Abstract
This paper gives a descriptive account of the causative constructions in Wobzi Khroskyabs (a.k.a Lavrung), a Sino-Tibetan language spoken in the Rngaba Prefecture of Western Sichuan, China P.R. Causative is one of the most interesting morphosyntactic constructions in Wobzi. Rich morphophonological processes (assimilation, dissimilation and various metatheses) can be observed in Wobzi causative prefixes, and the language under analysis has also developed a few analytical causative constructions through syntactic operations. In the first place, I will provide an overview to all the attested causative constructions: morphological causative with the prefixes s-, v- and z-, as well as analytical causative with the nominaliser spi. Then, from a historical and comparative point of view, I will compare these constructions with other Rgyalrongic languages, especially with other Khroskyabs dialects (Huang 2007 [1], Yin 2007 [2], Personal investigation 2012), Japhug Rgyalrong (Jacques 2004 [3], 2008 [4]), Shangzhai Horpa (Rta’u) (J. T.-S. Sun 2007 [5]), Khang-gsar Rta’u (Jacques et al 2013 [6]) and G.yurong Rta’u (personal investigation 2014).

Keywords: Wobzi, Khroskyabs, Lavrung, Rgyalrongic, Rta’u, Sino-Tibetan, causative, morphosyntax;

1. Introduction

Khroskyabs, previously known as Lavrung, is a recently recognised Rgyalrongic (Sino-Tibetan) language spoken in the Rngaba Prefecture of Sichuan Province, China P.R.
Its major population concentration is located in Thugschen (観音橋鎮), North-West of Chuchen Township, and extends towards ‘Brongrdzong (木爾宗鄉), Southern part of ‘Barkhams Township, as well as Phosul (蒲西鄉) in Eastern ‘Dzamthang Township. The total Khroskyabs speaking population is estimated to be less than 10,000 people (Huang 2007).

The dialect that is treated in the present paper, namely Wobzi, is spoken by about 400 people in ṛāgu (娃姑), the Third Village of ‘Obzi (俄熱三村).

The main purpose of this paper is to provide a description of the causative constructions in Wobzi Khroskyabs: on the one hand, the language exhibits rich morphological phenomena, both conservative and innovative, in its prefixal causativising constructions; on the other, speakers may use the nominalising enclitic spi and the causation verb vî ‘do’ to construct analytic causative sentences. A comparative discussion with evidence in related languages will be presented alongside the description.

2. Background Information

Prior to the presentation of the causative formations in Wobzi Khroskyabs, we should keep an eye on some of its major typological properties and phenomena, backing up the discussions in the following sections.

2.1. Syllable Structure

The syllable in Wobzi comprises an onset that is only absent in several affixes and ideophones, an obligatory nucleus and an optional mono-consonantal coda. Onsets can be comprised of a single consonant or a consonant cluster (hereafter a complex onset):

\[(1) \text{(CCCCCC)}V(C)^2\]

A complex onset is divided in three parts, an obligatory INITIAL, an optional PRE-INITIAL and an optional MEDIAL. Initials can be all the consonantal phonemes in the inventory, while pre-initials are chosen from the continuants, and medials the sonorants. In order to recognise these three onset roles, the consonantal reduplication test should be applied (Lai 2013a [8]):

\[(2) \text{a. } C_pC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_ME} \rightarrow C_pC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_mC_Ma/hu\]

\[^2\text{The number of consonants in an onset varies from one to five, according to my data.}\]
b. mbrê ‘rice’ → i. mbrê-mbru
ii. mbrê-bru
iii. mbrê-mbu
iv. mbrê-bu

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

Elements in the pre-initial part of an onset strictly follow a hierarchy (Lai 2013b [9]):

(3) ʁ- > j- > nasals > v- > r-, l- > s-, z- > INITIAL > MEDIAL

2.2. Case marking

Cases are marked with toneless postpositional enclitics:

<table>
<thead>
<tr>
<th>Case</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>yə</td>
<td>ergative</td>
</tr>
<tr>
<td>kʰe</td>
<td>dative-ablative</td>
</tr>
<tr>
<td>ji</td>
<td>possessive-dative</td>
</tr>
<tr>
<td>tʰa, gə, tʰi, etc.</td>
<td>locative</td>
</tr>
</tbody>
</table>

2.3. Verb and Transitivity

The Wobzi verb can have one, two or three stems: a non-past stem (stem 1), an aorist stem (stem 2) and sometimes an imperative stem (stem 3). Stem alternation can be realized through tone alternation, ablaut and suppletion. Usually, tone alternation accompanies ablaut. If a verb does not have a special form for a certain stem, stem 1 will be used.

<table>
<thead>
<tr>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>jbɔv</td>
<td>NA</td>
<td>NA</td>
<td>swell</td>
</tr>
<tr>
<td>srió</td>
<td>srió (tone alternation)</td>
<td>NA</td>
<td>look</td>
</tr>
<tr>
<td>lè</td>
<td>lì (ablation)</td>
<td>NA</td>
<td>release</td>
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<tr>
<td>vɔ</td>
<td>ɔ (suppletion)</td>
<td>ɔ (ablaut)</td>
<td>go</td>
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</tbody>
</table>

Wobzi is an overwhelmingly prefixing polysynthetic language, exhibiting an SOV word order and mainly a template morphology (Lai 2013b [9]). The verbal template is illustrated as follows:
Table 3. Wobzi verbal template

<table>
<thead>
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<th></th>
<th>-11</th>
<th>-10</th>
<th>-9</th>
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<tbody>
<tr>
<td></td>
<td>s̃</td>
<td>x̂-</td>
<td>m̄</td>
<td>t̄</td>
<td>z̃</td>
<td>k̄</td>
<td>h̄</td>
<td>n̄</td>
<td>s̄</td>
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Inflectional | Derivational | Stem | Inflectional | RDP

Prefixes:
-1 Incorporation
-2 Reflexive ajè-
-3 Causative x-
-4 Causative v-
-5 Autobenefactive N-
-6 Intransitive k-
-7 Irrealis z-
-8 Négatif m̄-m̄-
-9 Inverse u-
-10 Directional-TAM x̂-, m̄-, k̄-, h̄-, n̄-, x̂-, v̂-, r̂-
-11 Progressive s̃-

