A Grammar of Bantawa : grammar, paradigm tables, glossary and texts of a Rai language of Eastern Nepal

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Citation

Doornenbal, M. A. (2009, November 3). *A Grammar of Bantawa : grammar, paradigm tables, glossary and texts of a Rai language of Eastern Nepal. LOT dissertation series*. LOT, Netherlands Graduate School of Linguistics, Utrecht. Retrieved from https://hdl.handle.net/1887/14326

Chapter 4

Verbs

4.1 Introduction

Verbs   Verbs form an open class of words that code the core of propositions. In contrast with the prototypical noun, the prototypical verb codes temporally instable notions, i.e. actions, events and states (Givón 2001: 52). States are verbal in Bantawa, whether they are transient or stable.

Syntactical role of verbs   Syntactically, verbs stand out as the core constituent of clauses. Verbs are the grammatical heads of clauses. Verbs project the grammatical roles and govern case on the nominal constituents. While ordering of nominal phrases and other adverbial modifiers with respect to one another is relatively free, verbs must occur clause-finally. Nominal arguments occurring after the verb must be regarded as an afterthought, which is readily audible in the form of a pause. All clauses must contain an overt verb, except those predicate clauses that express a simple equation.

Verb classes   Simple equative predications can be expressed by zero verbs, which appears as a juxtaposition of two noun phrases. In §4.2 we discuss verbs that are grouped as 'to be' verbs. In the same section, we shall also discuss some other verb classes that stand out by their defining behaviour as a group. These verb classes are distinguished mainly by semantic and functional differences. We briefly discuss action, stative, modal and motion verbs.

Verb morphology   After this functional survey, I shall describe how verbs are put together formally. First I shall discuss verb stems (§4.3), then the simplex finite morphology (§4.4). The remainder of the simplex verb morphology is dealt with in the section on non-finite verbs (§5.1).

Tense and Aspect   The categories non-past and past or preterite are primary and coded on simplex verb forms. After the description of simplex verb forms, I shall

discuss temporal and aspectual categories such as imperfective, perfective, perfect and pluperfect forms (§4.6). Before I proceed to describe the morphosyntax that encodes composite tenses and aspects, these functional categories will be described in functional terms.

Subsequent chapters   This chapter describes the morphology of the finite simplex forms of the verb. In the subsequent chapters, we shall deal with several other aspects of verb derivation, morphology and syntax in detail.

Chapter 5 will deal with nominalisation procedures and strategies to embed verbs or full clauses into a matrix clause. Chapter 5 consists of two sections. The first section focuses on the morphology of non-finite verbs, the other on the application of general nominalisation to full clauses and verbs.

Chapter 6 will be dedicated to valency operations on the verb, i.e. operations having to do with the number and role of participants that the verbs encode. However, while doing that, at some points the effect of some valency operations on the temporal and aspectual interpretation of the verbs must be discussed as well.

Chapter 7 delves into the morphology of complex verbs. Under the heading 'complex verbs', compound verbs, progressives and complemented verbs are treated. Syntactically, complex verbs operate as a single syntactic constituent in the clause. For complex verb constructions, we shall discern different lexical and grammatical construction patterns.

4.2   Verb classes

All clause types must contain an overt verb, except for the bare predicate clauses. These equative clauses only contain two nominal phrases. They are full sentences and can even be nominalised as such. We may assume that there is a zero copula 'to be.'

In this overview of verb classes, we start with the verbs that share the property that they express some kind of predication. The copula verbs have similar syntactic behaviour, but have different aspectual flavours or distributional restrictions.

4.2.1   To be

The zero copula 'to be'   We may assume that the equative predicates such as (243, 244) contain a phonetically empty equative verb <Ø> (EQ). Alternatively we may introduce a special grammar for the equative construction that contains no verb at all and yeilds the equative meaning. However, the constructions containing zero copulae contrast with constructions containing an explicit copula (cf. 248, 249), as well as with constructions without any verb at all, e.g. (244) might mean 'that, my father' in wider context. For convenience, then, we shall assume an zero copula.

(243)   mo-ko   saŋ Ø ʔo?
        that-REF who EQ NOM?
            'Who is that?'

(244) mo-ko ɨŋ-pa   Ø.
      that-REF my-father EQ
        'He is my father.'

These clauses have an equative (Rai 1985: 179) or identifying meaning.

yuŋma ~ yukma In equative sentences, as an alternative to the zero copula, appropriately inflected forms of the verb *yuŋma* 'to sit, to be' can be used. *Yuŋma* is the general verb for existential and locative predication.

(245) baise   rajyə   mɨ-yuŋ-a-ŋ-a.
      twenty-two (N) kingdom (N) 3pl-sit-PT-PROG-PT
        'There were twenty-two kingdoms' [Gn]

(246) əni   ɨŋ-daju   jeʈʰa-enan   yuŋ-ci-ŋ-ci-ʔa.
      and (N) my-*elder.brother (N) firstborn (N)*-COMe sit-DU-PROG-DU-e
        'I and my oldest brother were together' [Sm]

(247) səᵈʰə̃y-ʔo   lagi   kʰokli-ya-ŋa   kʰana tɨ-yuŋ.
      always (N)-GEN *for (N)* forest-LOC.level-EMPH youˢ   2AS-sit
        'You will stay in the forest forever.' [Dt]

Yuŋma belongs to a family of verbs based on the stems <yuŋ ~ yuk> that all signal locative existence 'to be, to sit, to put'. These verbs are also used as auxiliaries in the formation of the perfect (§5.2.3).

lima Where predication has an aspect of change, the verb *lima* 'to become' is preferably used. Consider the following examples.

(248) kʰana haŋ [Ø]
      youˢ   king EQ
        'You are the king.'

This is the simple, equative clause. *Yuŋma* could have been used as well. To express future 'to be', we must use a form of the inchoative verb *lima* 'become', cf. (249).

(249) maŋkolen haŋ tɨ-li.
      tomorrow   king 2AS-become
        'You will be king tomorrow.'

(250) maŋkolen haŋ tɨ-li-ʔo   yuŋ-Ø.
      tomorrow   king 2AS-become-NOM sit-NPT
        'Tomorrow you will be king – for sure.'

In example (250), we see a form of the future perfect that expresses certainty. This construction will be discussed in section §5.2.3, on the perfect.

(251)   kʰana haŋ tɨ-li-ʔo.
        youˢ   king 2AS-become-NOM
            'You are the king, for sure.'

(252)   kʰana haŋ tɨ-li-yaŋ-ʔo
        youˢ   king 2AS-become-PROG-NOM
            'You are the king, for sure'

Both of these forms, one simple present and the other progressive, are augmented by the nominaliser <-ʔo>, that will be discussed in Chapter 5. The forms in examples (251, 252) express certainty by virtue of the combination of the verb and nominaliser.

(253)   kʰana haŋ tɨ-li-ʔa
        youˢ   king 2AS-become-EXCL
            'You are the king, for sure.'

Alternatively, the exclamative marker <-ʔa> can be used as an expression of certainty. *Lima* is also used as a modal auxiliary expressing certainty and necessity.

cʰukma   The verb *cʰukma* 'to be down, to jump' is used locatively and in comparative contexts.

(254)   o-ko   dem   cʰuk-Ø?
        this-REF how.much be.down-NPT
            'how much is this?'

(255)   dʰakko cʰuk-Ø.
        upwards be.down-NPT
            'It is up.'

(256)   iŋka bantawa rai cʰuk-ŋa.
        I   Bantawa Rai be.down-1sNP
            'I am a Bantawa Rai.'

yakma ~ yaŋma   The etymologically related verbs *yakma* and *yaŋma* primarily indicate bare existence or equation. However, these verbs may be used in a locative sense, where locative predication introduces the existence of a new entity, as is particularly clear in example (260). *Yaŋma* is rather rare as an independent verb, as *yuŋma* and *yakma* are usually preferred.

(257)   o-da   di   yak-Ø-yaŋ-Ø.
        this-LOC what be-NPT-PROG-NPT
            'What is this here?'

(258)   dem-ka-tet   yiŋ-ci   mɨ-yak-Ø-yaŋ-Ø.
        how.much-CNT-qual word-PL 3pl-be-NPT-PROG-NPT
            'How many words are there?'

(259)   iŋ-goji-da   sumka yaŋ yak-Ø-yaŋ-Ø.
        my-*pocket (N)*-LOC three   coin be-NPT-PROG-NPT
            'There are three coins in my pocket.'

(260) wasɨŋ-taŋ-du   sɨkwa-ci mɨ-yaŋ-a-ʔo
       alder.tree-head-LOC.high hornet-PL 3pl-be-PT-NOM
         'that there are hornets up in an alder tree' [Bw]

Some speakers frown upon locative usage as in (259). For equation in contrast
with location, *yakma* is used, e.g. for weight:

(261) weight

     a. 50 kilo on-ŋa   yak-ŋa-Ø-ŋa.
       50 k.g. this.much-EMPH be-1sNP-PROG-1sNP
         'I weigh only 50 kg.'

     b. * 50 kilo on-ŋa   yuŋ-ŋa-Ø-ŋa.
       50 k.g. this.much-EMPH sit-1sNP-PROG-1sNP
       ** (ungrammatical) with *yuŋma*

This verb pair is the root for the progressive *yaŋma* and habitual *yakma* vector
verbs (§7.2.6).

Defective negative forms   While the normal verbal negation formation is with
either the prefixes <ɨ-> (NEGNP) or <man-> (NEGPTP), the negative forms for some
'to be' verbs are irregular, viz. examples (262a-263c).

(262) negative of *yaŋma* (regular would have been *manyaŋ*)

     a. maʔaŋ!
         'No!'

(263) negative of *yuŋma* (regular would have been *manyuŋ*)

     a. matdɨŋ
         'It's not there!'

     b. matdɨŋ-ci
       not.there-PL
         'They are not there!'

     c. matdɨŋ-yaŋ
       not.there-PROG
         'They are not there (currently)!'

The paradigms are defective. *Maʔaŋ* is a single form. For the verb *matdɨŋ* the
plural and dual are identical (263b), and a progressive is also possible (263c).

4.2.2   Verb classes by syntactic behaviour

Verbs can be classified along many different lines. Here, I shall outline the major
groups of verbs, identified by shared syntactic behaviour and corresponding semantic
features. Prototypically, verbs describe an event or state pertaining to the arguments
in the clause. All verbs have a valence indicating the number of participants of
the event. Valence is a major component of transitivity, cf. §6.1. Verbs conjugate

according to transitivity class. Verbs may be transitive or intransitive, depending on the nature of the predication. Verb classes may be distinguished by the number or type of participants or by the nature of the predication.

Action verbs

Action verbs describe events and form a relatively unmarked and large class of verbs. Action verbs are subcategorised for nominal complements.

(264) naŋsi-ʔa   ɨ-catt-a-ŋ
       hailstone-ERG 3AM-hit-PT-1s
          'A hailstone hit me.'

(265) mɨkmɨkmɨkwa kʰaw-a
       profusely   cry-PT
          'He cried profusely.'

    Prototypical action verbs describe an activity with an endpoint, which makes them typically telic, cf. ex. (264). However, there may be an inherent progressive aspect, no complement, or adverbial modification may stretch the time reference, cf. (265).

    Action verbs project either one, two or three grammatical roles that normally are expressed by nominal phrases. Single grammatical role verbs usually conjugate intransitively, although there are exceptions. Verbs projecting more than one grammatical role can conjugate transitively. The issue of transitivity and grammatical roles will be discussed in Chapter 6.

Stative verbs

Stative verbs are those verbs that predicate a state or property. Stative or property verbs fulfil the role that adjectives fulfil in many European languages.

