloss
$\nu d\acute{a}r$	—	$\nu d\acute{a}r$	—	‘to open (one’s eye)’
$\nu d\acute{a}r$	$\gamma d\acute{a}\nu$	$\gamma d\acute{a}\nu$	$\gamma d\acute{a}p^{55}$	‘to be flat’
$\nu z\acute{a}r$	$r z\acute{a}\nu$	$r d z\acute{a}\nu$	$r z a \gamma p^{55}$	‘to be spicy’

The verb $\nu d\acute{a}r$ ‘to open (one’s eye)’ does not seem to have undergone the $rCV\nu \rightarrow \nu CVr$ sound change, since it is related to the more conservative Siyuewu Khroskyabs $\nu d\acute{a}r$ ‘to open (the eyes)’. The causativisation into $z-d\acute{a}\nu$ ‘to cause to open eye’ is therefore analogical.

Another verb, $\nu z\acute{a}r$ ‘shave’, seems to fit in this category. However, its causative form is attested as $l-z\acute{a}r$ ‘cause to shave’. This is probably because it is a recent borrowing from Tibetan (cf. $bzhar$ ‘to shave’), which took place after the $*rCV\nu \rightarrow \nu CVr$ sound change.

3.1.5 Lateral assimilation

Lateral assimilation happens in the causative form of verbs with $-ar$ rhyme when the initial consonant is a coronal fricative or affricate (a consonant that triggers lateral dissimilation). The causativisation process replaces the coda $-r$ with $-l$.

Examples in (20) illustrate the process. The initial consonants of each base verb are *s-* (*çsâ^r* ‘to include’), *tç^h-* (*çtç^hâ^r* ‘to be sour’), *dz-* (*jdzâ^r* ‘to mill’), *ts^h-* (*ts^hâ^r* ‘to milk’) and *z-* (*ɸzâ^r* ‘to crack’), respectively. Note that this process disregards the presence or absence of preinitials, as well as their place of articulation.

- (20) Lateral assimilation
- s-* + *çsâ^r* ‘to include’ → *çsâ-l* ‘to cause to include’
 - s-* + *çtç^hâ^r* ‘to be sour’ → *çtç^hâ-l* ‘to cause to be sour’
 - s-* + *jdzâ^r* ‘to mill’ → *jdzâ-l* ‘to cause to mill’
 - s-* + *ts^hâ^r* ‘to milk’ → *ts^hâ-l* ‘to cause to milk’
 - s-* + *ɸzâ^r* ‘to crack’ → *ɸzâ-l* ‘to cause to crack’

On the surface, the only difference between the base and the causative form is that of the coda, *-r* in the base and *-l* in the causative form. This is the outcome of no less than five distinct sound changes, as illustrated in Example (21):

- (21) a. **s-jdzâ^r* (CAUS-mill)
 b. → **j<s>dzâ^r* (preinitial ordering metathesis)
 c. → **j<l>dzâ^r* (lateral dissimilation)
 d. → **j<l>dzâ^l* (lateral assimilation)
 e. → *jdzâ-l* (loss of the former *l*) ‘cause to mill’

The lateral variant of causative *s-* assimilates the coda *-r* into *-l* before disappearing, then the coda *-l* becomes the causative marker in these cases. As more and more speakers merge *r* and *l* in preinitial and coda positions, lateral dissimilation is becoming increasingly rare.

3.1.6 Tonal alternation

Generally, the causative prefix *s-* is added to the base verb without any suprasegmental changes. However, there are *s-*causative forms where tones are different from those of their bases. Tonal alternation is unproductive and uni-directional with a high-falling toned base and a high toned causative form. To illustrate the alternation, corresponding examples from Wobzi and Siyewu are shown in Table 8.

