CAUSAL/NONCAUSAL VERB PAIRS IN BARPAK GHALE

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This study aims to investigate the coding strategies used for causal and noncausal verb pairs in Barpak Ghale, a Tamangic language of Nepal. Methodologically, it examines the strategies employed for 31 verb pairs provided by Haspelmath (1993). There are three major findings. First, Barpak Ghale has five coding strategies including anticausative, causative, labile, equipollent, and suppletive with a few subtypes in each strategy. Second, this study analyzes tone-differentiated verb pairs as exhibiting anticausative derivation based on the direction of neutralization. Third, the comparison of Barpak Ghale with other Tibeto-Burman languages shows that the language has fewer causative verb pairs.

Keywords: Tamangic, anticausative, causative, transitive and intransitive verb pairs, tone alternation

1. Introduction

Ghale (ISO 639-3: ghe) is a language of the Tamangic branch within the Tibeto-Burman language family (van Driem, 2011). The language is mainly spoken in the Gorkha District of the Gandaki Province of Nepal. According to the 2021 census of Nepal (National Statistics Office, 2023), Ghale is spoken by 23,049 people. A sociolinguistic survey of the language has been conducted (Regmi, 2021). This study is based on data collected during the present author's fieldwork on the dialect spoken in Barpak village, in the Gorkha District. Only preliminary grammatical descriptions have been conducted on this language (Paudel, 2008).

Coding of causal/noncausal pairs in Ghale is one of its few grammatical aspects that has been described in the existing literature. In particular, it has been reported that tone is employed for distinguishing causal and noncausal verbs in phonological studies (Khadgi, 2021; Nishi, 1983).

Khadgi (2021) observes that the intransitive verb of these pairs has low tone /21/ and the transitive verb has high tone /55/ in Barpak Ghale. The examples in (1) and (2) from my fieldnotes show such a verb pair.

(1) $\eta\Lambda^{33}$ $l\Lambda\eta^{21}$-$k\Lambda$-*te*
 1SG wake.up-PFV-PST
 'I woke up.'

(2) ηete^{33} ram^{33} $l\Lambda\eta^{55}$-$k\Lambda$-*te*
 1SG.ERG Ram wake.up-PFV-PST
 'I woke up Ram.'

The intransitive $l\Lambda\eta^{21}$ has the low falling tone and the transitive $l\Lambda\eta^{55}$ has the high level tone. Similar verb pairs, described as causative coding, have been observed in other branches of Tibeto-Burman, such as in Nubri (Donohue, 2021). However, such a verb pair distinguished by tone has not been found in other Tamangic languages (Khadgi, 2021; Nishi, 1983). Except for the reports on this pattern, other coding patterns of causal/noncausal verbs in Ghale have remained understudied.

The present study examines causal/noncausal verb pairs in Barpak Ghale, based on 31 verb pairs provided by Haspelmath (1993). It shows that this language has five coding strategies: anticausative, causative, labile, equipollent, and suppletive. Among these, labile coding is the most frequent (10 of the 31 verb pairs), followed by anticausative coding (about 9 of the 31 verb pairs). Causative and equipollent coding strategies are less common.

The significance of the study in Tibeto-Burman linguistics lies in analyzing tone-differentiated verb pairs as exhibiting anticausative coding. Alternations in tone used to encode causal/noncausal pairs have been documented in various Tibeto-Burman languages. Such tonal differences in modern Tibeto-Burman languages are commonly understood as traces of the

causative prefix *s- in Proto-Tibeto-Burman (Sun, 1999). Even in many studies of modern Tibeto-Burman languages, such as Donohue (2021), these tonal alternations are analyzed as causative coding. In contrast, this paper argues that in Barpak Ghale, noncausal verbs are derived from causal verbs, and thus tonal alternation represents anticausative coding from a morphological perspective, specifically through the direction of tone neutralization.

Lastly, a comparison of Barpak Ghale with other Tibeto-Burman languages shows that Barpak Ghale exhibits fewer causative verb pairs. This lower frequency of causative coding might be an areal feature of the languages in central Nepal.