(266) cʰak-Ø-yaŋ-Ø.
       be.hard-NPT-PROG-NPT
          'It is hard!'

(267) nu-Ø!
       be.good-NPT
          'It is good, OK!'

    Stative verbs are intransitive but often have transitive, causative counterparts. Frequently, these counterparts are formed by transitive conjugation of the intransitive root. In chapter 6, on transitivity operations, this will be discussed at length.

    Stative verbs are often what I shall call middle verbs, in the sense that the patient of transitively conjugated verb form corresponds to the subject of a clause containing an intransitive conjugation of the same verb. More precisely, both patient and subject are interpreted as undergoers. For action verbs, by contrast, both the agent in transitive conjugation and subject are interpreted as source or agentive.

Modal verbs

There is a distinct class of verbs that take infinitive phrases as a complement and serve as modals. Some verbs take infinitive complements only, while other verbs are used as modals in a more or less figurative sense.

Inceptive   *Muma* is interpreted as the inceptive auxiliary 'about to begin, to start'. In isolation *muma* means 'to do'.

(268)   i-naŋwa   hu-ma   mu-yaŋ-Ø
         his/her-mind spin-INF do-PROG-NPT
            'He starts to get dizzy.'

Obligation   *Dotma* 'be necessary' is the auxiliary of obligation. Conjugated transitively in isolation, *dotma* means 'to beg, to require'. *Dotma* frequently appears in third person singular intransitive forms with an infinitive complement.

(269)   kʰat-ma dot-Ø.
         go-INF   must-NPT
            'One has to go (you must go)'

Ability   *Rɨma* 'can' expresses ability in the sense of having the capacity, not in the sense of having the opportunity or permission.

(270)   cep-ma   ɨ-rɨ-n-ɨŋ.
         speak-INF NEGNPp-can-NEGn-1s
            'I cannot speak.'

Hurry   *Diŋma* 'hurry' expresses a hurried manner of action and selects an infinitival complement.

(271)   bəjara kʰat-ma diŋ-ŋa-Ø-ŋa.
         bazaar go-INF   hurry-1sNP-PROG-1sNP
            'I am hurrying to go to the bazaar.'

Desire   The verb *sɨma* 'to die' has undergone a semantic shift to function as a modal verb in the figurative sense of 'to die for, to wish'.

(272)   badde cija duŋ-ma tɨ-sɨ-yaŋ?
         much   tea drink-INF 2AS-die-PROG
            'Do you want to drink tea badly?'

(273)   kʰo   sa   sɨ-wa.
         he/she meat die-PT
            'He is hungry.'

   Collocating with *sa* 'meat' the verb *sɨma* simply means 'be hungry'.

Inchoative The verb *lima* in isolation means 'to become, to happen'. When *lima* in the past tense is combined with infinitive phrases, it signals that the subordinated phrases did happen, cf. examples (274, 598d). In non-past tense, *lima* indicates that the infinitive phrase is imminent, cf. (275). Like the auxiliary of obligation, there may be a imperative overtone in future usage of *lima* such that things 'must' happen.

(274) watni min-ma-ʔa-ŋe   buŋwakʰa-ʔo puk-ma lis-a,   sum-ka-doŋ
       this.way think-INF-ERG-EMPH Bunwakha-GEN begin-INF become-PT three-CNT-year
       bu-ya.
       front-LOC.level
          'By such a thought the birth of Bungwakha happened, three years ago.'
       [Bw]

(275) jʰarak-s-a pʰa-ma li-Ø.
       all-PRN-ERG help-INF become-NPT
          'All will help.'

Others There are many more auxiliaries that take infinitival complements. Not all auxiliaries can be discussed, and it seems pointless to invent Latinate terminology for each of them. The most important are a) *tokma*, auxiliary of permission, of opportunity, 'to get' in isolation, and b) *pukma ~ puŋma*, another inceptive auxiliary, 'to start, to begin'.

Motion verbs

Motion verbs or, in a wider sense, all verbs that signal location or a change of location, form a very significant class of verbs. Motion verbs function very productively in verbal compounding (§7.2). Used as vector verbs in compounds, motion verbs indicate a perfective aspect and sometimes the direction of the action and where the action ends. Syntactically, motion verbs stand apart as they license the supine <-si> (SUP), cf. section §5.1.5, whereas modal verbs strictly collocate with the infinitive.

   Like locative cases, motion verbs are marked for vertical orientation in a clear-cut three-way division, i.e. high 'movement up', level, and low 'movement down'. Additionally, there are level-neutral motion verbs that give no information on vertical level change and express movement from or to an unknown source or far away. Orthogonal to this division, there is a split between 'come' and 'go', resulting in eight different roots for movement. Motion verbs can be transitivised in different ways (cf. Ch. 6), such that quite a few verbs result (see Table 4.1).

   There are also motion verbs that focus on the method of movement rather than on the vertical orientation, viz. *konma* 'to walk about', *latma* 'to take out', *lotma* 'to run', *pʰuŋma* 'to escape', etc. These motion verbs serve equally well as vector verbs in compounds and also select the supine.

Other verb classes

Many more verb classes can be identified. Other verb classes are not introduced here, as I have restricted the discussion to the immediately relevant syntactic and

morphological notions. Emotion verbs and verbs with obligatory arguments are discussed in Chapter 6.

4.3 Morphology of verb stems

4.3.1 Introduction

This section treats two aspects of the morphophonology of the verb stem. First, it is noted that there are two stem allomorphs for each verb. The canonical shape of these allomorphs is described. The selection of allomorphs is conditioned by phonological context. However, the forms of the two stem allomorphs labelled pre-consonantal stem and pre-vocalic stem are not predictable from the context. It does not always suffice to know one of the stems to be able to predict the other.

Secondly, to understand the range of alternation, we group the verbs into conjugation classes. Several scholars have previously published on the formal characteristics of Bantawa verb stems[1]. I shall show, that if we know the pre-consonantal stem and the conjugation class for a verb, we can predict the verb's junction behaviour. There is no way to describe the stem alternation more economically.

There are three conjugation classes. The first two are called the t-conjugation and s-conjugation. These classes are based on the type of alternation between the two different stem allomorphs for an individual verb. In the case of the t- and s-conjugations, the pre-vocalic stem for a verb derives from the pre-consonantal stem form by addition of either a -t or -s. The third class is labelled the Ø-conjugation, because here the pre-vocalic stem is not derived from the pre-consonantal stem by an obvious addition. In this Ø-conjugation, several consonant changes occur, some of which are unpredictable, forcing us to introduce subclasses in the Ø-conjugation.

In §6.3.1, some stem derivation processes for causativisation are discussed. These derivation processes explain morphological relations that exist between verb stems. It appears that the s-conjugation and t-conjugation classes, at least historically,

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[1]In his grammar, Bāntāvā (V.S. 2055: 33) does list stem alternations but does not attempt to group verbs by alternation patterns. Rai gives an overview of the stem formation for his dialect of Bantawa (1985: 87). Sprigg has published on the subject of Bantawa verb roots, presenting the stem alternation patterns as a transparant morphological transitivity operation (1987).

Table 4.1: Verbs of movement - by direction and level

direction	*up*	*level*	*down*	*neutral*
come	tʰaŋma	banma	yɨma	tama
go	lonma	bitma	dʰama	kʰatma
bring (transitive)	tʰakma	batma	yɨtma	tatma
take (transitive)	lonma		dʰanma	kʰatma, kʰanma

largely originated from these lexical derivation processes. The relation between derivation processes and the conjugation classes will be discussed in §6.3.1. The conclusion of that discussion is that the two parameters, i.e. (1) whether a verb takes part in a certain derivation process and (2) how a verb conjugates, seem only loosely correlated. There are many exceptions to the system. While there is certainly a relation between derivational origin and conjugation class, this relation is mostly historical. The membership of a conjugation class is not necessarily related to the derivational history of a verb.

Notational conventions and abbreviations   Abbreviations follow the conventions outlined in the section on abbreviations in this book. Subscripts indicate conjugation type membership, e.g. hin_{3a} is member of conjugation class 3a, thus conjugates as *hilu*, while hin_2 is member of class 2, thus conjugates as *hinsu*.

4.3.2   Phonological structure of the verb root

Verbs, roots and stems   A Bantawa verb may be listed in the lexicon by a form of one, two or more syllables followed by the ending of the infinitive, the citation form. One or more syllables may uniquely identify a verb as a unique combination of form and meaning, and thus are the verb as a whole. However, finite and all other verb inflection only affixes to the last part of any polysyllabic verb. We shall label this verbal head as the 'stem' for the remainder of this section. A verb stem in this sense may in turn have been historically derived from another root morpheme. However, here we are not concerned with roots of derivations but with stems that host inflection. All Bantawa verbs have one or two stem allomorphs: The pre-consonantal verb stem allomorph is always a single syllable, the pre-vocalic stem allomorph is usually sesquisyllabic.

There are instances where two syllables uniquely identify a verb meaning, such as is the case with verb complements, e.g. *kʰa-etma* 'to tell'. However, in finite forms, the complement is split off from the verbal head of the stem and all flectional prefixes affix to the verbal head only: *kʰa miettuci* 'they told them.' A grammatical formation such as the analytical causative with <-met> (CAUS) affirms the fact that only the verbal head hosts inflectional markers, while deverbal grammatical complements are prefixed to the inflected verb as a whole, cf. §7.3.

Whether these constructions are treated as a) a special instance of the general process of verbal compounding, or b) as a verb always taking a deverbal stem as complement, in either case the special status of the verb stem is maintained. In the ensuing discussion we shall discuss the regular alternation of verb stem allomorphs.

Allomorphs   For each Bantawa verb there are two stem forms, i.e. stem allomorphs. For instance, the verb <kon- ~ kol-> in the infinitive is *kon-ma* (walk-INF), whereas the third person singular form is *kol-a* (walk-PT). The selection of stem forms is entirely dependent of the paradigmatic ending. This stem selection can be described in terms

of phonological context only. However, to know the form of a stem for each context, we must list two stems for each verb[2].

Pre-consonantal stem the stem allomorph that appears before consonants or word-finally

Pre-vocalic stem the stem allomorph that appears before vowels

The pre-consonantal stem The syllable structure of the pre-consonantal stem allomorphs is as in (276).

(276) Pre-consonantal stem syllable structure
       (C_i) V (C_f)

The initial consonant C_i may or may not be present. The possible initial consonants are listed in (277).

(277) Verb initial consonants
       C_i = { p p^h b b^h m
                  t t^h d d^h n
                  c c^h j j^h
                  k k^h g g^h $ŋ$
                  h s y w
                  l r }

The initial consonant can be any of the valid native consonant phonemes. Consonant clusters are ruled out, however. The vowel can be any of the native Bantawa vowels (278).

(278) Verb stem vowels
       V = { a e i o u ɨ }

The final consonant C_f may or may not be present. Valid final consonants are a limited subset of the consonant phonemes. Stem-final consonants in the pre-consonantal stem only appear before consonants or before the word boundary. These consonants are true syllable codas and not the onset of a new syllable.

(279) Final consonants
       C_f = { p t k m n ŋ }

In short, the valid shape of the pre-consonantal stem is that of the Bantawa syllable, except that initial consonant clusters are not allowed.

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[2]Sprigg (1992) states that there may be as many as five different types of junction for some verbs. This may be true in a phonetic sense, but morphophonologically only two are relevant. He lists five different contexts that condition five possibly different forms: (a) before vowel (b) before nasals (c) before glides (d) before voiced stops /d/ (e) at word boundary. However, the morphophonologically relevant distinction is two-way only: 1) before vowels {Sprigg's (a)} 2) elsewhere {Sprigg's (b-e)} The alternations in the elsewhere part are entirely predictable by phonological rules that are not unique to any stem junction type, cf. §2 on phonology.