Tonal alternation is not always uniform among dialects. Some causative forms exhibiting tonal alternation in one dialect might be regular causative forms (without tone change) in another. For instance, the Siyewu causativisation exhibits an alternation *s-mp^hjâ^r* (CAUS-be.beautiful) → *ɬ-s-p^hjâ^r* ‘to beautify’, which has a cognate in Wobzi without alternation: *s-mp^hjâ^r* → *s-p^hjâ^r*.⁸

8 For an analysis of the origin of the tonal alternation in Khroksyabs causatives, see Lai (2014).

TABLE 8 *Tonal alternation in causative derivations in Khroskyabs*

Wobzi Gloss base	Wobzi	Gloss causative	Siyuewu equivalent
<i>t^hê</i> ‘to drink’	<i>s-t^hé</i>	‘to cause to drink, feed’	<i>t^hê</i> → <i>s-t^hé</i>
<i>rk^hô</i> ‘to be cold’	<i>s-k^hó</i>	‘to cool up’	<i>rk^hô</i> → <i>r-s-k^hó</i>
<i>rmê</i> ‘to be named’	<i>s-mé</i>	‘to name’	<i>rmê</i> → <i>r-s-mé</i>
<i>ɲí</i> ‘to borrow, to owe’	<i>s-ɲí</i>	‘to lend’	<i>ɲí</i> → <i>r-s-ɲí</i>
<i>nâr</i> ‘to burn (intr.)’	<i>s-nâr</i>	‘to burn (tr.)’	<i>nâr</i> → <i>s-nâr</i>
<i>brê</i> ‘to be loud’	<i>z-bré</i>	‘to wind (trumpet)’	<i>brê</i> → <i>z-bréd</i>

3.1.7 Irregular *-m* coda

An irregular causative form with an additional *-m* coda is attested. It concerns the stative verb *çtâ* ‘to be short’ :

(22) *s-çtâ* (CAUS-be.short) → *s-tâ-m* ‘to shorten’

This irregular coda might be related to the stem 3 *-m* suffix attested in Rgyalrong languages (Jacques 2004: 353, Sun 2004: 280).

The suffix *-m* is preserved in only a limited number of stem 3 verbs in Rgyalrong languages, and according to Sun (2004: 280), it must be one of the oldest markers of stem 3 in Rgyalrongic.

TABLE 9 *Stem 3 in Rgyalrong languages*

Language	Stem 1	Stem 3	Gloss
Japhug <i>kumɲuu</i>	<i>mtɔ</i>	<i>mtɔ-m</i>	‘to look’
Japhug <i>Gsar.rdzong</i>	<i>sɛndu</i>	<i>sɛndu-m</i>	‘to exchange’
Zbu	<i>rzú</i>	<i>rzâ-m</i>	‘to keep, to raise’

The form *s-tâ-m* ‘to shorten’ is the only example attested with the suffix *-m* in Wobzi, and it is not found elsewhere among the Khroskyabs dialects.

3.1.8 Additional remarks

Our data show that Wobzi *s*-causative used to be quite productive at some points in the history of the language, as it can be prefixed to Tibetan loan words: *s-dzɛ́n* (CAUS-recall) → *l-dzɛ́n* ‘cause to recall’ (Tibetan *dran*), *s-ndzɛ́m* (CAUS-be.soft) → *l-dzɛ́m* ‘to cause to be soft’ (Tibetan *jam*). In Rgyalrong language, such as Japhug Rgyalrong, the causative prefix *sui-* is fully productive and can be added to verbs of Tibetan and even Chinese origin, for instance, *sui-sci* (CAUS-be.born) ‘to give birth to’ is derived from a Tibetan loanword, *skye* ‘to be born,

to grow'. (Jacques 2014b: 264).

It is generally assumed that derivational morphology is far less productive than inflectional morphology (Stump 1998, Haspelmath & Sims 2002). *S*-causative derivation is also restricted and its productivity is visibly decreasing today, as younger people use less *s*-causative forms than their elders, a particular causative form may be judged acceptable by one consultant and rejected by another, in this case, they would prefer the analytic strategy (Section 6). For example, speakers prefer not to use *s*-causative when the base has already an *s*-preinitial: for instance, the causative form t -*sri* of the verb *sri* 'to look', is never attested in narratives or daily production. The form is only judged marginally possible when elicited. In Siyuewu Khroskyabs, as will be shown in Section 3.1.9, this constraint is less strict, allowing sequences like $r < t > s$.