The paper is organized as follows. Section 2 provides basic information on Barpak Ghale. Section 3 introduces the theoretical background of the study. Section 4 outlines the methodology. Section 5 describes the 31 verb pairs in Barpak Ghale. Section 6 specifically analyzes the tone-differentiated verb pairs. Section 7 discusses the significance of the study, including comparisons with other Tibeto-Burman languages. Section 8 concludes the paper.

2. Barpak Ghale

The phonology of Barpak Ghale has been described in several studies (Khadgi, 2021; Yoshida, in press). Segmentally, the language has 20 consonant phonemes, /p, t, ʈ, k, pʰ, tʰ, ʈʰ, kʰ, ts, tsʰ, s, h, m, n, ŋ, r, l, w, j, ɰ/, and six vowel phonemes, /i, u, e, o, a, ʌ/. Each unaspirated stop has voiced and voiceless allophones. Tonally, Barpak Ghale has five tones: /22/, /33/, /55/, /21/, and /25/. These tones are represented by Chao tone letters, with 1 being the lowest and 5 the highest. The tonal domain in Barpak Ghale is the word. The basic word order in Barpak Ghale is verb-final. Most affixes are suffixes. There is only one prefix: the negative prefix $ʌn^{33}$-.

3. Theoretical background

This section introduces the terminology used in the typological literature on causal/noncausal verb pairs, particularly in the works of Haspelmath (1993) and Haspelmath et al. (2014). Causal and noncausal verbs are defined semantically as follows (Haspelmath et al., 2014). A causal verb refers to a verb that includes a 'cause' meaning component. A noncausal verb refers to a verb that expresses the same meaning as a causal verb without the 'cause' meaning component. Example (3) illustrates causal and noncausal verbs in English.

(3) English (Haspelmath, 1993, p. 90)
    a. The girl broke the stick. (causal)
    b. The stick broke. (noncausal)

Formally, Haspelmath (1993) classifies causal/noncausal verb pairs in languages into five coding types: causative, anticausative, equipollent, labile, and suppletive. Examples of these coding types are given in (4).

(4) The five coding types (Haspelmath, 1993, pp. 90–92)
a.   causative coding
    French   *fonder* 'melt (noncausal)'
                faire fondre 'melt (causal)'
b.   anticausative coding
    Russian   *katat'-sja* 'roll (noncausal)'
               katat' 'roll (causal)'
c.   equipollent coding
    Hindi-Urdu *šuruu honaa* 'begin (noncausal)'
                šuruu karnaa 'begin (causal)'
d.   labile coding
    Greek   *svíno* 'go out (noncausal)'/
               'extinguish (causal)'
e.   suppletive coding
    Russian   *goret'* 'burn (noncausal)'
               žeč' 'burn (causal)'

In causative coding, the noncausal verb is basic and the causal verb is derived, as in (4a). In anticausative coding, the causal verb is basic and the noncausal verb is derived, as in (4b). In equipollent coding, both causal and noncausal verbs are derived from the same stem, which expresses the basic verb meaning, as in (4c). In labile coding, the same verb form is employed for both causal and noncausal verbs, as in (4d). Last, in suppletive coding, different verb roots are used for the causal and the noncausal verbs, as in (4e).

4. Methodology

In this study, I analyzed 31 causal/noncausal verb pairs in Barpak Ghale based on Haspelmath's (1993) methodology, which includes the 31 verb pair meanings in (5). These verbs often show causal/noncausal alternation in the languages of the world.