The pre-vocalic stem   The pre-vocalic stem can take on more forms than the pre-consonantal stem. The structure of the pre-vocalic stem is as in (280):

(280)   pre-vocalic stem syllable structure
       $(C_i) \; V \; (C_f) \; (C_e)$

If there is an extra consonant C_e in the pre-vocalic stem, the final consonant C_f is always the same for the two verb stem allomorphs. However, in the Ø-conjugation, where there is no extra consonant, it is not always the case that the same consonant C_f from the pre-consonantal stem persists in the pre-vocalic stem. For pre-vocalic allomorphs that have no extra consonant, the stem-final consonant is not a syllable-final consonant. Rather, the stem-final consonant is the initial consonant of the next syllable. In this case, the consonant may be the same as the consonant in the pre-consonantal stem, but usually there is a change. This change is not always predictable. In the next section we shall list the possible allomorph pairs to find the patterns. There are only two consonants that can appear as the first consonant in the next syllable, in an pre-vocalic stem with a filled final consonant position, cf. (281).

(281)   Extra consonants
       $C_e = \{ \; s \; t \; \}$

Before /s/, only nasal final consonants appear. There are two exceptions that deserve attention. Firstly, due to a general phonological rule, /n/ before /s/ is pronounced as [ĩ] or even [i], cf. §2.2.2. This is a general phonological rule, however, that is not specific to verb roots and does need not concern us here. The other exception is a real exception. There are two verbs that violate the rule that only nasal final consonants appear before /s/, see example (282).

(282)   Non-nasals before extra /s/

    a.   ɨts-a
        bad-PT
          'It is bad.' (<ɨtma 'to be bad')

    b.   taks-a.
        fill-PT
          'It filled.' (intr, <takma 'to fill')

The verb <tak ~ taks> 'to fill (intr)' was reported for the *Āmcoke* dialect only, and even so, this is an exception even for *Āmcoke*. These exceptions do not violate any phonotactic rule of Bantawa, but are exceptional only in being a member of the s-conjugation class.

Syllabicity   The real difference between pre-consonantal and pre-vocalic stems is in syllabic structure. Pre-consonantal stem allomorphs are truly monosyllabic in the sense that they form a full syllable. Pre-vocalic stem allomorphs are sesquisyllabic, spanning one and a half syllable due to the syllabification process in Bantawa. The few vowel-final stems where both the final and extra consonant (C_f and C_f) are absent are exceptional in the sense that for these stems both the pre-consonantal

and pre-vocalic stems span a single syllable only. In the normal case, the final stem consonant or stem augment of the pre-vocalic stem allomorph is the onset of the second syllable of the finite verb.

4.3.3   Bantawa verbs grouped by junction type

So far, we have described the canonical Bantawa verb stem allomorphs in general terms. To understand how stem allomorphs relate to one another, we list the stem alternatives for each verb. Stem allomorphs for any verb are most simply seen comparing infinitive forms ending in <-ma> (INF) and third person singular forms ending in the ending <-u> (3P) for transitive verbs or in the past-tense suffix <-a> (PT) for intransitive verbs. Verbs can be classed into junction types by the alternation between their pre-consonantal and pre-vocalic stem forms. There are three conjugations for verbs, and the third conjugation is in turn subdivided into subgroups[3].

1. t-conjugation
   In this conjugation, the pre-vocalic stem equals the pre-consonantal stem +t. All canonical syllable final consonants can appear in front of the extra consonant /t/. The stem-final consonant position cannot be empty, however. Both transitive and intransitive verbs appear in this conjugation.

   <hek ~ hekt>   e.g. hek-ma 'to cut' vs. hekt-u 'he cut'
   <ŋap ~ ŋapt>   e.g. ŋap-ma 'to snatch' vs. ŋapt-u 'he snatched'
   <hot ~ hott>   e.g. hot-ma 'to be tired' vs. hott-a 'he was tired'
   <kuŋ ~ kuŋt>   e.g. kuŋ-ma 'to bend' vs. kuŋt-a 'it bent'
   <dʰan ~ dʰant> e.g. dʰan-ma 'to bring down' vs. dʰant-u 'he brought it down'
   <pʰom ~ pʰomt> e.g. pʰom-ma 'to get confused' vs. pʰomt-a 'he was confused'

   For this conjugation, the pre-consonantal stem is entirely predictable from the pre-vocalic stem, i.e. by cutting off the /t/.

2. s-conjugation
   In this conjugation, the pre-vocalic stem equals the pre-consonantal stem +s. If the stem-final consonant is there, it must be a nasal: { ŋ n m }. With the exception of the examples in (282), only nasals appear in front of the extra consonant /s/. It is also possible that the stem-final consonant position is empty. Both transitive and intransitive verbs appear in this conjugation.

   <oŋ ~ oŋs>   e.g. oŋ-ma 'to give light' vs. oŋs-a 'it gave light'
   <kʰan ~ kʰans> e.g. kʰan-ma 'to send' vs. kʰans-u 'he sent it'
   <im ~ ims>   e.g. im-ma 'to sleep' vs. ims-a 'he slept'
   <nu ~ nus>   e.g. nu-ma 'to heal' vs. nus-u 'he healed'

   Similar to the t-conjugation, the pre-consonantal stem can unambiguously be derived from the pre-vocalic stem for all verbs of this conjugation, i.e. by cutting the <-s>.

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[3]This organisation in conjugations is similar to that in (Rai 1985) and (Sprigg 1987). Classes 1 and 2 correspond with both these writers' t- and s- classes. Class 2 includes Rai's Class 6. Class 3 here corresponds to Rai's classes 3, 4 and 5. The analysis here resembles Sprigg's, but differs in some aspects, as will be clear.

3. Ø-conjugation, or single consonant conjugation
The identifying feature of this conjugation is that there is no extra consonant in the pre-vocalic stem forms. All stem-final consonants are found in this conjugation, as well as stem that have no stem-final consonant.

Instead of adding a consonant, Ø-conjugation pre-vocalic stem forms either are equal to the pre-consonantal stem forms, or differ from the pre-consonantal stem forms only by a) consonant *change* or b) consonant *deletion* or c) vowel coalescence, in the case of the absence of a stem-final consonant in the pre-consonantal stem.

As a) the number of different consonants appearing in pre-vocalic stems is bigger than that in pre-consonantal stem, and b) the pre-consonantal stem consonant is often predictable from the pre-vocalic stem, we assume that the pre-vocalic stem is primary and the pre-consonantal stem is secondary.

Third conjugation class   As conjugation class (3) is, in a sense, the most basic of the three classes and shows most variation in stem forms, the Ø-conjugation needs a special discussion.

This class has been dubbed the Ø-conjugation[4], because there is no stem-final consonant. At least, so it seems. However, within this class we observe different behaviour with regard to vowel fusion. The $-p_3$, $-k_3$ and $-n_3$ verbs of the Ø-conjugation have empty stem-final consonants prevocally, but retain their stem-final consonant position, with the result that hiatus or some replacement for this illegal empty onset occurs. In contrast, vowel-final stems are subjected to coalescence rules as shown in §4.3.6. To clarify that the -p, -k and -n verbs in this class behave differently from verbs that have no final consonant in the pre-consonantal stem, I have listed the glottal stop /ʔ/ as their pre-vocalic stem consonant in the tables below. This signals that fusion processes that apply to verbs without a final consonant in the pre-consonantal stem do not apply. In examples (283-286) I have contrasted the pre-consonantal stems that appear before the infinitive <-ma>, with the pre-vocalic stems that appear before the past tense suffix <-a> or the third person patient ending <-u>.

(283)   cakma ~ cama

     a. (wa)cak-ma   ~ (wa)caʔ-a   'to bathe', 'he bathed'

     b. ca-ma   ~ ca-Ø   'to eat', 'he ate'

(284)   tupma ~ tuma

     a. tup-ma   ~ tuʔ-u   'to meet', 'he met'

     b. tu-ma   ~ tu-Ø   'to dig', 'he dug'

(285)   hokma ~ homa

     a. hok-ma   ~ hoʔ-u   'to open', 'he opened'

     b. ho-ma   ~ ho-Ø   'to burn (*tr*)', 'he burnt'

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[4]Sprigg (1987): z-conjugation

(286) hopma ~ homa

    a. (wa)hop-ma   ~ hoʔ-a   'to get wet', 'he got wet'

    b. ho-ma   ~ ho-ʔa   'to burn (*intr*)', 'it burnt'

For these examples the third-person forms are different only by virtue of the consonant position for C_f at the end of the stem.

However, some verbs are pronounced as coalesced forms anyway. While stem vowels regularly do not fuse with vowel initial suffixes due to the stem-final consonant position, the stem vowel /ɨ/ may fuse: c^hɨk > c^hu (<c^hɨ+u) 'to pinch', hɨp > hu (<hɨ+u) 'peel'. Similarly for the verb 'to chew', two different verbs, both of the third conjugation, are offered: *k^hupma* > k^huʔu: 'he chews' or *k^huma* > k^hu: 'he chews'.

To get a full overview of the stem-consonant changes in this conjugation class, we list the stem consonant pairs in Table 4.2.

Exceptions   There are two verbs that do not fit into the conjugation classes as presented here. Both are one-of-a-kind exceptions: <min ~ mitt> 'to think'[6] and <k^haŋ ~ k^ha> 'to look'. The verb *k^haŋma* 'to look, see' is very frequent as a second verb in verb compounds, where it signals politeness. However, *k^haŋma* is apparently avoided in the past tense in its literal meaning. Instead forms of *copma* 'to see' are used.

4.3.4 Predictability of conjugation class

If we know the pre-consonantal stem of a verb, we can never predict the form for the pre-vocalic stem. However, if we know the pre-consonantal stem plus the verb's conjugation type, we can predict the pre-vocalic stem unless the verb is of conjugation type 3) and the stem's final consonant is one of *{n Ø}*. In these cases we must know the sub-type as well. Conversely, it is not true that the pre-consonantal stem is always predictable from the pre-vocalic stem either. If the pre-vocalic stem has a final syllable break, then the pre-consonantal stem must be one of *{ p n k Ø }*. If the pre-vocalic stem has /r/ as consonant, the pre-consonantal stem must be one of *{ t n }*. If the pre-vocalic stem has /w/ for consonant, the pre-consonantal stem must be one of *{p Ø}*, and /y/ leads to either *{ n Ø}*. There is therefore no alternative for the lexicographer but to either list both stems or give one of the stems and, if necessary, the verb's conjugation type.

Sprigg (1987: 13) seems to object to the idea of treating 'lexical items such as [...] as each having two phonological forms, a vowel-final form [...] and a consonant final form'. Sprigg fields five objections to this solution, amongst which: 'it would upset grammatical relationships'. This objection refers to the lexical process of causative formation (§6.3.1) that he relates to conjugation assignment. Sprigg (1987) seeks to describe the causative formation process as a 'conjugation type shift' only, and therefore his conjugation type assignment is informed by this lexical process as well

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[5]Sprigg (1987) lists two verbs that show a <-t ~ -Ø> pattern, viz. <lot ~ loy> 'run' and <lat ~ lay> 'take out'. However, in our data these pattern with all other t_3 verbs, i.e. <lot ~ lor> and <lat ~ lar>.

[6]The second stem form may derive from a causative interpretation of the verb, viz. 'I made myself think'. In other texts an alternative, regular form is found, viz. *min-a* 'he thought', based on a stable stem min$_{3b}$.