Some *s*-causative forms are related to different interpretations of syllable structure depending on individual speakers. For instance, the onset structure of the verb base $\nu\gamma\hat{a}m$ 'to rest head on' is ambiguous. It can be either an INITIAL-MEDIAL sequence, or a PREINITIAL-INITIAL one. Both interpretations are attested with different consultants through the reduplication test: apart from the fully reduplicated $\nu\gamma\hat{a}m$ - $\nu\gamma\hat{a}$, we have $\nu\gamma\hat{a}m$ - $\nu\hat{a}$ if it is analysed as INITIAL-MEDIAL and $\nu\gamma\hat{a}m$ - $\gamma\hat{a}$ if PREINITIAL-INITIAL. Since *s*-causative can only interact with preinitials, speakers with the INITIAL-MEDIAL interpretation will find it impossible to add the *s*-causative to the base, as the phonotactics of Wobzi does not allow two sonorants or fricatives behind *s*-; on the other hand, speakers with the PREINITIAL-INITIAL interpretation will find the causative form s - $\gamma\hat{a}m$ legitimate.⁹

Many of the *s*-causative forms are lexicalised and have idiomatic meanings. For example, the action that z -*bré* (CAUS-loud) denotes is actually that of playing a wind instrument, rather than causing any object to sound loud;¹⁰ the most frequent meaning of s -*lé* (CAUS-be.slow) is to delay, hence its reflexive form $\nu\hat{j}\hat{x}$ -*sle* (RFL-delay) means to spend some time somewhere (耽擱 *dān gē* in Western variants of Sichuanese Mandarin); s - $c^h\hat{x}$ (CAUS-immense) is used with the meaning of holding someone in esteem.

Kulikov (1993) introduced the terms FIRST CAUSATIVE and SECOND CAUSATIVE to discuss languages having at least two different causative strategies. The first causative is the formally simpler causativisation strategy, often showing idiomatic meanings and referring to more natural and typical activities or processes than the standard causative meanings (Kulikov 1999). In this sense, we

9 The forms were elicited with four different speakers in the summer of 2012. Language consultants: Rig'dus Lha.mo, Mtsho.skye Sgrolma.ma, Shakyaa Tshe.ring, Snyan.grags.

10 In Japhug Rgyalrong, the cognate $zmbri$ 'to play (an instrument)' has the same idiomatic meaning, suggesting that this causative form was already lexicalised in Proto-Rgyalrongic.

can assume that *s*-causative is the first causative derivation in Wobzi. Wobzi's second causative under this framework should be analytic causative, presented in Section 6.

3.1.9 *S*-causative in other Khroskyabs dialects

In other Khroskyabs dialects, the *s*-causative also undergoes complex morphophonological processes, including voicing assimilation, lateral dissimilation, and preinitial ordering metathesis which we saw earlier.

In Siyuewu Khroskyabs,¹¹ the morphophonological processes are similar to Wobzi, but there is no cluster reduction (23a). The preinitial *N*- is denasalised into *l*- or *ɬ*-, depending on the voicing of the following consonant (23b, 23c), and the preinitial *m*- (not to be confused with the bilabial variant of *N*- before bilabial consonants) is fricativised into *v*-, then devoiced into *f*- by the following voiceless consonant (23d), after metathesis.

- (23) a. *s-rsváy* (CAUS-coarse) → *r-ɬ-sváy* 'to cause to be coarse'
 b. *s-ɲcô* (CAUS-throw) → *ɬ-s-cô* 'to cause to throw'
 c. *s-mpjæpjú* (CAUS-suck.in.the.mouth) → *ɬ-s-pjæpjú* 'to cause to suck'
 d. *s-mqlóy* (CAUS-swallow) → *f-s-qlóy* 'to cause to swallow'

We find more examples of affrication in Siyuewu Khroskyabs than in Wobzi Khroskyabs, such as *l-dzé* 'to cause to be small/young', from *zé* 'to be small/young' and *l-dzóy* 'to cause to be sharp' from *zóy* 'to be sharp', etc.

There is also an isolated example of metathesis attested: *s-tál* 'CAUS-hit' → *ɬtá-z* 'cause to hit'. The causative prefix *s*- is metathesised with the original coda *-l*, and automatically becomes *-z* due to the phonotactics of the dialect.

The 'Brongdzong dialect'¹² has a syllabic causative morpheme *sə*- preceding the base, which seems to be largely productive.