Suffixes:
1 Person endings -η, -j, -n
2 Reduplication

Person marking in Wobzi follows a hierarchical alignment, with a 1 > 2 > 3 empathy hierarchy (Lai 2013b [9], for empathy hierarchy see Silverstein 1976 [10], Delancey 1981 [11]), illustrated in the two tables below:

Table 4. Wobzi intransitive agreement

<table>
<thead>
<tr>
<th>Person</th>
<th>Pronoun</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>ηō</td>
<td>-η</td>
</tr>
<tr>
<td>1du 1pl</td>
<td>ηŋāne, ηŋjį</td>
<td>-j</td>
</tr>
<tr>
<td>2sg 2du 2pl</td>
<td>nû, nêne, nêî</td>
<td>-n</td>
</tr>
<tr>
<td>3sg 3du 3pl</td>
<td>ætō, ætōne, ætōji</td>
<td>zero</td>
</tr>
</tbody>
</table>

Table 5. Wobzi transitive agreement

<table>
<thead>
<tr>
<th>Agent</th>
<th>Patient</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>1pl</td>
<td>Ση</td>
</tr>
<tr>
<td>1pl</td>
<td>1pl</td>
<td>Σ-j</td>
</tr>
<tr>
<td>2</td>
<td>u-Σ-j</td>
<td>Σ-n</td>
</tr>
<tr>
<td>3</td>
<td>u-Σ-j</td>
<td>Σ-n</td>
</tr>
</tbody>
</table>

Transitivity of a verb can be easily identified by eliciting the inverse scenarios\(^3\), 2→1, 3→2, 3→1, or the non-local scenario 3↔3’. If a verb is transitive, in the scenarios presented in (4), it allows the possibility of using the ergative marker yə behind the agent, and inverse u- must be marked on the verb. Notice that the inverse marker, unlike the one in Rgyalrong dialects (Jacques 2010 [12], Gong 2014 [13]), is used in all 3 ↔3’ scenarios, regardless of the semantic properties. This feature is shared with Rta’u (Jacques et al 2013 [6]).

(4) a. nû=yə ηō n-u-sã-η 2SG=ERG 1SG AOR-INV-kill2-1SG
    You killed me.

b. ætō=yə ηō/nû n-u-sã-ŋ 3SG=ERG 1SG/2SG AOR-INV-kill2-1SG/2SG
    He killed me/you.

c. lṣač=yə luvzāŋ n-u-sā 3SG=AER Blobzang AOR-INV-kill2
    Bkrashis is/are killing Blobzang.

\(^3\) For the typology of inverse systems, see Zúñiga (2006) [14].
In a direct scenario, such as $1 \rightarrow 3$, neither the ergative marker $\gamma \theta$ nor the inverse marker $u$- can appear:

(5) a. $\eta \theta \ c \theta \ n\varepsilon\-\s\eta$
    1SG 3SG  AOR-\text{kill}_2-1SG
    I killed him.

Ditransitive verbs in Wobzi Khroskyabs exhibit an indirective vs. secundative opposition\(^4\) (Lai to appear [15]). In the secundative alignment, the recipient is treated as the patient, while in the indirective alignment, the theme is treated as the patient. Secundative verbs in Wobzi include $ld\z\varepsilon$ ‘teach’, $b\theta$ ‘give (food)’ and $sy\theta$ ‘lend’, etc.; indirective verbs include $k^h\varepsilon$ ‘give’, $r\eta \theta$ ‘borrow’, $fs\varepsilon$ ‘lead’ and $r\theta$ ‘say’, etc.

(6) Secundative

a. $n\tilde{u}=\gamma \theta \ k^h\varepsilon \ b\varepsilon d\varepsilon d\varepsilon \ n\varepsilon-ld\z\-\s\eta$
   2SG=ERG 1SG=DAT Tibetan AOR-INV-teach$_2$-1SG
   You taught me Tibetan.

Indirective

b. $n\tilde{u} \ y\varepsilon=j\varepsilon \ k\varepsilon \ u\varepsilon v\tilde{u}=r\varepsilon \ t\varepsilon h=t\varepsilon \ n\varepsilon-fs\varepsilon-n$
   2SG 1SG=DAT ‘Obzi DIR-go$_1$=NMLS way=DEF AOR-lead$_2$-2
   You showed me the way to ‘Obzi.

2.4. Nominalising enclitics

Unlike Rgyalrong dialects in which the deverbal noun is brought about by prefixes (J.-T.S Sun 2006 [16], Jacques 2008 [4]), Khroskyabs exhibits nearly no trace of such prefixal nominalisers, instead, it developed a series of nominalising enclitics. Being semantically driven rather than syntactic, these enclitics can also form relative constructions by nominalising a clause. Frequently used nominalising enclitics are:

<table>
<thead>
<tr>
<th>Table 6. Wobzi nominalising enclitics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclitic</td>
</tr>
<tr>
<td>$p\alpha \theta$</td>
</tr>
<tr>
<td>$r\alpha \delta \varepsilon$</td>
</tr>
<tr>
<td>$spi \varepsilon$</td>
</tr>
<tr>
<td>$ska$</td>
</tr>
<tr>
<td>$ri/sci$</td>
</tr>
</tbody>
</table>

Examples are presented below:

(7) a. $n\varepsilon=pa$
    slaughter$_1$=NMLS (S/A)
    he who slaughters

b. $n\varepsilon\varepsilon-ld\z\varepsilon=p\alpha$
   AOR-INV-find$_2$-1SG=NMLS (P)
   I who am found (elicited)

c. $m\varepsilon d\varepsilon \varepsilon=ray$
   extraordinary$_2$=NMLS (S/A)
   an extraordinary one

d. $d\tilde{u}=spi$
   eat$_1$=NMLS
   thing to eat

\(^4\) For the typology of ditransitive constructions, see Malchukov et al. (2010) [17].
3. **Lexical Causative**

Lexical causatives are usually (synchronically) bare verbs with a causative meaning. The most widely cited example, *kill* vs. *die*, is existent in Wobzi: sâ ‘kill’ vs. șâ ‘die’. Like Shangzhai Rta’u (J. T.-S. Sun 2007:213 [5]), suppletive lexical causative pairs are not common in Wobzi, another example could be pûru ‘feed’ vs. dzî ‘eat’.