Table 4.2: Overview of consonant alternation in the Ø-conjugation
Stem-C = pre-consonantal stem, Stem-V = pre-vocalic stem

Stem consonant pairs			Members and/or comments
Stem-C	Stem-V	Conj	(infinitive ~ third person sg. past)
k	ʔ	3	sokma ~ soʔu 'kick'.
t	r	3	setma ~ seru 'kill'. The change r > t is also found in other languages, e.g. Limbu.
			We would expect /t/ to pattern with /k/ and /p/, but it does not[5].
p	ʔ	3	There is no need for a sub-class. The epenthetic /w/ is conditioned by the following vowel
	w	3	if this is an /a/, /w/ is inserted. Bāntāvā (V.S. 2055) lists verb alternatives in his grammar using the -a verb ending only, consistently inserting /w/ also for -k₃ stems.
Ø	Ø	3a	/Ø/ here means 'no syllable boundary'. By consequence,
	ʔ		the stem vowels is subject to the coalescence processes such as described in §4.3.6.
	w	3b	These glides are epenthetic unlike the /w/ ~ /y/
	y		that replace /p/ in the Ø-conjugation. As the /w/ and /y/ distribute complementarily, conditioned by surrounding vowels, we assign them to one class (3b).
ŋ	ŋ	3	a stable stem
n	l	3a	Surprisingly, the /n/ class shows very unpredictable behaviour, while other nasals produce stable stems.
	n	3b	The l-forms are most frequent: konma ~ kola 'walk'.
	r	3c	The n- and y-forms are in complementary distribution w.r.t. the preceding stem vowel, but then, as these forms are few, we shall leave it alone.
	y	3d	For each of the ʔ-, y- and r- consonant forms there are clues from the derivational relationship with -tt-stems, that they originally were *-t.
	ʔ	3e	However, the derivation history is not transparent from the current forms.
m	m	3	a stable stem

as by the simple surface observations of stem alternation. For a sweeping analysis like that, it is troublesome if the move between 'conjugation types now do not correspond to the derivational process'. Repeating the problem as an argument, he notes that it would complicate lexicography if we have to list two forms. However, it is obvious that the conjugational facts do not correspond to derivational rules[7]. We must not sacrifice transparency of the conjugation system in order to arrive at neat linguistic analyses.

In Table 4.3 the reader finds a list of all stem consonant pairs, their frequencies and conjugation class assignment. All verbs can be found in the verb list in the appendix.

This table prompts the phonological comment that the absence of *-iŋ* and *-ik* stems is by no means a coincidence. The sound change in chapter 2, rule (43) has historically emptied those slots. In the chapter on verb derivations (§6.3.1), we shall return to this observation.

4.3.5 Phonological justification for conjugation classes

In view of the constraints on Bantawa syllable structure (cf. §2.2), it is obvious that the primary motivation for the conjugational alternation of verb roots is phonological. We can start to assume that the pre-vocalic stem is the basic root for each verb, whenever the pre-vocalic stem is more identifying for a verb than its pre-consonantal stem. For all pre-consonantal stems, there are multiple possibilities of pre-vocalic stem, but this is rarely true the other way around. Based on the alternations between pre-vocalic and pre-consonantal stems, we may formulate phonological rules that are invoked when the constraints on syllable structure are not satisfied[8].

(287) sound change of liquids at syllable-final position

    a. l → n / _ [.]

    b. r → t / _ [.]

(288) deletion of extrasyllabic consonant before syllable boundary

    a. t → Ø / [+consonantal] _ [.]

    b. s → Ø / [+consonantal] _ [.]

These rules capture most of the current facts but do not regularly and predictably apply synchronically. For instance, rule (287b) does not always apply. There are forms in -r- that are inflections of -n stem verbs, e.g. *cʰor-u ~ cʰon-ma, wer-u ~ wen-ma, cʰir-u*

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[7]Some -Ø verbs from the second conjugation, as well as some Ø-verbs and n-verbs of the third, are roots for -t verbs of the first conjugation. Sprigg (1987: 22) assigns those items to the t_1-class (-tt-transitives) that derive from a $Ø_3$-class verb to a virtual $Ø_1$-class. (But, he does not discuss the t_1-examples that have a derivational relationship to $Ø_2$- or n_3- verbs.) There are two drawbacks to this approach. First, now the Ø-class verbs have been subclassed, without a phonetic difference between the two sub-types of verb. Second, there are many more derivational oddities (§6.3.1), and it is not a good strategy to introduce conjugation classes, that must describe surface behaviour, to answer for lexical irregularities. While Sprigg's analysis is clear and gives the correct clues for historical reconstruction, it complicates conjugation assignment.

[8]In these rules [.] denotes syllable boundary.

Table 4.3: Verb Stem Alternations and Frequencies

Stem final		*stem vowel*						*Conjugation*			Total
-C	-V	a	e	i	o	u	ɨ	1	2	3	per pair
Ø	Ø	9			2	1	3			15	15
	w					3	3			6	6
	y			2						2	2
	ʔ	1		6	2	3	4			16	16
	s	12	9	8	8	7	12		56		56
p	w	2	2							4	4
	ʔ	6	3	3	7	12	2			33	33
	pt	13	16	9	16	14	7	75			75
t	r	11	9	4	6	2	4			36	36
	tt	19	13	17	13	19	13	94			94
k	ʔ	5	5		12	6	4			32	32
	kt	16	13		20	17	15	81			81
m	m	2	4	2	5	4				17	17
	ms	14	11	4	8	6	2		45		45
	mt	7	6	6	13	10	2	44			44
n	l	2	2	4	5	1	2			16	16
	n	1	4	1						6	6
	y				1	1				2	2
	ʔ		2	3						5	5
	r		1		2		1			4	4
	ns	4	4	2	1	3			14		14
	nt	19	9	10	15	11	9	73			73
ŋ	ŋ	8	3		4	4	6			25	25
	ŋs	12	11		10	15	9		57		57
	ŋt	11	7		11	2	4	35			35
	Totals	174	134	81	161	141	102	402	172	219	793

~ *cʰin-ma*. We can assume that these rules applied actively in the past though, and now their reflexes have been frozen in verbal conjugation classes. Irregularities as this /r/ < /n/ pattern may well be due to the partial replacement of original /t/ verbs by their more transitive /n/ allofams. While the pre-consonantal stem of a verb did get replaced, the pre-vocalic stem did not. The rules in (288) apply regularly, making the pre-consonantal stem for first and second conjugation class verbs predictable from the pre-vocalic stem. Rules (288) leave a phonological trace in tone, cf. §4.3.7.

The problem with investigating the status of the above rules is that there is no scope for application elsewhere in the language. Not only is nominal flection quite limited, but also all nominal roots have legal final syllables that are not dependent on further vowel-affixation to be validated. Wherever necessary in the noun classes (e.g. with loans from Nepali), other strategies are employed to comply with the restrictions of syllable structure.

It is not possible to devise rules like the above to explain the elision of /k/ and /p/ in the Ø-conjugation class. First of all, in this instance of pre-consonantal stem and pre-vocalic stem correspondences, the pre-consonantal stem is actually richer in information than the pre-vocalic stem. By consequence, rules to disallow glottal stops or empty onsets by rewriting them into /k/ or /p/ in the appropriate contexts are bound to overgenerate tremendously. To begin with, there are actually many cases where empty syllable codas are found. In the reverse rule /k/ or /p/ would be rewritten to /Ø/ or /ʔ/, intervocalically. This rule may have applied historically but seems to lack any motivation synchronically, witness the presence of many poly- as well as monomorphemic bisyllabic forms containing exactly that sequence.

(289)   V-p-V, V-k-V
    a. tʰupi   'scar'
    b. diwapa   'forefather'
    c. deki   'why'
    d. jaŋcʰoku 'hill nettle'

In sum, we can conclude that while there is a clear phonological motivation for the alternations in conjugation classes, viz. the restrictions on syllable structure, the synchronic status of rules trying to capture the alternations within conjugation classes is unclear.

4.3.6   Vowel coalescence

There are some thirty verb stems ending in vowels. Every stem vowel is represented, but the forms for the single verb in -*e*, *tema* 'to calm down', could not be verified. For these verb stems, both the pre-consonantal and pre-vocalic stem end in a vowel. Affixation of consonant-initial verb endings is unproblematic, in that these do not geminate or change. The vowel-initial verb endings have conditioned allomorphs in the contexts of vowel-final verb stems. In the interest of economy, the verb allomorphs are described as morphophonologically conditioned. However, it is obvious that these allomorphs are the result of some process of coalescence. Except where bound verb suffixes meet vowel-final verb stems, vowel coalescence occurs

nowhere else in the language. The following verb endings are relevant to the discussion.

marker	gloss	function
-a	PT	past tense marker, appears both on transitive and intransitive verbs
-u	3P	third person patient marker, appears on transitive verbs only
-in	12PLSP	first and second person plural marker, appears both on transitive and intransitive verbs

The following fusion processes occur:

(290)   stem vowel -a

    a. a + in → an
        can
        'we eat'

    b. a + a → a
        nɨca
        'he eats you'

    c. a + u → a
        ca
        'he eats'

(291)   stem vowel -ɨ

    a. ɨ + in → ɨn
        tama rɨnka
        'we can come'

    b. ɨ + a → ɨwa
        rɨwaŋ
        'I could'

    c. ɨ + u → ɨ
        pɨŋ
        'I gave'

(292)   stem vowel -o

    a. o + in → on
        lon
        'we say'

    b. o + a → owa
        ɨlowa
        'they said to him'

    c. o + u → o
        lo
        'he said'

(293)   stem vowel -u

    a. u + in → un
        mun
        'we do'

      b. u + a → uwa
         nuwa
         'it is good'

      c. u + u → u
         tu
         'he digs'

(294)   stem vowel -i

      a. i + in → in
         yinka
         'we came down'

      b. i + a → iya
         iya
         'he laughed'

      c. i + u → iyu
         ciyu
         'he finished it'

The glides /w/ and /y/ that emerge in the forms listed are optional and epenthetic. The epenthetic glide can always be replaced by a glottal stop [ʔ], although that would in many cases be regarded as slightly unnatural. Glides are predictable by the previous vowel by the rules given in the chapter on phonology, ch. 2.

The past tense suffix <-a> is always preserved after root vowels, except where it fuses with its equal /a/. The /i/ vowel of the first and second person plural suffix <in> (12PLSP) always gives way to the stem vowel. The /u/ vowel of the third person patient suffix <-u> also always gives way, except after a root vowel /i/, where it remains intact. The following allomorphs must be defined:

3P	< u ~	
	∅	/ [+syllabic] _ ~
	yu	/ i _ >
PT	< a ~	
	∅	/ a _ ~
	ya	/ [-back] _ ~
	wa	/ [+back] _ >
12plSP	< in ~	
	n	/ [+syllabic] _ >

For distribution and ordering, see next section.

These allomorphs for verbal suffixes are phonologically conditioned. However, there is also a more complicated pattern of suffix allomorphy that is morphologically motivated: The present and past tense simplex forms of transitive verbs in /-a/ are different only in their patterns of vowel fusion. Compare the following parts of the paradigms of *cama* 'to eat' and *kʰatma* 'to take'.