- (24) a. *sə-bâ* (CAUS-give.food) 'to cause to give food'
 b. *sə-vzê* (CAUS-teach) 'to cause to teach'
 c. *sə-ɲjâ* (CAUS-be.thin) 'to cause to be thin'

The original *s*- prefix seems only to occur in lexicalised forms: *sməmô* 'to move (tr.)' (c.f. Wobzi *s-mumû* (CAUS-move.intr) 'to move (tr.)'), *sjú* 'to finish' (c.f. Wobzi *s-jáy* (CAUS-be.finished) 'to finish'). Sometimes *sə*- and *s*- co-occur, the causative form of *ɲkækæ* 'to be separated' is *sə-s-kækæ* 'to separate'.

¹¹ Personal investigation since 2014. Language consultant: G.yu Lha.

¹² Referring to the Siniao (斯鳥) variant. Personal investigation in 2012. Language consultant: Dngosgrub Lhamo.

The Guanyinqiao variant described in [Huang \(2007\)](#) is similar to 'Brongrdzong, with a productive *sə-* prefix and unpredictable co-occurrence of *sə-* and *s-*: *sə-xšú* (CAUS-be.alive) 'to cause to be alive', *sə-s-lú* (CAUS-CAUS-be.wet) 'cause to be wet'.

Njorogs ([Yin 2007](#)) is a phonologically more conservative dialect as it preserves plosive codas, which have undergone lenition in all core Khroskyabs dialects. As in 'Brongrdzong, the preservation of *s*-causative in Njorogs is restricted to lexicalised examples, and the productive prefix is *sə-*. In Example (25), there are a few examples taken from [Yin \(2007: 177\)](#):

- (25) a. *sə³³-ndzoʔs⁵⁵* (CAUS-learn) 'to cause to learn'
 b. *sə³³-raʔt⁵⁵* (CAUS-write) 'to cause to write'
 c. *sə³³-ydoʔ⁵⁵* (CAUS-hit) 'to cause to be hit'
 d. *sə³³-dzəʔ⁵⁵* (CAUS-eat) 'to cause to be eat'

3.2 *V-causative*

The causative prefix *v-* in Wobzi is cognate to Situ Rgyalrong *wə-*, Zbu Rgyalrong *və-* ([Sun 2006](#)) and Japhug Rgyalrong *yə-* ([Jacques 2008](#)). It is believed to be exclusively used with stative verbs ([Sun 2006: 11](#)). In Wobzi this prefix is not productive, only one confirmed example is found in our vocabulary: *f-ts^hú* 'to boil', from the stative verb *ts^hú* 'to be boiled' (*v-* devoiced into *f-* due to voicing assimilation). Minimal pairs with *s*-causative are also found with the stem: *t-ts^hú* 'cause to be boiled'; the difference between *v-* and *s-* causatives can be illustrated in Example (26).

- (26) *ŋô jdâ=tə* *æ-f-ts^hú-ŋ* *æna æ-mæ-t-ts^hú-ŋ*
 ISG water=DEF PFV-CAUS_v-boiled-1SG but PFV-NEG-CAUS_s-boiled-1SG
 'I tried to boil the water but I didn't make it boil.'

[Huang \(2007: 80\)](#) states that in Guanyinqiao, *v-* seems to be a variant of the syllabic prefix *sə-*, but does not discuss the conditioning environment.

In Siyuewu, *v-* appears only lexically with verbs whose first consonant is a dental fricative or an affricate, and it is not restricted to stative verbs.

- (27) a. *f-skí* (CAUS-be.hot) 'to heat'
 b. *f-st^hóž* (CAUS-wake) 'to cause to wake'
 c. *f-ts^hú* (CAUS-be.boiled) 'to boil'

The original difference between *v*-causative and *s*-causative remains opaque in Khroskyabs with the data available to us; although [Sun \(2006, 2014\)](#) reports

a difference in Tshobdun, the semantic contrast between the two prefixes appears to have been lost also in Japhug, except in examples like *suu-mto* ‘to show’ vs. *ɣɣ-mto* ‘cause to recover (sight)’ (JACQUES 2015).