Labile verbs showing causative alternation are found in Wobzi as well. Consider the verbs çsâr ‘include tr.; be included itr.’ and zbh ‘dry up tr.; be dry itr.’ and χsôy ‘tie tr.; be tight’:

\[(8) \text{csâr}\]

a. çô <apiaosi>=tô çô=ji=gô nô-çsô-n
DEM money=DEF 3SG=POSS=LOC IMP-include1-2
Cut him in on the money.

b. bôtpa=tô <zhongguo>=gô çsâr
Tibetan=DEF China=LOC be.included1
Tibetans are counted as Chinese.

\[zbî\]

a. çô tsâég=tô æ-zbî
DEM clothes=DEF AOR-dry1
The clothes are dry.

b. ætô=ya tsâég=tô æ-zbî si
3SG=ERG clothes=DEM AOR.INV- dry2 EVD
He dried the clothes up.

\[χsôy\]

a. jdû tô kô-χsôy
stomach DEF DIR-tight1
The stomach is tight.

b. brê=ya ficalâ=tô=mi pâ k-u-χsôy si
rope=INSTR thing=DEM=PL all AOR.INV- tie2 EVD
He tied the things up with a rope.

4. **Morphological Causative with Prefixes**

In this section, I will first present the causative prefixes s- and v-, occupying the positions -4 and -3 in the verbal template, and then a possible causative prefix z- related to s- will be discussed in the end. These prefixes are of limited productivity, while clearly recognisable.

4.1. **s-Causative**

Causative prefix s- exhibits richer morphophonological properties than the other prefixes in the template, there are five categories of s- phonological processes: dissimilation, assimilation, affrication, metathesis and cluster reduction.
4.1.1. Morphophonology

4.1.1.1. Assimilation

When followed by a voiced stop, the causative prefix *s*- undergoes assimilation and becomes a voiced *z*-. However, although voiced by nature, sonorant consonants (*k*, *v*, *j*, *r*, *l* and nasals) do not undergo the assimilation process.

<table>
<thead>
<tr>
<th>Base</th>
<th>Meaning</th>
<th>Causative</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tê</td>
<td>drink</td>
<td><em>s</em>-tê</td>
<td>cause to drink</td>
</tr>
<tr>
<td>gí</td>
<td>put on (clothes)</td>
<td><em>z</em>-gí</td>
<td>cause to put on</td>
</tr>
<tr>
<td>rë</td>
<td>write</td>
<td><em>s</em>-rë</td>
<td>cause to write</td>
</tr>
</tbody>
</table>

Table 7. Voicing assimilation

The table above shows that voicing assimilation is only available to voiced stops (more specifically, with the distinctive features [+voice, -continuant, -sonorant], that is, voiced stops and affricates, c.f. 4.1.1.2.), as in *z*-gí ‘cause to put on (clothes)’, while *s*-rë ‘cause to write’ is ruled out of the process.

4.1.1.2. Dissimilation

The causative prefix *s*- is dissimilated in terms of the articulation place. It is lateralized into *l*- when preceding coronal stops and fricatives *s*, *z*, *ts*, *tsʰ*, *dz*, *c*, *z*, *tɕ*, *tɕʰ*, *dʑ*, *tʂ*, *tʂʰ* and *dʐ*.

Table 8. Voicing assimilation

<table>
<thead>
<tr>
<th>Base</th>
<th>Meaning</th>
<th>Causative</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sâ</td>
<td>kill</td>
<td><em>l</em>-sâ</td>
<td>cause to kill</td>
</tr>
<tr>
<td>teʰra</td>
<td>get up</td>
<td><em>l</em>-teʰra</td>
<td>cause to get up</td>
</tr>
<tr>
<td>tɕalé</td>
<td>fold intr.</td>
<td><em>l</em>-tɕalé</td>
<td>cause to fold</td>
</tr>
<tr>
<td>dzíkv</td>
<td>bark</td>
<td><em>l</em>-dzíkv</td>
<td>cause to bark</td>
</tr>
<tr>
<td>dzë</td>
<td>hold</td>
<td><em>l</em>-dzë</td>
<td>cause to hold</td>
</tr>
<tr>
<td>dzikn</td>
<td>recall</td>
<td><em>l</em>-dzikn</td>
<td>cause to recall</td>
</tr>
</tbody>
</table>

4.1.1.3. Affrication

Coronal fricatives may turn into corresponding affricates when preceded by the prefix already dissimilated into *l*- This process may be issued from an epenthesis, inserting a stop consonant between the prefix and the fricative. Affrication is widely attested in Wobzi with sentence final enclitics such as the evidential marker *si* (→ *tsʰi*) and the yes-no question marker *ɕy* (→ *teʰɕy*) when preceded by a coronal nasal, it is however unproductive in morphological causatives. Only one example is found in our data:

(9) *rzɔ* ‘wash’ → *l*-dzɔ ‘cause to wash’

Other verbs with initial coronal fricatives do not undergo this process (c.f. *l*-sâ in Table 8). For the drop of *r*- in *l*-dzɔ see 4.1.1.4.
4.1.1.4. Metathesis

Three types of metatheses will be presented in this part: in the first place, the hierarchical metathesis together with cluster reduction; in the second, the \( \nu \text{CV}_r \) metathesis and finally the \(-\sigma r\) metathesis.

- Hierarchical metathesis and cluster reduction

“Hierarchical” here refers to the pre-initial hierarchy presented in 2.1, which is reproduced below:

\[
\begin{align*}
\text{\( \nu \)-} & > \text{\( j \)-} > \text{nasals} > \text{\( v \)-} > \text{\( r \)-}, \text{\( l \)-} > \text{\( s \)-}, \text{\( z \)-} > \text{INITIAL} > \text{MEDIAL}
\end{align*}
\]

The prefixation of causative \( s- \) is restricted in the pre-initial domain. Therefore, causative \( s- \) cannot occur on the right-hand side of the initial or the medial. When the base verb has already a complex onset, the placement of the causative prefix must not violate the hierarchy, which yields an inevitable metathesis.

<table>
<thead>
<tr>
<th>Base</th>
<th>Meaning</th>
<th>Causative Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \nu b\acute{\alpha} \gamma )</td>
<td>explode</td>
<td>( \nu-z-b\acute{\alpha} \gamma ) cause to explode</td>
</tr>
<tr>
<td>( j\acute{\alpha} )</td>
<td>buy</td>
<td>( j-z-d\acute{\alpha} ) cause to buy</td>
</tr>
<tr>
<td>( v\acute{\varepsilon} )</td>
<td>correct</td>
<td>( v-z-v\acute{\varepsilon} ) cause to be correct</td>
</tr>
</tbody>
</table>

Table 9 illustrates the hierarchical metathesis. As \( \nu-, j- \) and \( v- \) rank higher in the hierarchy, \( s- \) must be placed after them.