	→3s NPT eat	→ 3s NPT take	→ 3s PT eat	→3s PT take
1.s	caŋ	kʰattuŋ	coŋ	kʰattuŋ
1.d	cacuʔa	kʰatcuʔa	cacuʔa	kʰattacuʔa
1.p	camka	kʰattumka	comka	kʰattumka
i.d	cacu	kʰatcu	cacu	kʰattacu
i.p	cam	kʰattum	com	kʰattum
2.s	tɨca	tɨkʰattu	tɨco	tɨkʰattu
2.d	tɨcacu	tɨkʰatcu	tɨcacu	tɨkʰattacu
2.p	tɨcam	tɨkʰattum	tɨcom	tɨkʰattum
3.s	ca	kʰattu	co	kʰattu
3.d	ɨcacu	ikʰatcu	ɨcacu	ikʰattacu
3.p	ɨca	ikʰat	ɨca	ikʰatta

This state of affairs is rather perplexing at first. It seems that the stem-final /-a/ in non-past forms overrides the third person patient suffix <-u>, whereas in the preterite forms, there is fusion into the single vowel /o/. We can sum this up as in (295).

(295)   a. Σ + 3P

ca + u → ca

b. Σ + PT + 3P

ca + a + u → co

a) An analysis where <-a> + <-u> PT + 3P go to /o/ first and then overrides the stem /a/ fails, as this does not happen in *kʰattu* (*kʰatto*) 'he took him'. b) Neither is it true that *cama* 'to eat' has a lexical past tense stem *co-*, as past tense forms without the third person suffix are based on *ca-*. c) Although the non-past forms of *cama* 'to eat' are partly homophonous with antipassive forms, the paradigm as a whole clearly shows that this is not the antipassive paradigm. In the antipassive paradigm 'we eat' would be *can* but not *cam*, etc., etc.

We are left with no alternative but to state allomorphy rules for all stems in -a (written as Σa), involving all three morphemes:

(296)   Σa → Σo / _ PT 3P

We may stipulate that the < Ø > allomorph of the past-tense morpheme has the ability to weaken the stem vowel, but it is hard to find further independent evidence for that.

Vowels that do not coalesce

As briefly mentioned above, verbs of conjugation classes k_3 and p_3 have a pre-consonantal stem in /-k/ and /-p/ respectively, while the vocalic suffixes are preceded by a syllable break. The pre-vocalic stem ending of these verbs is conveniently written with ʔ, for example as in *yoʔu* 'he peeled out' < *yopma* 'to peel'. The glottal stop has no phonemic status, but signals a syllable boundary between the verb stem and the following vowel-initial affix. Wherever this boundary is absent form verb stems ending in vowels, as above, vowels coalesce. The syllable boundary

is part of the pre-vocalic stem allomorph of verbs of the k₃ and p₃ classes. Due to the no-empty-onset rule as described in §2.1.3 this boundary is realised as [ʔ].

The syllable boundary may be realised throughout as a glottal stop. However, in normal speech, the syllable boundary emerges as a, sometimes hardly audible, glottal stop in between homorganic or nearly homorganic vowels and as an approximant between different vowels.

(297)   nak lo-ʔu
        loan loan-3P
            'He loaned'

(298)   wa   ca-ʔa
        water bathe-PT
            'He bathed'

(299)   caʔwa pa-ʔu.
        water   put.in-3P
            'He put in water.'

(300)   wa   ho-ʔaŋ   (also: wa howaŋ)
        water get.wet-1s
            'I got wet.'

The identifying feature of the pre-vocalic stem of these verbs is not the glottal stop, but rather the syllable boundary, however realised. This phonological boundary distinguishes these verbs from vowel-final stems. The glottal stop ʔ signals this boundary.

4.3.7   Tone

Rule (288), deleting extrasyllabic consonants, is generally applicable to verbal roots of t- and s-conjugation classes. This rule applies in verbal/nominal compounds as well:

(301)   water-springs: verb-noun compounds

        a. ku-muŋwa
            *kus-muŋwa
            be.hot-source
                'hot spring'
        b. keŋ-muŋwa
            *keŋs-muŋwa
            be.cold-source
                'cold spring'

The psychological reality of rule (288) can be further corroborated with the observation that in some dialects, there is a reflex of this consonant deletion left on the resulting syllable. For all pre-consonantal forms of verbs of the t- and s-conjugation classes, the loss of the final, extra root consonant by deletion rule (288) is compensated for by a high tone on the root syllable.

Tonal contrast is not a pervasive feature of the Bantawa language, and outside of this context no lexical or grammatical tonal contrasts are found. We can then best assume that this high tone is a subphonemic residue imposed on the intonational contour of the verbal form. The resulting forms seemingly have a shorter and more abrupt root syllable in a higher pitch. However, on measurement, this perception is proven to be false. The contrast is mainly in length and amplitude.

The first syllable of infinitives bears the weak word stress, realised in higher pitch and greater amplitude. Unmarked infinitives show a gradually falling pitch contour on the first syllable. Pitch generally does fall towards nasal consonants. Note that the infinitive ending is <-ma> (INF). Since Bantawa is not a tone language in general, we can assign L as the default tone to all syllables, and write L.L for normal two-syllable infinitives. Due to the stress placement, however, the normal pitch contour is HL.L, HL representing a falling contour on the normally higher pitched initial syllable.

However, in t- and s- conjugation infinitives, the tonal pattern is H.L. The falling tone on the stressed pitched syllable is simplified to H.

Placing a number of pitch contours of t-conjugation verbs against those of Ø-conjugation verbs shows the contrast.

Contrasted pitch contours of infinitive forms
of verbs of different conjugation classes

cʰɨkma: t-conjugation   cʰɨkma: Ø-conjugation

cʰukma: t-conjugation   cʰakma: Ø-conjugation

cʰekma: t-conjugation   cʰopma: Ø-conjugation
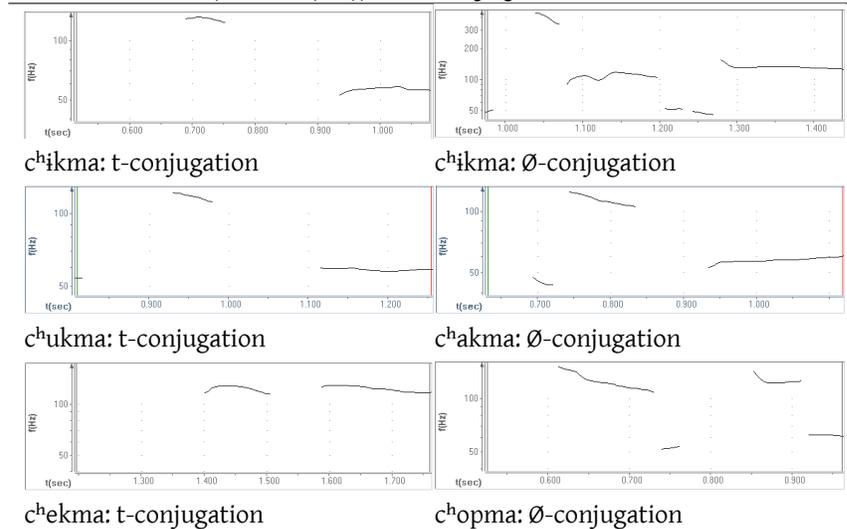
In all of these graphs, the timing is very similar. Only the verbal form root is shown, invariably reading *cʰVCma*, with the value of VC variable for the vowel and consonant. The last part of the verb form, *-ma*, generally shows as a flat line. Right before the ending there is a hiatus where no pitch is shown, which represents the stem final consonant. The pitch contour right before the stem final consonant shows the root's pitch contour. While for t-conjugation verbs the root pitch is high and flat, the pitch is falling or low for verbs of the Ø-conjugation. This contrast results in minimal pairs differentiated by tone alone. The minimal pairs can be written using simple tone marks for the t-conjugation class verbs only.

(302) tonal minimal pairs

a.	t-conjugation		Ø-conjugation	
	cátma	'hit the mark'	catma	'ferment'
b.	cʰákma	'be hard'	cʰakma	'chisel'
c.	káŋma	'obey, hide'	kaŋma	'heat up, warm up'
d.	kʰápma	'thatch'	kʰapma	'cry'
e.	kʰókma	'chop off'	kʰokma	'extract'
f.	kʰónma	'resurrect'	kʰonma	'move'
g.	pónma	'divide'	pònma	'grow'
h.	tónma	'arrange'	tonma	'push away'
i.	kúmma	'hide'	kumma	'hide'
j.	kúpma	'sit on eggs'	kupma	'pick up'
k.	kʰúnma	'penetrate'	kʰùnma	'carry'
l.	tʰínma	'filter'	cʰinma	'nudge'
m.	tʰíŋma	'spread out'	tʰiŋma	'be pregnant'

This table shows that the tonal contrast is predictable by a grammatical rule. However, there are hints that the contrast is mainly lexicalised. For instance, while one would expect a tonal contrast between *kʰatma₁* 'to take' and *kʰatma₃* 'to go', this contrast is not there, as these roots are phonologically the same, at least in the experience of the language users. In other related root pairs, however, e.g. *kúmma ~ kumma*, the contrast is still present.

4.3.8 Accounts for the tonal contrast

Account 1

Now that the circumstances of the tonal contrast have been delineated, we must try to explain it and capture it in a viable phonological rule. There are at least two alternative accounts possible. The first is to rewrite the consonant deletion rule as above to (303)[9].

(303) deletion of extrasyllabic consonant before syllable boundary

$$
\begin{bmatrix}
\text{+anterior} \\
\text{+consonantal} \\
\text{+coronal} \\
\text{-voiced}
\end{bmatrix}
\rightarrow [\text{+high tone}] \: / \: [\text{+consonantal}] \, \_ \, [.]
$$

In other words, the segment does not go to /Ø/, but rather to an unassociated [+high tone] autosegment. This feature, then, must be assumed to associate with the

---

[9]Tacitly, the rule has been generalised, which goes without penalty as there are no other contexts that could falsify such a generalisation.

syllable to the left of the deletion site. How this would happen, however, is not clear to me. For example, why would the high tone autosegment not spread all over the place? By conventional autosegmental phonological theory[10], tone spreads over the word unless spreading is blocked by tone marking already present on other syllables. Since Bantawa has no lexical tonal contrasts, an analysis is this vein is problematic.

Account 2

There is an alternative way, I maintain, to account for this tonal contrast. This account simply says that this extrasyllabic consonant is deleted late, i.e. after the normal intonation pattern has been generated. The normal falling pitch contour on infinitives is merely a reflex of the nasal onset of the next syllable[11], and it is the t- and s-conjugation verb infinitives that are marked. This should be so, if we assume that the pitch contour over the verb form is built before the deletion of the extrasyllabic consonant from the pre-vocalic verb form to form the pre-consonantal verb stem allomorph. What is heard, when an pre-consonantal verb stem is uttered, is an pre-vocalic stem, pronounced in anticipation of a syllable having the onset in /s-/ or /t-/. However, the extrasyllabic consonants /s/ or /t/ are deleted right before they are pronounced. The advantages of this account are that Bantawa remains a language without lexical tone and that no tone registers need to be introduced. Moreover, this analysis avoids the problems with the alternative, i.e. how to properly associate new replacement autosegments with their segmental units. Finally, this theory correctly predicts that in contexts where there is not normally a falling tone, before syllables without nasal onset, this tonal effect is not present. For example, the following nominalisations, where a consonant is equally deleted, do not show a tonal contrast (304).

(304)   No contrast for forms not starting with a nasal: the *-starred forms do not occur.

    a.   * bóp-kʰa
        bop-kʰa
        cover-PNOM
         'lid, cover'
      <bop- ~ bopt-> 'to cover'

    b.   * lak-lù-kʰa
        lak-lu-kʰa
        dance-perform-PNOM
        'dancing place'
      <lak lu-> 'to dance'

---

[10]For an introductory background on autosegmental phonology, cf. Burquest (1998). The proper assocation of an autosegment generated by a phonological rule is problematic. In Bantawa, the tone mentioned in rule (303 may associate with the syllable to the left by the Universal Association Convention (UAC) but why would it not spread to the right by the Right Spread Rule? We cannot assume that spreading is blocked by tone marking already present on all other morphemes, excepting verb roots. At least, this analysis requires that we assume that by default, every segment is lexically marked for tone.