(5) 31 verb pair meanings (Haspelmath, 1993, p. 97)

boil, freeze, dry, wake up, go out/put out, sink, learn/teach, melt, stop, turn, dissolve, burn, destroy, fill, finish, begin, spread, roll, develop, get lost/lose, rise/raise, improve, rock, connect, change, gather, open, break, close, split, die/kill

In addition, verb pairs of tone alternations as in (1) and (2) were collected through elicitation. The additional data on such verb pairs are discussed in Section 6, in an analysis of the direction of derivation

5. The 31 verb pairs in Barpak Ghale

Table 1 summarizes the data of the 31 verb pairs in Barpak Ghale. Each row shows the meaning, the causal/noncausal verb pairs which share the meaning, and the coding type. In the type column, the abbreviations C, A, E, L, and S represent causative, anticausative, equipollent, labile, and suppletive coding strategies, respectively. These verbs are ordered in the same way as in Haspelmath (1993, p. 104): cross-linguistically, the higher up a meaning is in the table, the stronger its preference for causative coding; the lower a meaning is, the stronger its preference for anticausative coding (Haspelmath, 1993, p. 104). This tendency is explained by how likely a given event occurs spontaneously (Haspelmath, 1993, 2016). When a noncausal event is more likely to occur spontaneously, such an event is more likely to be expressed by causative coding. There is no one-to-one correspondence between verb meanings in English and verb forms in Barpak Ghale. In some cases, multiple meanings in English are expressed by one form in Barpak Ghale; in other cases, multiple forms in Barpak Ghale express a single meaning in English. Due to this, more than one verb pair is listed for 'freeze', 'melt', 'stop', 'dissolve', 'burn', 'destroy', 'improve', 'rock', and 'break'.

Table 1: *31 causal/noncausal verb pairs in Barpak Ghale*

Meaning	Noncausal	Causal	Type
boil	k^hlja^{55}	k^hlja^{55}-la^{22} $tsji^{55}$	C
freeze	$dzj\Lambda m^{33}$-ti	$dzj\Lambda m^{33}$-ti	L
	$dzj\Lambda m^{33}$-ti	$dzj\Lambda m^{33}$-ti-la^{22} $tsji^{55}$	C
dry	$k^h\Lambda r^{22}$	$k^h\Lambda r^{22}$-la^{22} $tsji^{55}$	C
wake up	$l\Lambda\eta^{21}$	$l\Lambda\eta^{55}$	A
go out/put out	sji^{33}	se^{55}	S
sink	num^{21}	num^{21}	L
learn/teach	lom^{22}	lom^{22}-mi	C
melt	ηjol^{21}	ηjol^{55}	A
	ηjol^{21}	ηjol^{21}-la^{22} $tsji^{55}$	C
stop	rok^{33}-ti	rok^{33}-ti	L
	ts^hja^{33}	-	-
turn	$khum^{21}$-ti	$khum^{21}$-ti	L
dissolve	ηjol^{21}	ηjol^{55}	A
	ηjol^{21}	ηjol^{21}-la^{22} $tsji^{55}$	C
	k^hulli^{21}	k^hulli^{21}	L
burn	$plja\eta^{21}$	p^hun^{55}	S
	nen^{21}	nen^{55}	A
destroy	-	lwa^{55}	-
	hul^{21}	hul^{55}	A
	nun^{21}	nun^{55}	A
fill	p^hja^{55}	p^hja^{55}	L
finish	$tsen^{21}$	$tsen^{21}$	E
begin	$suru^{22}$ $kjur^{33}$	$suru^{22}$ $tsji^{55}$	E
spread	$t^h\Lambda r^{21}$	$t^h\Lambda r^{55}$	A
roll	$kj\Lambda r^{21}$	$kj\Lambda r^{21}$	L
develop	$bikas^{33}$ $kjur^{33}$	$bikas^{33}$ $tsji^{55}$	E
get lost/lose	$mu\eta el^{55}$	$mu\eta el^{55}$	L
rise/raise	to^{33} $kjur^{33}$	to^{33} $tsji^{55}$	E
improve	$sus\Lambda l^{22}$-ti	$sus\Lambda l^{22}$-ti	L
	$sus\Lambda l^{22}$-ti	$sus\Lambda l^{22}$-ti-mi	C
rock	$tsilli^{55}$	$tsilli^{55}$	L
	lin^{55}	lin^{55}	L
	lin^{21}	lin^{55}	A
connect	t^hu^{55}	t^hu^{55}	L
change	p^hjer^{22}-ti	p^hjer^{22}-ti	L

gather	rup^{21} $kjur^{33}$	rup^{21} $tsji^{55}$	E
open	puk^{21}	puk^{55}	A
break	$p\Lambda r^{21}$	$p\Lambda r^{55}$	A
	kjo^{21}	kjo^{55}	A
	$pr\Lambda^{21}$	$pr\Lambda^{55}$	A
close	t^ha^{21}	t^ha^{55}	A
split	$prja\eta^{21}$	$prja\eta^{55}$	A
die/kill	sji^{33}	se^{55}	S