If the base is prefixed with the reflexive \( k\acute{j\varepsilon} \), the latter is considered the domain of the metathesis. Therefore \( s- \) is inserted between \( \nu- \) and \( j\acute{\varepsilon} \):

\[
\begin{align*}
\text{\( k\acute{j\varepsilon} \)a} \ 'commit suicide' & \rightarrow \text{\( k-
u-s-j\acute{j\varepsilon} \)a } [\chi k\acute{j\varepsilon}a] \ 'cause to commit suicide' \\
\end{align*}
\]

Except \( \nu- \), the nasal pre-initials, \( r- \) and \( l- \) drop obligatorily after the metathesis, call it the cluster reduction:

\[
\begin{align*}
\text{a. } \text{nt\textsuperscript{h}omr\acute{\alpha} 'paralysed'} & \rightarrow *n-s-t\textsuperscript{h}omr\acute{\alpha} \rightarrow s-t\textsuperscript{h}omr\acute{\alpha} 'cause to be paralysed' \\
\text{b. } \text{mkh\acute{\varepsilon} 'intelligent'} & \rightarrow *m-s-k\acute{\varepsilon} \rightarrow s-k\acute{\varepsilon} 'cause to be intelligent' \\
\text{c. } \text{rl\acute{\varepsilon} 'peel'} & \rightarrow *r-s-l\acute{\varepsilon} \rightarrow s-l\acute{\varepsilon} 'cause to peel' \\
\text{d. } l\acute{q}\acute{\varepsilon}l\acute{\varepsilon} 'dirty' & \rightarrow *l-s-q\acute{\varepsilon}l\acute{\varepsilon} \rightarrow s-q\acute{\varepsilon}l\acute{\varepsilon} 'cause to be dirty' \\
\end{align*}
\]

The cluster reduction is applied to pre-initial \( j- \) and \( v- \) with an increasing rate. In contemporary Wobzi, \( j-z-d\acute{\alpha} \ 'cause to buy' \) and \( v-z-j\acute{\varepsilon} \ 'cause to be slow' \) are more often simplified as \( z-d\acute{\alpha} \) and \( z-j\acute{\varepsilon} \), respectively. When a syllabic prefix (e.g. directional-TAM prefixes, inverse, etc.) is present, \( j- \) and \( v- \) might however reoccur:

\[
\begin{align*}
\text{a. } \text{n-u-(j)-z-d} & \rightarrow \text{AOR-INV-j-CAUS-buy}_2 \\
\text{He caused to buy} & \\
\text{b. } \text{n-u-(v)-z-j} & \rightarrow \text{AOR-INV-v-CAUS-correct}_2 \\
\text{He corrected} & \\
\end{align*}
\]

- \( \nu \text{CV}_r \) metathesis

When a base is endowed with \( v- \) as pre-initial and \( -r \) as coda, the use of \( s- \) causative yields the \( \nu \text{CV}_r \) metathesis:
The base \(vCVr\) will first metathesize its pre-initial and coda, and the new base \(*rCVv\) undergoes normal s-causative processes presented above:

\[
(14) \quad vz\acute{a}r \text{ ‘spicy’} \rightarrow \\
*rz\acute{a}v \text{ (}\!vCVr\text{ metathesis)} \rightarrow \\
*rs-\acute{z}av \text{ (hierarchical metathesis)} \rightarrow \\
s-\acute{z}av \text{ (cluster reduction)} \rightarrow \\
l-\acute{z}av \text{ (dissimilation)} \rightarrow \\
l-\acute{z}av \text{ (assimilation)}
\]

This process is an innovation in Wobzi and reflects earlier Khroskyabs forms. Consider the cognates in other Khroskyabs dialects:

\[\text{Table 11. } vCVr \text{ cognates}^5\]

<table>
<thead>
<tr>
<th>Wobzi</th>
<th>Guanyinqiao</th>
<th>Njorogs</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>vd\acute{a}r</td>
<td>NA</td>
<td>NA</td>
<td>open eye</td>
</tr>
<tr>
<td>vd\acute{a}r</td>
<td>ydav\textsuperscript{55}</td>
<td>ydap\textsuperscript{55}</td>
<td>flat</td>
</tr>
<tr>
<td>vz\acute{a}r</td>
<td>rzav\textsuperscript{55}</td>
<td>rza\textsuperscript{p}\textsuperscript{55}</td>
<td>spicy</td>
</tr>
</tbody>
</table>

\(vd\acute{a}r\) “open eye” and \(vd\acute{a}r\) “flat” do not seem to have a cognate in Rgyalrong dialects, while \(vz\acute{a}r\) “spicy” corresponds to Japhug Rgyalrong \(rtsa\beta\) “spicy”. We can therefore conclude that the \(*rCVv\) should be closer to the proto language (although the irregularity of \(-r\) vs. \(\gamma\)- in \(vd\acute{a}r :: ydav\textsuperscript{55} :: ydap\textsuperscript{55}\) is yet to be explained).

The causative forms, \(z-\acute{d}ev\) ‘cause to open eye’, \(z-\acute{d}av\) ‘flatten’, \(l-\acute{z}av\) ‘cause to be spicy’, must have appeared before the Wobzi lexical \(rCVv \rightarrow vCVr\) metathesis and hitherto persist.

\(vz\acute{a}r\) “shave” seems to fit in this category, however, its causative form is attested as \(l-\acute{z}av\) ‘cause to shave’. This is because it is borrowed from Tibetan \(bz\acute{a}r\) \(\text{go}\) ‘shave’, without a \(*rz\acute{a}v\) proto-form (Guanyinqiao vz\acute{a}r).