[11]Low tone and nasality are generally known to be associated, cf. e.g. (Ploch 2000).

While the revised version of the extrasyllabic consonant deletion rule (303) aptly describes the fact, the rule is not necessary if we, instead, offer the following explanation.

(305)   Account for high tone in Bantawa verb forms

   a. pitch contours are sensitive to nasal consonants, i.e. pitch falls before syllables beginning with nasals, and

   b. the late deletion of extrasyllabic consonants leaves a trace in the emergence of pitch contours atypical of their context.

4.4   Finite verb morphology

This section will deal with the finite, so called *simplex* forms. We shall give a description of the verb agreement in terms of a slot morphology approach, similar to e.g. the treatment of the Limbu verb by Van Driem (1999). Where appropriate, I shall draw attention to phenomena that are outside the scope of a simple slot morphology approach.

4.4.1   Person and number categories

The Bantawa verbal agreement is of the classical Kiranti style. Bantawa has eleven pronominal categories. There are singular, dual and plural forms for all three persons. For the first person, inclusive and exclusive are distinguished in the non-singular forms. As a result, the set of pronouns represents eleven different person-and-number combinations, as in Table 4.4. The dual vs. plural distinction on the third person is marginal, in the sense that the distinction is not present on the pronoun. However, the difference between dual and plural subject is marked on the finite verb. For reference, the set of personal pronouns for Bantawa is repeated below from §3.4.

Table 4.4: Bantawa pronouns

↓ number		person →			
		1e	1i	2	3
	s	iŋka		kʰana	kʰo
	d	ankaca	ankaci	kʰanaci	kʰoci
	p	ankanka	ankan	kʰananin	kʰoci

The inclusive first person (1i or i) represents the first and second person merged into one. The paradigmatic forms of the finite verb will be listed in simplex verb conjugation tables. In simplex transitive verb conjugations, forms can have affixes showing either agent or patient agreement, or both. The tables of transitive verbal agreement contain forms for verbal situations with valid actant combinations, viz. a first person agent acts upon a second person patient (1→2), and so on: 1→3, i→3,

2→1, 2→3, 3→1, etc. Forms representing 1→1 and 2→2 combinations are not found. The number of different valid actant combinations then amounts to a total of (9+9+6+9+9+6+9+9+9) = 75. There are 9 combinations for all person combinations for all numbers (singular, dual and plural), but 6 combinations for all person combinations involving the inclusive first person (that has no singular). Finite verbs are also marked for tense (past and non-past) and polarity (affirmative vs. negative), resulting in a potential of 300 combinations of inflectional categories on transitive verbs.

Several actant combinations are represented by a single form. For example, the form *nikhatci* means 'he/she/they[d,p] took us/you[d]'. As a result, there are only 42 or 43 different forms for the non-past and past tense transitive affirmative forms respectively. In comparison, intransitive forms are relatively simple. Different forms express eleven different person and number combinations for each combination of tense and polarity. Apart from the past tense negated paradigm, first person inclusive and third person dual forms are identical. Intransitive paradigm for most tense-polarity combinations usually have ten different forms. Aside from these finite paradigms, verbs may have reflexive paradigms and a set of non-finite forms, viz. nominalisations, converbs, the supine and the infinitive, cf. §5.1. Optatives, nominalised and subordinated forms are all formed transparantly on the basis of finite forms.

4.4.2   Stem alternation

There are two stem allomorphs for each verb stem: the pre-consonantal stemand the pre-vocalic stem. The stem selection is completely conditioned by the immediate context and can be defined in phonological terms. Stem allomorphy and selection were discussed in the previous section, cf. §4.3.

4.4.3   Agreement paradigms

Apart from person and number agreement, finite verb forms express polarity, affirmative or negative and either of the basic tenses non-past or past, abbreviated NPT and PT. The untensed imperative mood also has a simplex paradigm, containing forms for implicit second person subjects only. Imperatives agree with the number of the addressee and, in transitive forms, with the agreement parameters of the patient.

Tense and polarity combinations

In the agreement tables below and in Table 4.5, there are finite simplex paradigms for four combinations of tense and polarity, viz. the combinations of simple tenses non-past and past, and affirmative and negative. However, the negative past forms are best described as derived and complex forms, regularly deriving from the affirmative non-past forms. For this reason, the morphology specific to the negative past will be treated separately from the simplex morphology. As opposed to the simplex paradigms, the non-past negative paradigm is complex.

Intransitive forms

The intransitive paradigm contains eleven person and number combinations for two polarity and two tense forms, plus three imperative forms. The affix patterns of these forms are listed here below. In intransitive conjugation, the affixes indicate tense and agreement with person and number of the subject.

slot	P NPT	N NPT	P PT	N PT	P IM	N IM
1s	Σ-ŋa	ɨ-Σ-nɨŋ	Σ-aŋ	man-Σ-ŋa		
1d	Σ-ca	ɨ-Σ-cinka	Σ-acia	man-Σ-daca		
1p	Σ-inka	ɨ-Σ-iminka	Σ-inka	man-Σ-daŋka		
id	Σ-ci	ɨ-Σ-cin	Σ-aci	man-Σ-daci		
ip	Σ-in	ɨ-Σ-imin	Σ-in	man-Σ-dan		
2s	tɨ-Σ	tɨ-Σ-nan	tɨ-Σ-a	man-Σ tɨda	Σ-a	man-Σ-da
2d	tɨ-Σ-ci	tɨ-Σ-nanci	tɨ-Σ-aci	man-Σ tɨdaci	Σ-aci	man-Σ-daci
2p	tɨ-Σ-in	tɨ-Σ-naminin	tɨ-Σ-in	man-Σ tɨdanin	Σ-in	man-Σ-danin
3s	Σ	ɨ-Σ-nin	Σ-a	man-Σ		
3d	Σ-ci	ɨ-Σ-cin	Σ-aci	man-Σ-ci		
3p	mɨ-Σ	nɨ-Σ-nin	mɨ-Σ-a	man-Σ mɨda		

For reference, some sample paradigms that form the basis of this analysis are listed in Appendix B.

Transitive forms

In transitive conjugation, the affixes can agree with both agent and patient. This results in rather large and unwieldy agreement matrices for each tense and polarity combination. However, to get a good insight in agreement patterns, it is helpful to have a clear picture of these tables. This will help to understand when an affix corresponds to a patient, and when it corresponds to an agent.

In all of the tables listed below and in the appendix, the horizontal axis represents the different patients, while the vertical axis represents the agent. The action denoted by the verbal form must normally be understood as performed by the agent and inflicted upon the patient. There are four persons in Bantawa, if we count the first person exclusive (1) as different from the first inclusive (i). For the purpose of demonstrating agreement paradigms it is convenient to treat exclusive and inclusive forms separately. All of these persons can operate on the other, but the forms of $1 \rightarrow 1$ and $2 \rightarrow 2$ are expressed by reflexive forms, so these are not found in the transitive paradigm table. For lack of plausibility, $i \leftrightarrow 1$ and $i \leftrightarrow 2$ forms are not found either. The paradigm table contains nine blocks of forms, viz. block $1 \rightarrow 2$ for the first person agent operating on the second person patient, first person agent to third person patient etc., as in Figure 4.1.

Identical forms   The listings of forms for each verb paradigm can be significantly abbreviated by using the fact that many forms are equal. The agreement matrix contains 75 cells that can be filled with paradigmatic forms. In transitive agreement however, there are no distinct forms for third person dual and plural patient forms,

Figure 4.1: Format of the agreement matrix for the transitive verb

		→ Patient										
		s	d	p	d	p	s	d	p	s	d	p
Agent →	s											
	d						1 → 2			1 → 3		
	p											
	d									i → 3		
	p											
	s											
	d	2 → 1								2 → 3		
	p											
	s											
	d	3 → 1			3 → i		3 → 2			3 → 3		
	p											

therefore these are subsumed under the heading 3NS, i.e. third person non-singular. Also, the following transitive relationships are expressed by a single form.

slots	comments
1ns→2	all non-singular first person agent → second person patient forms are expressed by a single form, ending in <-ni>
2→1ns	all second person agent → non-singular first person patient are expressed by a single form, with prefix <tɨ-> and suffix <-ni>)
3ns→1d	all non-singular third person agent → dual first person patient are expressed by a single form, with prefix <nɨ-> and suffix <-ciʔa>
3ns→1p	all non-singular third person agent → plural first person patient are expressed by a single form, with prefix <nɨ-> and suffixes <-in-ka>
3→id	all third person agent → dual first person patient are expressed by a single form, with prefix <nɨ-> and suffix <-ci>
3→ip	all third person agent → plural first person patient are expressed by a single form, with prefix <nɨ-> and suffix <-in>
3→2s	all third person agent → singular second person patient are expressed by a single form, with prefix <nɨ->
3→2d	all third person agent → dual second person patient are expressed by a single form, with prefix <nɨ-> and suffix <-ci>

3→2p all third person agent → plural second person patient are expressed by a single form, with prefix <nɨ-> and suffix <-in>

Otherwise, all forms are unique, resulting in 40 unique forms. The patterns of identical forms are the same for all tense and polarity combinations[12]. All of these forms are built by logical procedures from a limited number of building blocks.

In the appendix I have listed the unique forms for some transitive verbs. To print full paradigms is rather inefficient. For reference, the full simplex agreement tables are provided as Tables 4.5 and 4.6.

4.5 Morpheme analysis

This section treats the verbal affixes that create finite verb forms in Bantawa. These affixes correspond to person and number of participants and polarity and tense of the verb. Most affixes indicate a combination of values for these parameters and so are portmanteau morphemes.

4.5.1 Prefixes

In this section we shall discuss the prefixes that are part of the finite verbal morphology. Prefixes primarily indicate two functional categories: a) polarity, i.e. negation prefixes, and b) person.

Person prefixes correspond with agent and subject only. This is one of the morphological accusative agreement patterns found in the language.

Person prefixes

There are four prefixes expressing person categories in the Hatuvālī Bantawa paradigm, as in the following table.

marker	gloss	function
<tɨ->	2AS	second person subject or agent
<i>	3AM	third person agent in marked configurations
<nɨ>	3A	third person agent
<mɨ>	3PL	third person non-singular patient or subject

Second person agent or subject <**tɨ-**> The second person prefix occurs in all forms where there is a second person subject in intransitive forms or second person agent in transitive forms. Except for this prefix, the 1ns→2 forms are formally similar to the 2→1ns forms in the transitive paradigm. This person prefix is a clear instance of accusative morphology, where subject agreement patterns with agent agreement[13].

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[12]The non-past affirmative paradigm has variants for the 3s→1ns forms with the third person agent prefix <-i> (3AM). If these forms were counted separately, the number of unique forms for the non-past paradigm would be 42.