4 Anticausative

Anticausative verbs are derived through voicing alternation from their causative counterparts, of which the initials are voiceless consonants. As anticausative examples are more or less identical among Khroskyabs dialects, Table 10 only provides an exhaustive list of anticausative forms in the Wobzi data:

TABLE 10 *Anticausative in Wobzi Khroskyabs*

Base verb	Gloss	Anticausative	Gloss
<i>c^hô</i>	‘to open (tr.)’	<i>ɣô</i>	‘to open (intr.)’
<i>ftc^hâ</i>	‘to melt (tr.)’	<i>dzâ</i>	‘to melt (intr.)’
<i>ftc^hâm</i>	‘to gather (tr.)’	<i>ɣdzâm</i>	‘to gather (intr.)’
<i>k^hlæ</i>	‘to perish’	<i>glæ</i>	‘to die out’
<i>ntc^hətē^háv</i>	‘to trip’	<i>ndzədzáv</i>	‘to tumble’
<i>fts^hâr</i>	‘to uprear’	<i>dzâr</i>	‘to stand’
<i>nts^hây</i>	‘to wear’	<i>dzây</i>	‘to be there (attached)’
<i>p^hayláy</i>	‘to lay down’	<i>bayláy</i>	‘to be laid down’
<i>p^hjá</i>	‘to destroy (financially)’	<i>bjá</i>	‘to go bankrupt’
<i>p^hráy</i>	‘to tie’	<i>bráy</i>	‘to be tied’
<i>p^hrâ</i>	‘to loosen’	<i>brâ</i>	‘to become loose’
<i>tc^hâlay</i>	‘to scatter’	<i>dzâlay</i>	‘to be scattered’
<i>tc^hévn</i>	‘to break (tr.)’	<i>dzévn</i>	‘to break (intr.)’
<i>tcârə</i>	‘to tear’	<i>dzârə</i>	‘to be torn (intr.)’

The direction of the anticausative derivation is undoubtedly from voiceless base verbs to voiced anticausative verbs. Voicing alternation is widely attested in Sino-Tibetan languages. In closely related Rgyalrong dialects, the anticausative forms are characterised by a prenasalised voiced initial, as in Japhug Rgyalrong *prət* ‘to cut’ vs. *mbrət* ‘to be cut’, and the process is still productive (JACQUES 2012: 214): Japhug Rgyalrong derived *ɣndər* ‘to be dispersed’ from *ɣtər* ‘to disperse’, which is borrowed from Tibetan *gtor* ‘to disperse, to toss’. Even though Khroskyabs anticausatives do not exhibit prenasalised consonants, there is evidence indicating that at least some voiced onsets are actually from prenasalised consonants. For instance, Wobzi Khroskyabs *bró* ‘horse’ is

related to Japhug Rgyalrong *mbro* ‘horse’ < Proto-Rgyalrong **mray*. The voiced bilabial stop *-b-* is clearly epenthetic, and a prenasalised stage was to be posited for this word. The onset of Wobzi *bró* must have come from **mbr-* < **mr-*.

Most of the causative verbs listed in Table 10 begin with voiceless aspirated consonants, only *tɛ̃ârə* ‘to tear’ has an unaspirated onset. Note the aspiration neutralisation *tɛ-* → *dz-*, *tɛ^h-* → *dz-* which confirms that the diachronicity of the derivation was from transitive to intransitive. Other related languages also exhibit anticausative voicing alternation. In Stodsde, a Horpa language (Sun 2007: 214), for example: *prə* ‘to startle’ vs. *brə* ‘to be startled’; *k^hu* ‘to cause to snap’ vs. *ga* ‘to snap’; in G.yurong Horpa (personal investigation in 2014): *pru* ‘to loosen’ vs. *bruu* ‘to become loose’; *k^hwæ* ‘to cut’ vs. *gwæ* ‘to be cut’.

In Wobzi, the preinitial *f-* in the base verb drops in the anticausative form, instead of becoming a voiced *v-*, as in *ftɛ^hâ* ‘to melt (tr.)’ → *dzâ* ‘to melt (intr.)’; *fts^hâr* ‘to uprear’ → *dzâr* ‘to stand’. The same case is found in Japhug Rgyalrong, *ftɛ̃si* ‘to melt (tr.)’ → *ndzi* ‘to melt (intr.)’ (Jacques 2014a: 246).