- \(-\acute{a}r\) metathesis

\(-\acute{a}r\) metathesis happens when the initial of the base is a consonant that triggers dissimilation (coronal fricatives and affricates), meanwhile the rhyme is \(-\acute{a}r\). The causativising process replaces the coda \(-r\) with \(-l\).

\[\text{Table 12. } -\acute{a}r \text{ metathesis}\]

<table>
<thead>
<tr>
<th>Base</th>
<th>Meaning</th>
<th>Causative</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\chi\text{c\acute{a}}\acute{r})</td>
<td>include</td>
<td>(\chi\text{c\acute{a}}\acute{a}-l)</td>
<td>cause to include</td>
</tr>
<tr>
<td>(\chi\text{w\acute{a}}\acute{r})</td>
<td>sour</td>
<td>(\chi\text{w\acute{a}}\acute{\acute{a}}-l)</td>
<td>cause to be sour</td>
</tr>
<tr>
<td>(jdz\acute{a}r)</td>
<td>mill</td>
<td>(jdz\acute{a}-l)</td>
<td>cause to mill</td>
</tr>
</tbody>
</table>

\[5\] Guanyinqiao data from Huang (2007) \[1\], Njorogs data from Yin (2007) \[2\].
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 from. Therefore, the causative morpheme is indubitably -l, which is a conditioned variant of s-. The morphophonological operation hidden behind includes several steps, shown in the example of the causativisation of *jdzə́ r ‘mill’ below:

(15)  
*jdzə́ r ‘mill’ →  
*j-s-dzə́ r (hierarchical metathesis) →  
*j-l-dzə́ r (dissimilation) →  
*jdzə́ r-l (-ə́ r metathesis) →  
jdzə́ l (simplification of coda)

Voicing assimilation might not have taken place in the process, as the coda must appear as a voiced sonorant. Wobzi does not allow complex coda (c.f. 2.1), therefore the original -r must drop in the causative construction, giving room to the causative morpheme.

As more and more speakers are confounding r and l in pre-initial and coda positions, -ə́ r metathesis is not frequently attested in natural speeches.

4.1.2. Morphosyntax

A causative construction introduces a new argument (causer) to the construction and triggers a remapping of syntactic roles of the arguments. The process is studied in Comrie (1976) [18] with the name of “paradigm case”. This principle is based on the case hierarchy:

(16)  
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, 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.

(17) below shows the causativisation of the intransitive verb gə́ y ‘bow’, in which its subject, the causee, kʊ ‘head’, occupies the direct object position in the causative construction.

(17) a.  
kʊ nə-ɡə́ y  
head AOR-bow₂  
The head bowed.

b.  
cə̂ =ɣə́ srú=τə n-u-z-ɡə́ y  
3SG=ERG head AOR-INV-CAUS-bow₂  
He lowered his head

When the base verb is monotransitive, the causative prefix derives a ditransitive verb. As we mentioned in 2.3, there are two alignments in the Wobzi ditransitive construction: secundative and indirective. The derived causative verb is always secundative, with the recipient treated as the patient. The causee can be left unmarked, or marked with the dative kʰe.

(18) a.  
cə̂ =ɣə́ srú=τə n-u-rvə́ j ip  
3SG=ERG meat=DEF AOR-INV-CHOP₂  
He chopped the meat.

b.  
tʃə̂ ci =ɣə́ yə̂ (yə̂ =kʰe) srú=τə n-u-s-və́ j-ə́ŋ  
Bkrashis=ERG 1SG/(1SG=DAT) meat=DEF AOR-INV-CAUS-CHOP₂-1SG  
Bkrashis made me chop the meat.
The causativisation of a ditransitive verb demotes the causee to the oblique object position. The person agreement of the resulting causative form is similar to the secundative alignment, that is, the causative verb does not agree with the theme, but with one of the other two arguments. The choice whether to agree with the causee or the recipient depends on the empathy hierarchy (1>2>3), the argument that ranks higher is coreferent with the verb. The recipient must be marked with the dative \(k^e\), while the dative marking of the causee is optional.

Such constructions are extremely rare. Below are the elicited examples of the secundative verb \(b\) ‘give (food)’ and the indirective verb \(k^e\) ‘give’.

\[\begin{align*}
\text{(19) Secundative} \\
\text{a.} & \quad \eta^o \ dzom\acute{a}=k^e \ kap\acute{} \ r\acute{a}y \ n\acute{a}-k^a-\eta \\
& \quad 1SG \ Sgrolma=DAT \ book \ one \ AOR-give-2-1SG \\
& \quad I \ gave \ Sgrolma \ a \ book. \\
\text{b.} & \quad t\acute{s}ac\acute{i}=\gamma^o \ dzom\acute{a}(=k^e) \ \eta^a=k^e \ kap\acute{} \ r\acute{a}y \\
& \quad Bkrashi\acute{s}=ERG \ Sgrolma(=DAT) \ 1SG=DAT \ book \ one \\
& \quad n-u-s-k^a-\eta \\
& \quad AOR-INV-CAUS-give-2-1SG \\
& \quad Bkrashis \ made \ Sgrolma \ give \ me \ a \ book. \\
\text{c.} & \quad t\acute{s}ac\acute{i}=\gamma^o \ \eta^o/(\eta^a=k^e) \ dzom\acute{a}=k^e \ kap\acute{} \ r\acute{a}y \\
& \quad Bkrashi\acute{s}=ERG \ 1SG/(1SG=DAT) \ Sgrolma=DAT \ book \ one \\
& \quad n-u-s-k^a-\eta \\
& \quad AOR-INV-CAUS-give-2-1SG \\
& \quad Bkrashis \ made \ me \ give \ Sgrolma \ a \ book. \\
\end{align*}\]

\[\begin{align*}
\text{Indirective} \\
\text{a.} & \quad dzom\acute{a}=\gamma^o \ \eta^a=k^e \ jan\acute{j\acute{u}} \ n\acute{a}-b\acute{o}-\eta \\
& \quad Sgrolma=ERG \ 1SG=DAT \ potato \ AOR-give.food-2-1SG \\
& \quad Sgrolma \ gave \ me \ a \ potato \ (to \ eat). \\
\text{b.} & \quad t\acute{s}ac\acute{i}=\gamma^o \ dzom\acute{a} \ \eta^a=k^e \ jan\acute{j\acute{u}} \\
& \quad Bkrashi\acute{s}=ERG \ Sgrolma \ 1SG=DAT \ potato \\
& \quad n-u-z-b\acute{o}-\eta \\
& \quad AOR-INV-CAUS-give.food-2-1SG \\
& \quad Bkrashis \ made \ Sgrolma \ give \ me \ a \ potato \ (to \ eat) \\
\text{c.} & \quad t\acute{s}ac\acute{i}=\gamma^o \ \eta^o \ dzom\acute{a}=k^e \ jan\acute{j\acute{u}} \\
& \quad Bkrashi\acute{s}=ERG \ 1SG \ Sgrolma=DAT \ potato \\
& \quad n-u-z-b\acute{o}-\eta \\
& \quad AOR-INV-CAUS-give.food-2-1SG \\
& \quad Bkrashis \ made \ me \ give \ Sgrolma \ a \ potato \ (to \ eat). \\
\end{align*}\]

**4.1.3. Supplementary remarks**

According to the data, we can at least conclude that Wobzi \(-causative\) had been quite productive during a certain period, as it is prefixed to Tibetan loan words: \(dz\acute{e}n\) ‘recall’ \(\rightarrow \ l-dz\acute{e}n\) (Tibetan \(dran\)), \(ndz\acute{e}m\) ‘soft’ \(\rightarrow \ l-dz\acute{e}m\) (Tibetan ‘jam’).