[13]According to Watters (1998: 784), who reviews the verbal prefixation patterns across languages, the second person prefix is the 'opening wedge' that opens up a prefixal slot to other person prefixes. The

Table 4.5: Transitive Agreement - Non-past forms

A/P	1S	1D	1P	ID	IP	2S	2D	2P	3S	3NS
1S						Σ-na	Σ-naci	Σ-nanin	Σ-uŋ	Σ-uŋciŋ
1D						Σ-ni			Σ-cuʔa	Σ-cuʔa
1P									Σ-umka	Σ-umcimka
ID									Σ-cu	Σ-cuci
IP									Σ-um	Σ-umcim
2S	ti-Σ-ŋa	ti-Σ-ni(n)							ti-Σ-u	ti-Σ-uci
2D	ti-Σ-ŋaŋciŋ								ti-Σ-cu	ti-Σ-cuci
2P	ti-Σ-ŋaŋniŋ								ti-Σ-um	ti-Σ-umcum
3S	ɨ-Σ-ŋa	(n)ɨ-Σ-aciʔa	(n)ɨ-Σ-inka						Σ-u	Σ-uci
3D	ɨ-Σ-ŋaŋciŋ	ni-Σ-aciʔa	ni-Σ-inka	ni-Σ-ci	mi-Σ	ni-Σ	ni-Σ-ci	ni-Σ-in	ɨ-Σ-cu	ɨ-Σ-cuci
3P	ni-Σ-ŋa								ɨ-Σ	mɨ-Σ-uci

Non-past Affirmative Transitive Paradigm

A/P	1S	1D	1P	ID	IP	2S	2D	2P	3S	3NS
1S						ɨ-Σ-nan	ɨ-Σ-nancin	ɨ-Σ-naminin	ɨ-Σ-niŋ	ɨ-Σ-niŋciŋ
1D						ɨ-Σ-nin			ɨ-Σ-cunka	ɨ-Σ-cuncinka
1P									ɨ-Σ-iminka	ɨ-Σ-imincinka
ID									ɨ-Σ-cun	ɨ-Σ-cuncin
IP									ɨ-Σ-imin	ɨ-Σ-imincin
2S	ti-Σ-niŋ	ti-Σ-niminin							ti-Σ-nan	ti-Σ-nancin
2D	ti-Σ-niŋciŋ								ti-Σ-nancin	ti-Σ-nancinan
2P	ti-Σ-niŋminiŋ								ti-Σ-naminin	ti-Σ-naminmincin
3S	ɨ-Σ-niŋ	ni-Σ-cinka	ni-Σ-iminka						ɨ-Σ-un	ɨ-Σ-uncin
3D	ɨ-Σ-niŋciŋ	ni-Σ-cinka	ni-Σ-iminka	ni-Σ-cin	mi-Σ-nin	ni-Σ-nan	ni-Σ-nancin	ni-Σ-naminin	ɨ-Σ-cun	ɨ-Σ-cuncin
3P	ni-Σ-niŋ								ni-Σ-un	ni-Σ-uncin

Non-past Negative Transitive Paradigm

Table 4.6: Transitive Agreement —Past forms

Past Affirmative Transitive Paradigm

A/P	1S	1D	1P	ID	IP	2S	2D	2P	3S	3NS
1S						Σ-na	Σ-naci	Σ-nanin	Σ-uŋ	Σ-uŋciŋ
1D									Σ-acuʔa	Σ-acuciʔa
1P						Σ-ni			Σ-umka	Σ-umcimka
ID									Σ-acu	Σ-acuci
IP									Σ-um	Σ-umcim
2S	tɨ-Σ-aŋ								tɨ-Σ-u	tɨ-Σ-uci
2D	tɨ-Σ-aŋciŋ	tɨ-Σ-nin							tɨ-Σ-acu	tɨ-Σ-acuci
2P	tɨ-Σ-aɲniŋ								tɨ-Σ-um	tɨ-Σ-umcim
3S	i-Σ-aŋ								Σ-u	Σ-uci
3D	i-Σ-aŋciŋ	nɨ-Σ-aciʔa	nɨ-Σ-inka	nɨ-Σ-aci	mɨ-Σ-a	nɨ-Σ-a	nɨ-Σ-aci	nɨ-Σ-in	i-Σ-acu	i-Σ-acuci
3P	nɨ-Σ-aŋ								i-Σ-a	mɨ-Σ-uci

Past Negative Transitive Paradigm

A/P	1S	1D	1P	ID	IP	2S	2D	2P	3S	3NS
1S						man-Σ-dana	man-Σ-danaci	man-Σ-dananin	man-Σ-doŋ	man-Σ-doŋciŋ
1D									man-Σ-dacuʔa	man-Σ-dacuciʔa
1P						man-Σ-danin			man-Σ-domka	man-Σ-domcimka
ID									man-Σ-dacu	man-Σ-dacuci
IP									man-Σ-dom	man-Σ-domcim
2S	man-Σ tidaŋ								man-Σ tido	man-Σ tidoci
2D	man-Σ tidaŋciŋ	man-Σ tidanin							man-Σ tidacu	man-Σ tidacuci
2P	man-Σ tidaɲniŋ								man-Σ tidom	man-Σ tidomcim
3S	man-Σ idaŋ								man-Σ-do	man-Σ-doci
3D	man-Σ idaŋciŋ	man-Σ-nidaciʔa	man-Σ nidanka	man-Σ nidaci	man-Σ-mɨda	man-Σ nida	man-Σ nidaci	man-Σ nidan	man-Σ idacu	man-Σ idacuci
3P	man-Σ nidaŋ								man-Σ ida	man-Σ mɨdoci

Third person agent in marked configurations The marked third person agent prefix <ɨ-> (3AM) is present in the 3s→1, 3ns→1s, as well as in the 3ns→3s affirmative forms.

Occurrence of the 3AM prefix												
VT	1s	1d	1p	id	ip	2s	2d	2p	3s	3d	3p	
1s												
1d											▨	PT Only
1p											X	NPT Only
id											X	PT & NPT
ip												
2s												
2d												
2p												
3s	X	X	X									
3d	X								X	X	X	
3p									X			

The marked third person agent prefix <ɨ-> marks all third person agent forms in the transitive paradigm that are not otherwise marked with a more specific prefix marking third person agent, viz. <nɨ-> (3A) or <mɨ-> (3PL), except where the agent is the third person singular. The positions in the paradigm that have this prefix can be called marked configurations, in the sense that in these configurations the agent-patient relation reverses the pattern of participant ranking, as will be outlined in §4.5.2. In summary, in the hierarchy of persons the participants are ranked as 1 > 2 > 3ns > 3s. The empirical import of such a ranking is evident from the pattern of person and number marking on the suffixes. See below. For prefixes, the person hierarchy is relevant for the marked third person agent prefix <ɨ-> only. The forms in the paradigm that have the prefix <ɨ> (3AM) happen to be those forms where there is an apparent disparity in ranking and specificity between the agent and patient[14].

Third person agent prefix <ni->   There are two more third person prefixes, viz. the third person agent prefix <nɨ-> (3A) and the third person plural prefix <mɨ-> (3PL). The third person agent prefix <nɨ-> appears in all 3→1i2 forms that do not have the marked-configuration prefix <ɨ-> or the more specific third person plural prefix <mɨ-> (3PL). The prefix <nɨ-> expresses the combination of a third person agent with

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implication is, that we would not expect a Kiranti language to have person prefixes at all, if there is no second-person prefix.

[14] For the prefix <ɨ-> (3AM), an inverse analysis was proposed by (Ebert 1994: 26), who also applies it to the Chamling prefix <pa-> (Ebert 1997a). Judging by person ranking on the hierarchy only, at first an inverse analysis seems to make some sense. On closer inspection, however, an analysis of this type creates more problems than it solves. The essence of an inverse marker is that it must affix to all verb forms that denote an action of a lower ranking person on a higher ranking person. This would explain the general pattern of the appearance of <ɨ-> (3AM), but it would not explain why it is absent on 2→1 or 3d→1d, or many other forms, and that irregularity is more easily explained by substitution by more specific markers anyway, cf. the analysis here. The most problematic part of an inverse analysis is that as a corollary, the third person patient suffix <u-> must be interpreted as a 'direct' marker. Such an analysis is not tenable: the assumed direct marker is used at the same time as the inverse marker in the 3d→3 forms.

a non-third person patient in transitive verbs. All 3→2 forms have the prefix, but 3→1 forms have the prefix only where the marked third person agent prefix <i-> is not present. In the 3s→1s/d forms as well as in the 3→ip forms, we find irregular marking. In the →3 patient forms, the prefixal person slot either remains empty, or is taken by the third person plural prefix <mɨ-> or the marked third person agent prefix <i->.

Table 4.7: Distribution of the third person agent prefix <nɨ-> and the third person plural prefix <mɨ->

VT	1s	1d	1p	id	ip	2s	2d	2p	3s	3d	3p	*VI*
1s												
1d												
1p												
id												
ip												
2s												
2d												
2p												
3s			░	░	▓	░	░	░				
3d		░										
3p	░	░	░	░	▓	░	░	░		▓	▓	▓

░ <nɨ-> (3A)
▓ <mɨ-> (3PL)

Third person plural prefix <mɨ->   The third person plural prefix <mɨ-> (3PL) expresses third person plural subject or agent. In the transitive paradigm, the prefix occurs in the 3p→3ns forms, but not in the other 3p→-forms. These positions in the paradigm align this prefix with the second person prefix <tɨ->: Both prefixes agree with the agent of transitive and the subject of intransitive predicates.

Unexpectedly, the third person plural prefix <mɨ-> (3PL) also appears in 3→ip forms[15]. These forms correspond to the third person plural subject form in the intransitive paradigm. The appearance of the third person plural prefix <mɨ-> in the forms with an inclusive plural patient in the paradigm can be explained as a merger of the impersonal forms with the first person inclusive object forms. In sections §6.4.1 and §8.6, it is observed that an intransitive conjugation of a transitive verb X which would read as 'they do X,' is reinterpreted as 'someone, a third person, does X to us.' This reinterpretation of the intransitive conjugation of a transitive verb explains these forms, that would otherwise not be compatible with a gloss 3PL for <mɨ->.

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[15]To be precise, I found two competing 3→ip forms.

a. <ni-Σ-in>

b. <mɨ-Σ>

(a.) patterns with the parallel forms in the transitive paradigm, i.e. 3→1p, 3→2p. (b.) patterns with the third person plural subject forms of the intransitive paradigm.

Summary of person prefixes   If the occurrence of <mɨ-> (3PL) in forms with a plural inclusive patient is left out of the equation, we find that person prefixes always correspond to the agent. The third person plural prefix <mɨ-> is also peripheral in the sense that it does not appear in negated forms, but is replaced by the negative third person plural prefix <nɨ->N3pl in negative third person plural patient transitive and third person plural subject intransitive forms.

The distribution of third person prefixes in the transitive paradigm can best be described in terms of specific-ness. We can state that the third person plural prefix <mɨ-> (3PL) is most specific in designating the third person plural scenarios 3p→3ns and 3→ip. Next, we can state that, quite idiosyncratically, the marked-scenario prefix <ɨ-> (3AM) expresses the scenarios 3ns→3, 3s→1s and 3d→1s. Given this distribution of the more specific third person prefixes, the less specific scenarios with third person involvement have the third person agent prefix <nɨ-> (3A).

Watters (1998) suggests that person prefixes developed from possessive markers. This may hold for the marked third person agent marker <ɨ->, that is homophonous with the third person possessive prefix. We shall be able to say more on the functional differences between prefixes and suffixes later.

Negation prefixes

There are two negation prefixes, viz. the past negative <man-> (NEGPTP) and non-past negative <ɨ- ~ Ø> (NEGNPP). There is a single portmanteau morpheme <nɨ-> (N3PL) that expresses both negative polarity and third person agent.