Table 2 shows the count and the percentage of the 31 verb pairs that fall into each coding type. Since more than one pair is listed for some meanings, the count is not always an integer. For instance, causative coding is the only strategy for the meanings 'boil', 'dry', and 'learn/teach'. It is one of the two strategies for the meanings 'freeze', 'melt', and 'improve'. It is one of the three strategies for the meaning 'dissolve'. Therefore, the total count for causative coding is 4.8, calculated as $(1 \times 3) + (0.5 \times 3) + (0.3 \times 1)$.

Table 2: *Percentages of verb pairs in each coding type in Barpak Ghale*

	Count	Percentage
Anticausative	8.7	28.0%
Causative	4.8	15.5%
Equipollent	5.0	16.1%
Labile	9.5	30.6%
Suppletive	2.5	8.1%
Others	1.0	3.2%
Total	31	100.0%

The coding types are each discussed in the following sections.

5.1. Causative coding

Causative coding is not very frequent in the data. 4.8 out of the 31 verb pairs (15.5%) belong to this type. There are both syntactic and morphological causatives. First, the syntactic causative is formed from a verb root suffixed with the adverbializer -la^{22} and the verb $tsji^{55}$ 'do' as in V-la^{22} $tsji^{55}$. This strategy was mainly used with the meanings in the upper part of Table 1, which are more likely to occur spontaneously (Haspelmath, 1993, 2016), as in (6) and (7).

(6) mi^{33}=te $kola^{33}$ $k^h\Lambda r^{22}$-$k\Lambda$-te
     fire=INS clothes dry-PFV-PST

'The clothes dried over the fire.'

(7) ηete^{33} $kola^{33}$ $k^h\Lambda r^{22}$-la^{22} $tsjik^{55}$-$k\Lambda$-te
     1SG.ERG clothes dry-ADV do-PFV-PST

'I dried the clothes.'

The morphological causative is formed from a verb root and the suffix -mi, as in (8) and (9). This suffix -mi was observed for the verb pairs lom^{22} 'learn'/ lom^{22}-mi 'teach' and $sus\Lambda l^{22}$-ti 'improve (noncausal)'/ $sus\Lambda l^{33}$-ti-mi 'improve (causal)'.

(8) $\eta\Lambda^{33}$ $lila^{25}$ $k\mu e^{55}$ lom^{22}-$k\Lambda$-te
     1SG Ghale language learn-PFV-PST

'I learned the Ghale language.'

(9) $hari^{21}$=te ηene^{33} $lila^{25}$ $k\mu e^{55}$
     Hari=ERG 1SG.DAT Ghale language
     lom^{22}-mi-$k\Lambda$-te
     learn-BEN-PFV-PST

'Hari taught me the Ghale language.'

The suffix -mi is necessary for lom^{22}-mi *'teach'*. It is optional for $sus\Lambda l^{33}$-ti-mi 'improve', as in (12).

5.2. Labile coding

Labile coding is characterized by the same verb form being employed for both causal and noncausal verbs Labile coding is the most frequent coding type in the 31 verb pairs. 9.5 out of the 31 verb pairs (30.6%) belong to this type.