In *ftɛ^hâm* → *ɛdzâm*, we observe the loss of preinitial *f-* and also an addition of preinitial *ɛ-*. This should be a redundant passive prefix.¹³

The Wobzi alternation seems to be restricted to stops and affricates, unlike Khang.gsar Stau *səla* ‘to let fall’ vs. *zəla* ‘fall’ (Jacques et al. forthcoming). Uvular stops are not attested in the alternation in Wobzi since the voiced uvular stop *ɣ-* does not belong to the consonantal inventory. In G.yurong Horpa this phonological restriction is absent, as *ɣ-* is attested in voicing alternation: *qatsé* ‘to break (branch) (tr.)’ vs. *gatsé* ‘(branch) to break (intr.)’.

Semantically, the anticausative is similar to passive constructions, but without the presence of an agentive participant (Ottosson 2013: 330); while passive usually entails an agent that causes the event, compare *c^hô* ‘to open (tr.)’, *ɣ-c^hô* (PASS-open) ‘to be opened’ and *ɛjô* ‘to open (intr.)’, in Example (28)

- (28) a. *æ̃tâ=ɣə* *ɣâm=tə* *u-c^hó*
 3SG=ERG door=DEF PFV.INV-open
 ‘He opened the door.’
- b. *ɣâm=tə* *ɛjô* *nú* *kə-vjî-n* *jáy*
 door=DEF open 2SG IPFV-come-2 can
 ‘The door is open, you can come in.’
- c. *ɣâm=tə* *æ̃ɣ-c^hó=si*
 door=DEF PFV-PASS-open=INFR
 ‘The door has been opened (by someone).’

¹³ Prefixal redundancy is discussed in Lai (2013a).

Sometimes the passive form conveys the same meaning as the anticausative. Therefore χ - p^h α γ λ γ (PASS-lay.down) ‘to be laid down’ and β α γ λ γ ‘to be laid down’ have no apparent difference in meaning, as is illustrated in (29).

- (29) a. $c\hat{a}$ λ α γ λ γ = $t\hat{a}$ $s\hat{a}$ = t^h a $n\alpha$ - β α γ λ γ
 3SG stick=DEF ground=LOC PFV-be.laid.down
 ‘The stick was lying on the ground.’
 b. $c\hat{a}$ λ α γ λ γ = $t\hat{a}$ $s\hat{a}$ = t^h a $n\alpha$ - χ - p^h α γ λ γ
 3SG stick=DEF ground=LOC PFV-PASS-be.laid.down
 ‘The stick was lying on the ground.’

5 Labile verbs

Labile verbs can be both causative and non-causative verbs without morphological transformation. The causative reading is sometimes termed lexical causative (Song 2014: 260, Kulikov 2001: 887). There are two types of labile verbs: A-preserving labile verbs (S = A) and P-preserving labile verbs (S = O) (Dixon 1994: 230).

- (30) A-preserving labile verb in Mandinka (Creissels 2014: 914)
 a. $M\acute{o}o$ - lu ye $b\acute{a}a$ tee
 people.DEF-PL PF.POS.TR river.DEF CROSS
 ‘The people crossed the river.’
 b. $M\acute{o}o$ - lu tee - ta
 people.DEF-PL CROSS-PF.POS.INTR
 ‘The people crossed.’
- (31) P-preserving labile verb in English
 a. *He breaks the window.*
 b. *The window breaks.*

Several P-preserving labile verbs are attested in Wobzi Khroskyabs: $\zeta s\hat{a}r$ ‘to include (tr.), to be included’, and $z\hat{b}i$ ‘to dry up (tr.), to be dry (intr.)’, $sk\acute{i}$ ‘to heat, to be hot’ and $\chi s\acute{o}\gamma$ ‘to tie (tr.), to be tight’. See examples (32), (33), (34), and (35).

- (32) $\zeta s\hat{a}r$
 a. $c\hat{a}$ $\langle p\acute{i}aozi \rangle$ = $t\hat{a}$ $c\hat{a}$ = ji = $g\hat{o}$ $n\alpha$ - $\zeta s\hat{a}$ - n
 DEM money=DEF 3SG=POSS=LOC IPFV-include-2
 ‘Let him share this money.’