It is generally assumed that derivational morphology is far less productive than inflectional morphology (Stump 1998 [19], Haspelmath and Sims 2002 [20]). \(-causative\) derivation is also restricted and its productivity is visibly decreasing today. Some causative forms are acceptable with one informant, but with others, some forms would be judged marginal or totally unacceptable. For example, bases with already a coronal fricative as pre-initial are not preferred to be affixed by \(-s\)-: for instance, \(sr\acute{i}\) ‘look’, the causative form \(l-sr\acute{i}\) is never attested in narratives or daily production. The form is only judged marginally possible when elicited.
Some s-causative forms are related to different interpretations of syllable structure according to the speaker. For instance, the onset structure of the verb base və̂m 'rest head on' is ambiguous. It can be either an initial-medial sequence, or a preinitial-initial one. Both interpretations are attested with different informants through the reduplication test: apart from the fully reduplicated və̂m-va if it is analysed as initial-medial and ii. və̂m-ya if preinitial-initial. 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 continuants behind s-; on the other hand, speakers with the preinitial-initial interpretation will find the causative form s-ɣə̂m legitimate.

Many of the s-causative forms are lexicalised with specific meanings. For example, the action that z-brê (CAUS-loud) denotes is actually that of playing a wind instrument, rather than causing a random object sound loud; the most frequent meaning of s-lê (CAUS-slow) is to delay, hence its reflexive form s-ja-še (RFL-delay) means to spend sometime somewhere (耽搁 dān gē in South-Western Mandarin); s-cʰə̂ (CAUS-immense) is used with the meaning of holding someone in esteem. If we follow the terms “first” and “second causatives” coined by Kulikov (1993 [21]), we can assume that s-causative is a simple causative derivation in Wobzi, hence the first causative, as it shows idiomatic meanings and refers to more natural and typical activities or processes than the standard causative meanings (Kulikov 1999:54 [22]).

4.1.4. s-Causative in related languages

s-causative is shared by Khroskyabs dialects. In the other Khroskyabs dialects we know, there is a related syllabic causative prefix sə-. In Guanyinqiao, for instance, as Huang (2007) [1] mentions, sə- can be analysed as an allomorph of s-, and sometimes even coexists with s-, rtsə “ride” → sə-ə-rtsə “cause to ride” (Huang 2007: 81 [1]).

In Njorogs, sə- is fully productive, and s- is merely its variant before voiceless stops and sonorants:

- pʰe “drink” → sə-tʰe or sə-tʰe (Yin 2007: 175 [2]).

The ‘Brongrdzong dialect also has sə- as causativiser (J. T.-S. Sun 2007 [5]). According to my personal investigation in 2012 (ɕə̂ variant), The ‘Brongrdzong sə- is fully productive with s- as a conditioned variant before sonorants.

From a Rgyalrongic perspective, Wobzi s-causative is most comparable to that of the Rta’u dialects. In Shangzhai Rta’u, for example, as J. T.-S. Sun (2007) [5] describes, the causative prefix s-undergoes complex morphophonological processes similar to Wobzi, including voicing assimilation, affrication, metathesis, etc.

Core Rgyalrongic dialects also exhibit causative construction with sibilant prefixes, as in Cogtse, Zbu and Tshobdun sə- (Nagano 2003 [23], J. T.-S. Sun 2006 [16]), Japhug sw- (Jacques 2008 [4]).

In other Sino-Tibetan languages, using a sibilant element as a causativising strategy is very common, examples vary from Dulong sw-, Jinghpo f- (Sun 1999 [24]), to Burmese se-. Whether these morphemes are direct cognates to those in Rgyalrongic languages is debatable, they might have undergone morphological processes individually.

4.2. v-Causative

The causative prefix v- in Wobzi is cognate to Situ Rgyalrong wə-, Zbu Rgyalrong wə- (J. T.-S. Sun 2006 [16]) and Japhug Rgyalrong γə- (Jacques 2008 [4]). It is widely considered to be the causativizer of stative verbs (J. T.-S. Sun 2006:11 [16]). In Wobzi this prefix is not productive, only one confirmed example is found in our vocabulary: ʃ-tsʰu ‘boil’, from the stative verb tsʰu ‘boiled’.

Minimal pairs with s-causative are also found with the stem: ʃ-tsʰu ‘cause to be boiled’; the difference between v- and s-causatives can be illustrated in the example below:

6 We still need to find out whether it is a free variant or a conditioned one.
(20) ŋô  jdto=tə  x-f-tsʰá-ŋ  xna
1SG  water=DEF  DIR-CAUS-boiled2-1SG  but
x-mæ-l-tsʰá-ŋ.
DIR-CAUS-boiled2-1SG
I tried to boil the water but I didn’t make it boil.

4.3. Is there z-Causative?

I argued in 4.1.1.1. that s- undergoes voicing assimilation before voiced consonants, except the sonorants. In the case of assimilation, [z-] is a conditioned allomorph of s-. However, before sonorants, there is opposition between the two phonemes /s/ and /z/: svɔ ‘pus’ vs. zvɔlu ‘year of the rabbit’.

Among the verbs, a causative minimal pair is found with similar definition: zvɔ ‘open mouth (of oneself)’ vs. svɔ ‘open mouth (of another)’. Compare the examples below:

(21) a. ŋô  jε=ji  mtʃʰə=tə  x-ẓvɔ-ŋ
1SG  1SG=POSS  mouth=DEF  AOR-open.mouth2-1SG
I opened my mouth
b. tʃɔcɛ =yɔ  jɛ=ji  mtʃʰə=tə  u-ẓvɔ
Bkrashis=ERG 1SG=POSS  mouth=DEF  AOR.INV-open.mouth
Bkrashis opened my mouth.