(10) Labile verbs
   a. $tsj\Lambda m^{21}$-ti 'freeze'
   b. rok^{33}-ti 'stop'
   c. k^hum^{21}-ti 'turn'
   d. p^hjer^{22}-ti 'change'
   e. $sus\Lambda l^{22}$-ti 'improve'
   f. k^hulli^{21} 'dissolve'
   g. num^{21} 'sink'
   h. $tsen^{21}$ 'finish'
   i. $kj\Lambda r^{21}$ 'roll'
   j. $m\mu el^{55}$ 'get lost/lose'
   k. $tsilli^{55}$ 'rock'
   l. $li\eta^{55}$ 'rock'
   m. t^hu^{55} 'connect'

The suffix -ti is the loan verb marker for borrowed Nepali verbs. It is found in (10a–f). The suffix is fused with the root in (10f), and the onset consonant of the suffix is assimilated to the coda

consonant of the root. These loan verbs are always labile, as in (11) and (12).

(11) *ram³³=tse³³ sjip³³ susʌl²²-ti-te*
    Ram=GEN skill improve-LVM-PST
    'Ram's skill improved.'

(12) *ŋete³³ ram³³=tse³³ sjip³³*
    1SG.ERG Ram=GEN skill
    susʌl²²-ti(-mi)-te
    improve-LVM(-BEN)-PST
    'I improved Ram's skill.'

The remaining verb pairs in (10g–m) are not Nepali loans. An example of such pairs is *kjʌr²¹* 'roll', as shown in (13) and (14). This verb root is used both for the causal and noncausal meanings.

(13) *luŋ⁵⁵ kjʌr²¹-pi-jʌ²²*
    stone roll-TRANS-NPST
    'The stone will roll down.'

(14) *ŋete³³ luŋ⁵⁵ kjʌr²¹-pi⁵⁵-jʌ²²*
    1SG.ERG stone roll-VOL-NPST
    'I will roll the stone.'

Although the verb root is suffixed with different suffixes – the translocative suffix *-pi* in (13) and the volitional suffix *-pi⁵⁵* in (14) – the verb root itself is segmentally and tonally the same in both examples.

5.3. Equipollent coding

Equipollent coding is characterized by both causal and noncausal verbs being derived from the same stem. Equipollent coding is not so frequent. 5.0 out of 31 verb pairs (16.1%) belong to this type. Compound verbs with *kjur³³* 'become' and *tsji⁵⁵* 'do' are analyzed as having equipollent coding. These are mainly loanwords from Nepali. *kjur³³* 'be' is used for the noncausal verb and *tsji⁵⁵* 'do' is used for the causal verb. This compounding is used when the source in Nepali is also a compound verb with हुनु *hunu* 'be' and गर्नु *gʌrnu* 'do'. For example, in (15) and (16), *suru²² kjur³³* 'begin (noncausal)' and *suru²² tsji⁵⁵* 'begin (causal)' are from Nepali *suru hunu* सुरु हुनु and *suru gʌrnu* सुरु गर्नु, respectively.

(15) *tini²¹ kʌm²² suru²² kjuri²¹*
    today work beginning become.PFV

'The work started today.'

(16) *ŋi³³=ju⁵⁵ tini²¹ kʌm²²*
    1PL.INCL=PL today work
    suru²² tsjik⁵⁵-kjʌ²²
    beginning do-NPST
    'We will start the work today.'

5.4. Suppletive coding

There are only three verb pairs with suppletive coding: *sji³³/se⁵⁵* meaning 'die/kill' and 'put out (noncausal)/put out (causal)' and *pljaŋ²¹/pʰun⁵⁵* meaning 'burn (noncausal)/burn (causal)'.

6. Tone alternation as anticausative coding

In this section, I discuss causal/noncausal verb pairs distinguished by tone alternation as introduced in the introduction. I analyze causal/noncausal verb pairs with the tone alternation as having anticausative coding.

Verb pairs distinguished solely by tone are the second most frequent type among the 31 causal/noncausal verb pairs in Barpak Ghale. 8.7 out of the 31 verb pairs (28.0%) belong to this type. The intransitive verb of these pairs always has the tone /21/, while the transitive verb of these pairs either has the tone /33/ or the tone /55/. The verb pairs distinguished by tone alternation in Table 1 are given again in (17)–(28).