- b. *bótpa=tə* <*zhōng guó*>=*gə* *çsâr*
 Tibetan=DEF China=LOC be.included
 ‘Tibetans are counted as Chinese.’
- (33) *zbî*
 a. *ætâ=γə tsʰægi=tə u-zbî=si*
 3SG=ERG clothes=DEF PFV.INV-dry.up=INFR
 ‘He dried the clothes up.’
 b. *câ tsʰægi=tə æ-zbî=si*
 DEM clothes=DEF PFV-be.dry=INFR
 ‘The clothes has become dry.’
- (34) *skí*
 a. *jná=rə ŋântɕʰæ næ-skí=si*
 sun=TOP really IPFV-be.hot=INFR
 ‘The sun was really hot.’
 b. *câ mbræ=tə kə-skí-n tɕʰə æ-dzî-n rə-jáy*
 DEM rice=DEF IPFV-heat-2 CONJ IPFV-eat-2 IPFV-can
 ‘Heat this rice, and then you can eat.’
- (35) *çsáy*
 a. *tsʰægi=tə kə-çsáy*
 clothes=DEF IPFV-be.tight
 ‘The clothes are tight.’
 b. *bré=γə ftealá=tə=ji pá k-u-çsáy=si*
 rope=INSTR thing=DEF=PL all PFV-INV-tie=INFR
 ‘He tied the things up with a rope.’

All four of the labile verbs have cognates in Japhug Rgyalrong, illustrated in Table 11. While they are labile in Wobzi Khroskyabs, none of them are labile in Japhug Rgyalrong, causative prefixes *suu-/sɿ-/γɿ-* and the passive prefix *a-* must be added to derive transitive or intransitive counterparts.

Actually, P-preserving labile verbs are absent in Japhug Rgyalrong, all labile verbs are A-preserving (Jacques 2012). As all of the P-preserving labile verbs in Wobzi are with a coronal sibilant somewhere in the onset (*çs-*, *zb-*, *sk-* and *çs-*), this kind of lability may be due to the fact that the causative *s-* is lost without trace before a cluster whose first element is a sibilant fricative, and does not undergo lateralisation:

TABLE 11 *Japhug Rgyalrong cognates of Wobzi Khroskyabs labile verbs*

Wobzi Khroskyabs	Gloss	Japhug Rgyalrong	Gloss
$\zeta s\acute{a}r$	'to include/to be included'	$a\chi s\acute{a}r$ $\chi s\acute{a}r$	'to be counted' 'to count'
zbi	'to dry (tr.)/to be dry'	$zba\grave{B}$ $suuzba\grave{B}/\gamma\acute{r}zba\grave{B}$	'to be dry' 'to dry'
ski	'to heat/to be hot'	$\acute{e}ke$ $su\acute{e}ke$	'to be hot' 'to burn'
$\chi s\acute{a}\gamma$	'to tighten/to be tight'	$asu\gamma$ $s\acute{r}su\gamma$	'to be tight' 'to tighten'

(36) Proto-Khroskyabs

- a. *s-sC- > *sC-
- b. *s-zC- > *zC-

Following this hypothesis, the transitive interpretation of the labile verb is derived from the original intransitive verb:

- (37) a. Prefixation of *s- to an intransitive verb beginning with *s- or *z-, deriving a transitive causative verb.
- b. Merger of *s- and *s-/ *z- of the base verb, causing the derived causative verb to be homophonous with the original intransitive verb.
- c. Labile verbs were created due to homophony.

The direction from intransitive to transitive may be confirmed by $\chi s\acute{a}\gamma$ 'to be tight': the preinitial χ - is a variant of B - which can be either the passive prefix or a denominal marker deriving exclusively intransitive verbs (Lai 2013a) (c.f. its Japhug cognate $asu\gamma$ 'to be tight'). Therefore, $\chi s\acute{a}\gamma$ 'to be tight' is formally an intransitive base, and its transitive meaning must be derived from some process, probably through the merger of the proto *s- and the following coronal sibilant. This evidence might give us a clue about the origin of lability in Khroskyabs.

6 Analytic causative

6.1 Formation

Comrie (1989: 167) describes the prototypical analytic causative as a clause in which there are separate predicates expressing the notion of causation and

the predicate of the effect. Thus, the English phrase *cause John to go* fits the prototype, while the French causative phrase *faire courir Jean* (make run John) does not. In this sense, Wobzi Khroskyabs exhibits a prototypical analytic causative with the nominaliser =*spi* and the causation predicate *ví* ‘to do’. See Example (38), taken from a natural narrative.