Both verbs have the meaning of causing the mouth to open. In (21)a, the action is caused internally, without the help of any outer forces. In (21)b, an external agent (Bkrashis) takes part in the causation of opening the mouth, therefore svɔ is used.

J. T.-S. Sun (2007:216) [5] notices an indirect causative prefix z- in Shangzhai Rta’u, opposed to the direct causative s-: s-nʌ ‘kindle’ vs. z-nʌ ‘cause to burn’. s-/z- opposition before sonorants could be a shared innovation of Khroskyabs and Rta’u, while more detail must be discovered to find out its nature.

The origin of this distinction is unknown due to the insufficiency of data, and the putative base of these two forms *ŋká is not attested. It might be the s- causative preceded by the autobenefactive marker N-: *ŋ-n-s-∑ > z-∑ (Jacques p.c.). The exact process with s- is unattested in modern Wobzi, while autobenefactive N- is able to re-voice the pre-initial ʁ-, assimilated into [χ-]: ʁtsʰâtsʰə ‘fight each other’ → u-ʁ-n-tsʰâtsʰə ‘fight exclusively with each other’. Should the process be valid, it must be part of the historical sound change.

5. Voicing Alternation of Causative-Anticausative Pairs

Anticausative verbs are derived through voicing alternation from their causative counterparts, of which the initials are voiceless consonants. Table 13 provides an exhaustive list of anticausative forms in the data:
Table 13. Causative-Anticausative

<table>
<thead>
<tr>
<th>Causative</th>
<th>Meaning</th>
<th>Anticausative</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʰô</td>
<td>open (tr)</td>
<td>ʰô</td>
<td>open (itr)</td>
</tr>
<tr>
<td>ʰô</td>
<td>melt (tr)</td>
<td>ʰô</td>
<td>melt (itr)</td>
</tr>
<tr>
<td>ʰm</td>
<td>gather (tr)</td>
<td>ʰm</td>
<td>gather (itr)</td>
</tr>
<tr>
<td>â</td>
<td>perish</td>
<td>â</td>
<td>die out</td>
</tr>
<tr>
<td>â</td>
<td>trip</td>
<td>â</td>
<td>tumble</td>
</tr>
<tr>
<td>ʰâ</td>
<td>lay down</td>
<td>ʰâ</td>
<td>laid down</td>
</tr>
<tr>
<td>ʰâ</td>
<td>destroy (financially)</td>
<td>ʰâ</td>
<td>go bankrupt</td>
</tr>
<tr>
<td>ʰâ</td>
<td>tie</td>
<td>ʰâ</td>
<td>be tied</td>
</tr>
<tr>
<td>ʰâ</td>
<td>loosen</td>
<td>ʰâ</td>
<td>become loose</td>
</tr>
<tr>
<td>ʰâ</td>
<td>scatter</td>
<td>ʰâ</td>
<td>scattered</td>
</tr>
<tr>
<td>ʰâ</td>
<td>break (tr)</td>
<td>ʰâ</td>
<td>break (itr)</td>
</tr>
<tr>
<td>ʰâ</td>
<td>tear</td>
<td>ʰâ</td>
<td>be torn</td>
</tr>
</tbody>
</table>

Most of the causative verbs listed above are initialed with voiceless aspirated consonants, only ʰə ʷ ‘tear’ is with an unaspirated onset. That the onset can be either aspirated or unaspirated may reflect the old aspiration alternation, still alive in some Rgyalrong and Rta’u dialects. Other related languages also exhibit anticausative voicing alternation. In Shangzhai Rta’u (J. T.-S. Sun 2007:214 [5]), for example: prə ‘startle’ vs. brə ‘be startled’, ʰk ‘cause to snap’ vs. ʰg ‘snap’; in G.yurong Rta’u (personal investigation in 2014): pru ‘loosen’ vs. bru ‘become loose’, ʰkʰ ‘cut’ vs. gw ‘be cut’.

The Wobzi alternation seems to be restricted to stops and affricates, unlike Khang-gsar Rta’u səla ‘let fall’ vs. ʰəla ‘fall’.

Uvular stops are not attested in the alternation in Wobzi since the voiced uvular stop ʰ- does not belong to the consonantal inventory. In G.yurong Rta’u this phonological restriction is absent, as ʰ- is attested in voicing alternation: qətsə ‘break (branch)’ vs. qətsə ‘(branch) break’.

From a syntactic point of view, anticausative can be compared with the passive construction (with the prefix ʰ-, see Lai 2013b [9]), as it deletes the agent of the transitive verb and promotes the original patient to the subject position, resulting an intransitive verb. Semantically, anticausative denotes a spontaneous movement or status; while passive usually entails an agent that causes the event, compare ʰô ‘open tr’, ʰ- ʰô ‘be opened’ and ʰô ‘open itr’:

\[(22) \quad \text{a. \ } \wedge t=\gamma \quad \gamma \wedge m=t \quad u-c\wedge \ô \quad 3\text{SG}=\text{ERG} \quad \text{door} = \text{DEF} \quad \text{AOR.INV-open}_2 \quad \text{He opened the door.} \]
\[(22) \quad \text{b. \ } \gamma \wedge m=t \quad \gamma \wedge \ô \quad n\u \quad k\wedge-y\j\i \wedge n \quad j\wedge y \quad \text{door} = \text{DEF} \quad \text{open}_1 \quad 2\text{SG} \quad \text{DIR-come}_1-2 \quad \text{can}_1 \quad \text{The door is open, you can come in.} \]
\[(22) \quad \text{c. \ } \gamma \wedge m=t \quad \wedge \gamma-\wedge-c\wedge\ô \quad s\i \quad \text{door} = \text{DEF} \quad \text{AOR-PASS-open}_2 \quad \text{EVD} \quad \text{The door is opened (by someone).} \]
Sometimes the passive form conveys the same meaning of anticausative. Therefore χ-pʰaylásy (PASS-lay.down) and baylásy ‘laid down’ have no difference in meaning.

(23) a. cɔ laylásy=tɔ sà=tʰa nxe-baylásy
   3SG stick=DEF ground=LOC AOR-laid.down
   The stick was lying on the ground.

b. cɔ laylásy=tɔ sà=tʰa nxe-χ-pʰaylásy
   3SG stick=DEF ground=LOC AOR-PASS-laid.down
   The stick was lying on the ground.