(17) *lʌŋ²¹* 'wake up (intr.)' *lʌŋ⁵⁵* 'wake up (tr.)'
(18) *ŋjol²¹* 'melt (intr.)' *ŋjol⁵⁵* 'melt (tr.)'
(19) *nen²¹* 'burn (intr.)' *nen⁵⁵* 'burn (tr.)'
(20) *hul²¹* 'destroy (intr.)' *hul⁵⁵* 'destroy (tr.)'
(21) *nun²¹* 'destroy (intr.)' *nun⁵⁵* 'destroy (tr.)'
(22) *tʰʌr²¹* 'spread (intr.)' *tʰʌr⁵⁵* 'spread (tr.)'
(23) *puk²¹* 'open (intr.)' *puk⁵⁵* 'open (tr.)'
(24) *pʌr²¹* 'break (intr.)' *pʌr⁵⁵* 'break (tr.)'
(25) *kjo²¹* 'break (intr.)' *kjo⁵⁵* 'break (tr.)'
(26) *prʌ²¹* 'break (intr.)' *prʌ⁵⁵* 'break (tr.)'
(27) *tʰa²¹* 'close (intr.)' *tʰa⁵⁵* 'close (tr.)'
(28) *prjaŋ²¹* 'split (intr.)' *prjaŋ⁵⁵* 'split (tr.)'

In addition to these pairs, I have also found plenty of verb pairs distinguished by tone alternation through elicitation. The following pairs in (29) and (30) are notable because the transitive verb has the tone /33/, which is not observed in the 31 verb pairs examined.

(29) *lwa²¹* 'return (e.g., home)'
   lwa³³ 'make someone return (e.g., home)' or 'return something'

(30) *lwa²¹* 'turn over (noncausal)'
   lwa⁵⁵ 'turn over (causal)'

The criterion for classifying these pairs distinguished by tone as anticausative verb pairs is the direction of neutralization. The direction of neutralization is proposed as one of the criteria for identifying the direction of derivation (Haspelmath, 1993, pp. 97–98). According to this criterion, if multiple patterns in either causal or noncausal verbs are neutralized into fewer patterns in the other, then the direction of derivation is from the more complex to the simpler one. Consider the situation schematized in (31), where Patterns A and B occur in causal verbs, while only Pattern C occurs in noncausal verbs.

(31) causal   >   noncausal
    Pattern A   >   Pattern C
    Pattern B   >   Pattern C

In this situation, the two patterns A and B in causal verbs are neutralized into the single pattern C in noncausal verbs. Thus, the direction of derivation is from causal to noncausal, representing anticausative coding in (31). Verb pairs in Hindi-Urdu like *phir-naa* 'turn (intr.)'/*pher-naa* 'turn(tr.)' and *pit-naa* 'take a licking'/*piit-naa* 'beat up' illustrate how the direction of neutralization is used in analyzing an actual example (Haspelmath, 1993). These verb pairs are shown in (32).

(32) causal   >   noncausal
    pher (mid vowel)   >   *phir* (high vowel)
    piit (high vowel) >   *pit* (high vowel)

In (32), the causal verbs have either mid or high vowels, whereas the noncausal verbs always have a high vowel. The height of vowels is neutralized in the noncausal verb. Hence the derivation type of these pairs in Hindi-Urdu is anticausative. The direction of derivation can be determined by the direction of neutralization in this way.

In the case of causal/noncausal verb pairs differentiated by tone in Barpak Ghale, the direction of derivation is from the causal verb to the noncausal verb. This idea is supported by the verb pairs *lwa²¹* 'return'/ *lwa³³* 'give something back, make someone return (home)' and *lwa²¹* 'turn over (noncausal)'/ *lwa⁵⁵* 'turn over (causal)'. The causal verbs have different tones, as seen in (33) and (34).

(33) *pʌisʌ²²   lwa³³-jʌ²²*
    money   return-NPST
    'I will return the money.'

(34) *luŋ⁵⁵   lwa⁵⁵-jʌ²²*
    stone   turn.over-NPST
    'I will turn over the stone.'