- (38) *brô ηâtá bjâm=ηk^hə=tə=rə t^hóv=tə ndzé=spi u-ví*
 horse which fast=NMLZ=DEF=TOP authority=DEF get=NMLZ PFV.INV-do
rə-ηǎ́
 IPFV-be
 ‘The one with the faster horse was throned.’

In (38), the effect clause nominalised by =*spi* is a sentence with the causee, the semantic agent of the effect transitive predicate *dzé* ‘to get’, marked with ergative. A more canonical expression can be elicited as:

- (39) *brô ηâtá bjâm=ηk^hə=tə(=k^he) t^hóv=tə ndzé=spi*
 horse which fast=NMLZ=DEF(=DAT) authority=DEF get=NMLZ
u-ví rə-ηǎ́
 PFV.INV-do IPFV-be
 ‘The one with the faster horse was throned.’

As with morphological causative, the causee of the transitive predicate is either unmarked or marked with the dative =*k^he*.

Analytic causative constructions with an intransitive effect predicate do not mark the causee, illustrated in (40).

- (40) *nêŋji snaylí nǎ-mǎ-ŋc^hǎl=spi v-âŋ*
 2PL moon IPFV-NEG-play=NMLZ do-1SG
 ‘I will not let you play under the moon.’

Analytic causatives are fully productive in Wobzi. However, when the causer and causee are both human, the verb *rǎ́* ‘say’ with a subordinate imperative clause is often used with a causative meaning, as is shown in (41).

- (41) *té^hé kə-nzgrâv ǎ́-n u-râ=si*
 Buddhism IPFV-practice go-2 PFV.INV-say=INFR
 ‘He let it practice Buddhism.’

Although the sentence in (41) literally means ‘He said to him, go practice Buddhism’, it does not necessarily imply that the causer actually uttered any words. Rather, it simply implies passive causation, best translated by the English *let* or Mandarin Chinese 讓 *ràng*. Note also that such constructions can also be used even when the causer is hearing/speaking-impaired.

While the canonical analytic causative with =*spi* denotes the causative *sensu stricto* ‘cause to do’, the quasi-causative construction with the verb *ræ* ‘to say’ indicates a command or a suggestion.

6.2 Comparative remarks

The Horpa languages have similar nominalising patterns using enclitics. Some of those enclitics developed independently of Khroskyabs. In Stodsde, the analytic causative construction is characterised by the nominaliser *-ldo*, as attested by Sun (2007: 225) in (42).

- (42) *ʔamu=ɣə lɲæ ʃlɔ=ldo ɣə-vzo*
 Lhamo=ERG child go.to.bed-NMLZ PFV-make
 ‘Lhamo made the child go to bed.’

7 Conclusion

This paper described lexical, morphological, and analytic causative constructions in Khroskyabs, mainly focusing on the Wobzi variant.

Lexical causatives are not common in Wobzi, with only a handful of labile lexical causative verbs attested. There are two morphological causative prefixes in Wobzi, and *s-*, *v-*. The former exhibits rich morphophonological alternations, including voicing assimilation, lateral assimilation, lateral dissimilation, two types of metathesis, affrication and cluster reduction. These processes are similar to those of the Stodsde causative, described by Sun (2007). However, Wobzi does not possess a syllabic causative prefix *sə-* which is fully productive in other Khroskyabs dialects, such as Guanyinqiao, ‘Brongrdzong, and Njorogs. Although the syllabic *sə-* looks more archaic, the absence of morphophonological alternations betrays the fact that it is a recently generalised allomorph.

A distinct phenomenon is the anticausative derivation whereby an intransitive verb is derived from a transitive one by voicing of the onset. Like the other Rgyalrongic and Sino-Tibetan languages, Khroskyabs exhibits a limited number of voiceless causative vs. voiced anticausative pairs, which originated from prenasalisation.

Khroskyabs also has a productive analytic causative construction that uses the nominaliser =*spi* (or =*spə* in ‘Brongrdzong, =*spe* in Njorogs) and the causation verb *vɪ* ‘to do’. With human causees, the analytic causative with =*spi* is less applied; instead, the verb *ræ* ‘say’ with an imperative subordinate clause is used to convey a suggestion or a demand.

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