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 prɔt ‘cut’ vs. mbrɔt ‘be cut’, and the process is still productive (Jacques 2012:214 [25]). As the number of such pairs are limited, and no trace of prefixation can be directly seen, the origin of this derivation is not to be unveiled from the point of view of Khroskyabs, that is, it has probably ceased to be productive from the very beginning of the Proto-Khroskyabs language.

6. Analytic Causative

6.1. Formation

Comrie (1989:167) [26] describes the prototypical analytic causative is where 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 à Jean (make run DAT John) does not. In this sense, Wobzi Khroskyabs exhibits a prototypical analytic causative with the nominaliser spi and the causation predicate vî ‘do’. Below is an example from a natural narrative:

(24) brɔ nətɔ bjɔm nkʰɔ=tɔ=yə tʰɔv=tɔ ndzé=spi
    horse which fast NMLS=DEF=ERG authority=DEF get=NMLS
    u-vî rɔ-ŋå
    AOR.INV-do1 NPAST-be1
   The one with the faster horse was throned. (Gesar 1: 6)

In (24) above, the effect clause nominalised by spi is a sentence with the causee, the semantic agent of the effect transitive predicate dẑe ‘get’, marked with ergative. A more canonical expression can be elicited as:

(25) brɔ nətɔ bjɔm nkʰɔ=tɔ(=kʰe) tʰɔv=tɔ ndzé=spi
    horse which fast NMLS=DEF(DAT) authority=DEF get=NMLS
    u-vî rɔ-ŋå
    AOR.INV-do1 NPAST-be1
   The one with the faster horse was throned.

Similar to morphological causative, the causee of the transitive predicate is either unmarked or marked with the dative kʰe.

Analytic causative constructions with an intransitive effect predicate do not mark the causee:

(26) nɛŋi snaŋlî nxe-mæ-pcʰɛël spi vâ-ŋ
    2PL moon DIR-NEG-play1 NMLS do1-1SG
   I do not let you play under the moon. (Moon Rabbits: 24)
Analytic causative is fully productive in Wobzi. However, when the causer and causee are both humans, the verb rē ‘say’ with a subordinate imperative clause is often used with a causative meaning:

(27) \text{te} \acute{\text{e}} \quad \text{kə-nzgrəv} \quad \text{əē-n} \quad \text{u-rə} \quad \text{si} \\
Buddhism \quad \text{DIR-practice} \quad \text{go₃-2} \quad \text{AOR.INV-say₂} \quad \text{EVD} \\
He let it practice Buddhism. (Origin of mankind: 6)

Literally, the sentence in (27) means “He said to him, ‘go practice Buddhism’”. However, the subordinate clause is not necessarily uttered by the causer. This kind of constructions can be applied to deaf causers using sign language. The most natural translation of such sentences is using the verb let in English, or 讓 ràng in Mandarin Chinese. Similar use of rē ‘say’ in Wobzi is seen in the sentence below:

(28) \text{dzɔd} \quad \text{ma-ndz-əŋ} \quad \text{rē-n} \\
literature \quad \text{NEG-learn}₁⁻¹SG \quad \text{say}₁⁻² \\
Don’t you study?

Translating (28) literally with “say” is unacceptable.

While the canonical analytic causative with spi vî denotes the causative sensu stricto ‘cause to do’, the quasi-causative construction with the verb rē ‘say’ has a curative meaning, which indicates a command or a suggestion.

6.2. Comparative Remarks

The nominaliser spi is cognate to the Japhug noun ʈʂ-spa ‘material, that is used to make something’. The grammaticalisation is a Khroskyabs innovation shared by Guanyinqiao spi, ‘Brongrdzong spo, etc. Its original meaning can still be detected in dzî=spi (eat=NMLS) ‘thing to eat’, tʰêt=spi (drink= NMLS) ‘thing to drink’.

The Rta’u language has similar nominalising patterns using enclitics. Some of those enclitics developed independently of Khroskyabs. In Shangzhai Rta’u, the analytic causative construction is characterised by the nominiser ldo, as noted by J. T.-S. Sun (2007:225) [5]:

(29) \text{ləmu=ʒə} \quad \text{ljæ} \quad \text{ʒəl-ldo} \quad \text{ʒə-vzo} \\
Lhamo=ERG \quad \text{child} \quad \text{go.to.bed}⁻\text{NMLS} \quad \text{PFV-make}₂ \\
Lhamo made the child go to bed.

7. Conclusion

This paper discussed the causative constructions in Wobzi. The three types of causative constructions, lexical, morphological and analytic are described.

Lexical causatives are not common in Wobzi, only a handful of suppletive and labile lexical causative verbs are attested. There are arguably three morphological causative prefixes in Wobzi, s-, v- (stative verbs) and z-, which is still controversial. s- exhibits rich morphophonological phenomena, including voicing assimilation, lateral dissimilation, three types of metathesis, affrication and cluster reduction. These processes are similar to those of the Shangzhai causative, described by J. T.-S. Sun (2007) [5]. However, Wobzi does not possess a syllabic causative prefix sə-, fully productive in other Khroskyabs dialects, such as Guanyinqiao, ‘Brongrdzong, and Njorogs. Although the syllabic sə- looks more archaic, it should be recently generalised in terms of its high productivity and lack of interaction with other prefixes.
Voicing alternation is another strategy to distinguish causative verbs from anticausative ones. Like the other Rgyalrongic languages, Wobzi exhibits a limited number of voiceless causative vs. voiced anticausative pairs.

Using the nominaliser spi and the causation verb vî ‘do’, Wobzi develops a productive analytic causative construction. With human participants, the analytic causative with spi is seldom applied; instead, the verb rè ‘say’ with an imperative subordinate clause is used to convey a curative causative meaning.

<table>
<thead>
<tr>
<th>List of abbreviations</th>
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<tbody>
<tr>
<td>1. first person</td>
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<td>2. second person</td>
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<td>3. third person</td>
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<tr>
<td>SG. singular</td>
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<tr>
<td>DU. dual</td>
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<tr>
<td>PL. plural</td>
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<tr>
<td>VERB₁. stem 1 of verb</td>
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<tr>
<td>VERB₂. stem 2 of verb</td>
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<tr>
<td>VERB₃. stem 3 of verb</td>
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<tr>
<td>AOR. aorist</td>
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<tr>
<td>AOR.INV. fusion of aorist</td>
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<tr>
<td>CAUS. causative</td>
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<tr>
<td>DAT. dative</td>
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<td>DEF. definite</td>
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