In contrast, both the noncausal verbs meaning 'return' and 'turn over' have the tone /21/, as seen in (35) and (36).

(35) *hʌmbʌ²¹ mi⁵⁵   lwa²¹-i*
    that   man   return-TRANS.PFV
    'That man returned.'

(36) *luŋ⁵⁵   lwa²¹-i*
    stone   turn.over-TRANS.PFV
    'The stone turned over.'

In the remaining verb pairs distinguished by tone, the noncausal verbs have the tone /21/ while the causal verbs have the tone /55/. The pair of *lwa²¹* 'return' and *lwa³³* 'give something back, make someone return (home)' is the only pair of a noncausal verb with the tone /21/ and a causal verb with the tone /33/. These data show that the causal verbs in verb pairs distinguished by tone have either the tone /55/ or /33/, while the noncausal verbs consistently have the tone /21/. The tonal distinction is neutralized in the noncausal verbs, as schematized in (37).

(37) causal   >   noncausal
    /55/   >   /21/
    /33/   >   /21/

Thus, the causal verb is the basic form and the noncausal verb is the derived form in tone-differentiated verb pairs in Barpak Ghale.

7. Discussion

First, Barpak Ghale exhibits a variety of coding patterns. In addition to tone alternation, which has already been discussed in the literature (Khadgi, 2021; Nishi, 1983), this study presented five coding types: causative, anticausative, labile, equipollent, and suppletive. Among these strategies, labile coding was the most frequent (9.5 of the 31 verb pairs), followed by anticausative coding (8.7 of the 31 verb pairs). Causative and equipollent coding strategies were less common. By examining the 31 verb pairs, this study shed light on the diverse coding types used in Barpak Ghale. The analysis highlighted different morphological processes, such as tone alternation and suffixation, as well as syntactic strategies like the syntactic causative. The methodology used to investigate how different meanings are formally expressed uncovered the range of coding strategies employed in Barpak Ghale.

Second, the significance of this study in Tibeto-Burman linguistics lies in analyzing tone-differentiated verb pairs as exhibiting anticausative coding. Alternations in tone used to encode causal/noncausal pairs have been documented in various Tibeto-Burman languages. Such tonal differences in modern Tibeto-Burman languages are commonly interpreted as traces of the causative prefix **s-* in Proto-Tibeto-Burman (Sun, 1999). This prefix is reflected in modern Tibeto-Burman languages through different forms, such as alternations in VOT or tone. Tonal alternation is one of the reflections of the causative prefix. Even in modern Tibeto-Burman languages, the reflexes of this prefix are often analyzed as exhibiting causative coding. For example, in Nubri spoken in northern Gorkha (see Figure 1), Donohue (2021) analyzes causal verbs of tone-differentiated verb pairs as derived from noncausal verbs by prefixing a floating high tone. In contrast to these languages, this study argues that in Barpak Ghale, noncausal verbs are derived from causal verbs based on the direction of tone neutralization. Similarly, recent studies on Gyalrongic languages (Gates, 2024; Gates et al., 2022; Jacques, 2021) analyze the direction of derivation in verb pairs with onset voicing

alternation as anticausative, where the noncausal verb is derived from its causal counterpart. The present study presents an analysis of tone-differentiated verb pairs as exhibiting anticausative coding and shows that the anticausative analysis is applicable beyond Gyalrongic languages.

Third, Barpak Ghale has considerably fewer verb pairs with causative coding than other Tibeto-Burman languages. 12.9% of the 31 verb pairs are causative pairs in Barpak Ghale. The data from the World Atlas of Transitivity Pairs (2014) show that Tibeto-Burman languages generally have more causative verb pairs than Barpak Ghale does. These languages with such data include Newar (Matsuse, 2014), Burmese (Otsuka & Onishi, 2014), Meche (Kiryu, 2014), rGyalrong (Shirai, 2014), Tiddim Chin (Otsuka, 2014), Amdo Tibetan (Ebihara, 2014), and Jingpaw (Kurabe, 2016). Additionally, the findings from Dhakal and Donohue (2015) are considered here. Their study focused on causal/noncausal verb pairs in Tsum, a Tibeto-Burman language spoken in villages in Nepal adjacent to the Ghale speaking area, as shown in Figure 1. They examined the 31 verb pairs in Tsum as well.

Figure 1. *Distribution of languages in Central Nepal*

Table 3 and Figure 2 show the percentages of causative coding in these languages.

Table 3: *Percentages of causative coding in Tibeto-Burman languages*

Language	Percentage of causative coding	Source
Newar	80.6%	Matsuse (2014)
Burmese	61.3%	Otsuka & Onishi (2014)
Meche	53.3%	Kiryu (2014)
rGyalrong	52.2%	Shirai (2014)
Tiddim Chin	50.0%	Otsuka (2014)
Amdo Tibetan	48.4%	Ebihara (2014)
Jingpaw	42.9%	Kurabe (2016)
Tsum	17.0%	Dhakal & Donohue (2015)
Barpak Ghale	15.5%	Author's field notes

Figure 2. *Percentages of causative coding in Tibeto-Burman languages*
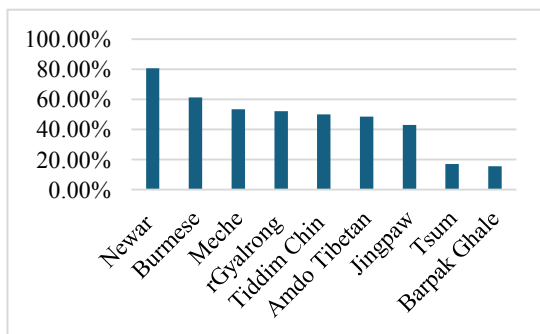
The low proportion of causative verb pairs might be an areal feature. Dhakal and Donohue (2015) report that only 17% of the 31 verb pairs are causative pairs in Tsum. Tsum and Barpak Ghale, the two languages spoken next to each other, are the only languages in this sample where the percentage of causative coding is below 20. A contrastive study of four Tibetic languages spoken in northern Nepal, Lhomi, Gyalsumdo, Nubri, and Lowa, by Dhakal (2017) also shows a preference for labile and suppletive coding in these languages, suggesting a relatively low frequency of causative coding compared to other Tibeto-Burman languages. [1] Further studies of causal/noncausal verb pairs in Tibeto-Burman languages in Nepal are needed to determine whether this is indeed an areal feature.

8. Conclusion

This study analyzed causal/noncausal verb pairs in Barpak Ghale, based on 31 verb pairs provided by Haspelmath (1993). The examination of the verb list revealed various coding patterns employed in this language. Causal/noncausal verb pairs in Barpak Ghale are classified as causative, anticausative, labile, equipollent, or suppletive coding. The significance of the present study in Tibeto-Burman linguistics lies in the analysis of tone-differentiated verb pairs as exhibiting anticausative coding. Such tone alternations are common in Tibeto-Burman languages and are often analyzed as having causative coding. In contrast, this study argues that such verb pairs can be analyzed as having anticausative coding in Barpak Ghale based on the direction of tone neutralization. Last, the comparison with other Tibeto-Burman languages shows that Barpak Ghale has considerably less frequent causative coding in the 31 verb pairs. The analyses in this study can lead the future research in two directions. The study implies that the low proportion of causative verb pairs seen in Tsum and Barpak Ghale might be an areal feature and that it might be possible to analyze tone-differentiated verb pairs as exhibiting anticausative coding in other Tibeto-Burman languages as well.

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[1] I would like to thank an anonymous reviewer for suggesting a comparison with Dhakal (2017).

Abbreviations

1	First person
ADV	Adverbializer
BEN	Benefactive
DAT	Dative
ERG	Ergative
GEN	Genitive
INCL	Inclusive
INS	Instrumental
LVM	Loan verb marker
LOC	Locative
NPST	Non-past
PFV	Perfective
PL	Plural
PST	Past
SG	Singular
TRANS	Translocative
V	Verb root
VOL	Volitional

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