Non-past negative   The non-past negative prefix <ɨ-> (NEGNPP) expresses negative polarity in the non-past tense forms. The prefix occurs on every non-past negative form, except where there is any other person prefix, i.e. one of the prefixes described previously. This fact can be explained in two ways, viz. a) <ɨ-> (NEGNPP) has a zero allomorph after a vowel-final prefix, or b) person prefixes block the single available prefix slot before <ɨ-> (NEGNPP) can attach.   As the latter solution is simpler, I shall gloss negative non-past forms with a single prefix only.

Past negative   The past negative prefix <man-> (NEGPTP) is present in all other negative forms, i.e. in the past tense negative paradigm, the negative imperative paradigm, as well as in all negative non-finite verb forms. The negative past will be discussed separately.

Negative third person plural <**nɨ-**> **(N3PL)**   The third person plural prefix <mɨ-> has a negative counterpart <nɨ-> (N3PL). The negative third person plural prefix <nɨ-> appears in the intransitive third person plural non-past forms, and the transitive third person plural →3 forms. While homophonous with the third person agent prefix <nɨ-> (3A), these two prefixes cannot be equated, as they are functionally different and occur in different positions in the paradigm.

A slot analysis of prefixes

In Bantawa verbs, there is only one prefixal slot.

pfx1		
2AS	<ti>	second person agent or subject
3A	<ni>	third person agent
3PL	<mi>	third person and plurality
3AM	<i>	third person agent in marked scenarios
N3PL	<ni>	third person plural agent or subject in non-past negative forms
NEGNPP	<i>	negative non-past

Across dialects and even between individual speakers from the same area, there is considerable variation in the ordering of person prefixes relative to the prefix <man> (NEGPTP). The negative past tense is formed as an analytical, composite tense. For these reasons it is not helpful to include the ordering of this prefix in a slot analysis. I shall address the formation of the past tense negative in a separate section, §4.5.3.

4.5.2 Suffixes

The suffixal string in simplex verb forms is far more complicated than the prefixal string.

Person and number hierarchy

As we have seen, the distribution of person prefixes in the transitive paradigm corresponds to an accusative pattern.

The distribution of person and number suffixes, however, is much more complicated. If we consider the paradigm in detail, we find that the presence of person suffixes is primarily determined by the ranking of participants, rather than the syntactic roles of the participants, or the semantic roles for that matter.

Person hierarchy   In brief, the person hierarchy is simply $1 > 2 > 3$ or, in other words, the more remote the person is from the speech act or the speaker, the lower it ranks in the person hierarchy.

In an informative discussion of the Tibeto-Burman agreement paradigms (1998: Ch. 17 of his *Kham Grammar*), Watters states that in general in Tibeto-Burman languages:

(A) agreement is with first or second person in preference to third, and

(B) with the object where both participants are first or second person.

This statement shows the correspondence between the person hierarchy and agreement as reflected in verbal affixes. However, this general schema needs some modification in its application to Bantawa. In any case, with regard to suffixes the 3s→ forms are exactly equal to the intransitive forms that correspond to the same

patient. The patient in transitive agreement patterns with the subject in intransitive agreement, which represents a distinctly ergative pattern in the verbal agreement.

However, ranking is more important than just the ergative pattern. In the verbal agreement suffix string all first person singular forms carry some variant of <-ŋ>. This is true only with the exception of 1s→2 forms, where the second person patient <-na> supersedes the first person suffix <ŋ>, in line with Watters' (B). Non-singular 1 ↔ 2 person constellations all get a portmanteau morpheme <-ni(n)> (1NS2) so that ranking does not matter anymore for these forms. Irrespective of role, first person exclusive forms always have an exclusive suffix <-a ~ -ka>. Surprisingly, the second person patient is not consistently marked by the suffixes in spite of rule (A).

Third person patient suffixes are different from other agentive suffixes, as they are marked with the third person patient suffix <-u>. In *transitive* conjugation, the plural suffix for first and second person agents is <-m>, in contrast with the suffix <-in> for patients and subjects[16]. This leads to some ambiguity between second and first person inclusive patient forms, but the peculiar shape of 3→ip forms partly makes up for this.

As person suffixes are determined primarily by ranking, it would be hard to tell agent and patient roles apart for any Bantawa form. However, this ambiguity is resolved by the prefixes discussed before.

Number hierarchy   Apart from person hierarchy, there is also a number hierarchy stating simply that $plural > dual > singular$, or the greater number ranks highest. In the number hierarchy another split pattern emerges. The number of the agent is *only* marked on the suffixes a) when the number of the agent outranks the number of the patient, and b) when the person of the agent outranks or equals the person patient or c) when the patient is 1s.   In summary, agent number marking is found only on 2ns→1s and →3 forms.

Patient participant are reflected in verbal agreement wherever they outrank the agent. Number markers occupy different slots for patient and agent, resulting in forms with double number marking, i.e. one number suffix corresponding to the patient and one number suffix corresponding to the agent.

Different from the pattern, the forms with a first person plural inclusiv patient lack number marking, just as the 3p→3s form. These are innovative elements in the paradigm. As Watters (1998: 748) noted, number marking in Kiranti languages is generally dissociated from person marking.

On forms reflecting a third person agent and a non-third person patient, we find object number agreement only. On forms with a third person patient we find number marking for both participants, except in 3→3 where only one marker is found that corresponds to the highest numbered participant. (Watters 1998: 748) introduces a typological yardstick where languages fall in either of two classes according to the number agreement found in non-singular-non-singular participant combinations. Type A is a language where in those conditions the number marking corresponds

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[16]First and second person plural markers represent an ergative trait of the morphology, where patient patterns with the subject.

with the object, while type B is a language where number affixes correspond to the subject.

By this standard, Bantawa clearly is a type A language. However, number marking is yet another instance of the phenomenon, that marking is not only determined by role, but more so by ranking. In all of the third person patient series, the agent also leaves a footprint in the number marking. The split by person ranking is visible in the Bantawa verb suffixes when it interacts with the number ranking as well.

Person suffixes

In Bantawa we find the following person agreement suffixes in the verbal paradigm.

marker	*gloss*	*function*
<ŋ ~ aŋ >	1s	first person singular marker.
<ŋa>	1sNP	This morpheme is the non-past variant of 1s. It appears in non-past intransitive forms and 2/3→1s.
<ni>	1NS2	first person non-singular and 2nd person involvement
<a ~ ka>	E	exclusive marker, that contrasts first person exclusive forms from inclusive forms
<na>	2P	Second person patient in 1s→2 transitive forms, and second person subject and patient in negated non-past forms
<u>	3P	Third person patient

Copying   Several person and number suffixes in the finite verb suffix string are subject to the 'copying' process that occurs in Bantawa. As noted before, the Bantawa finite verb suffix string is described in terms of slots; nevertheless, we observe that some parts of the suffixal string are copied to a 'copy' slot-location under certain conditions. Let us use the capital letters (A B C) to represent suffixes. We observe that a verbal form may be Σ-A in one part of the paradigm, and that addition of a simple suffix C results in the form Σ-A-C-A. When C is added to a form Σ-B, the resulting form is Σ-B-C-B, etc. The A or B that follows C is clearly copied. The suffixes that are copied and the triggers of the copying process are noted below. The copying process is described in some more detail in the discussion of the triggers; tabular data is given in Tables 4.10, 4.8 and 4.11.

First person singular   The suffix first person singular suffix <-ŋ ~ -aŋ> (1s) appears in all forms that involve a first person singular participant, with the only exception of 1s→2 forms. The <-ŋ> allomorph appears after vowel-final roots or suffixes. The suffix <-ŋ> is always copied when another non-singular participant in the action puts its number marking in, cf. Table 4.8. In the 1s→2 agreement, no first person marking appears, in line with the split-ergative pattern. The second person patient suffix <-na> dominates. As the number also comes from the highest numbered partipant, these forms show patient agreement only.

Table 4.8: Distribution and copying of the first person suffix

agent series	1s→3s	1s→3ns	
P NPT	Σ-uŋ	Σ-uŋciŋ	
P PT	Σ-uŋ	Σ-uŋciŋ	
N NPT	i-Σ-nuŋ	i-Σ-nuŋciŋ	
N PT	man-Σ-doŋ	man-Σ-doŋciŋ	
patient series	s→1s	d→1s	p→1s
P NPT 2	ti-Σ-ŋa	ti-Σ-aŋciŋ	ti-Σ-aŋnuŋ
P NPT 3	i-Σ-ŋa	i-Σ-ŋaŋciŋ	ni-Σ-ŋa
P PT 2	ti-Σ-aŋ	ti-Σ-aŋciŋ	ti-Σ-aŋniŋ
P PT 3	i-Σ-aŋ	ni-Σ-aŋ	ni-Σ-aŋ
N NPT 2	ti-Σ-niŋ	ti-Σ-niŋciŋ	ti-Σ-niŋciniŋ
N NPT 3	i-Σ-nuŋ	ni-Σ-nuŋ	ni-Σ-niŋ
N PT 2	manti-Σ-daŋ	manti-Σ-daŋciŋ	manti-Σ-daŋniŋ
N PT 3	man-Σ-daŋ	manni-Σ-daŋ	manni-Σ-daŋ

Non-singular first ↔ second person agreement   All 1ns↔2 forms in the transitive paradigm have the first and second person portmanteau suffix <-ni> (1ns2)[17]. The role of each participant is disambiguated by the second person agent or subject prefix <-ti> .

Exclusive marker   The exclusive suffix <-a ~-ka> (e) tells apart exclusive and inclusive forms. First person exclusive verb forms are identical to the inclusive forms[18], with the addition of the exclusive marker <ʔa ~ ka> (e).   Whenever the exclusive suffix is affixed immediately after a vowel, a syllable break is heard in careful speech and the morpheme appears as [ʔa]. In allegro speech, the dual suffix <-ci> and <a> (e) coalesce to [ca]. Elsewhere, the exclusive suffix is <-ka>.

Second person patient   The second person patient suffix <-na> (2P) indicates a second person patient in the transitive 1s→2 forms. Irregularly, the second person patient suffix <-na> also appears in second person plural imperative transitive forms, that are otherwise equal to past tense forms without the second person prefix <ti-> (2AS), cf. §4.7.2. The second person patient suffix does not appear in the affirmative intransitive paradigm or elsewhere in the transitive affirmative paradigm.

   Remarkably, in all transitive and intransitive forms involving second person the non-past negative suffix <-n> (NEGN) requires the suffixation of the second person patient suffix <-na> as well. In the transitive negative paradigm, second person patient suffix appears in the 3→2 and 2→3 forms, which is everywhere where a more specific suffix does not occur. In the intransitive negative paradigm, this suffix appears in all second person forms. This distribution can be explained by two factors,

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[17]The first and second person non-singular suffix <-ni> (1NS2) can be reconstructed from protomorphemes <*-na> (2) + <*i> (1NS). The suffix has an unconditioned, idiolectal variant <-nin>.

[18]With the exception of the 3→ip forms, cf. the paragraph on <mi-> (3PL).

viz. a) the non-past negation suffix <-n> requires to be part of a full syllable, cf. also the allomorphy <-n ~ -nin> for this same non-past negative suffix, and b) we observe in other places as well that negative forms with third person patient align with intransitive forms, cf. §6.1.2.

The second person patient suffix <-na> (2P) is the only true second person suffix.

Third person patient suffix   The third person patient suffix is <-u ~ Ø> (3P)[19]. The suffix <-u> (3P) occurs on all forms with a third person patient in the affirmative transitive paradigm, with the exception of 3pl→3s forms. This form is best described as having a zero allomorph of the third person patient suffix. The third person patient suffix also surfaces as Øafter stem vowel /u/. Strictly speaking, the third person patient suffix <-u> does not just mark the third person patient, but also the intentional category of transitivity as in contrast with the antipassive forms. See for discussion §6.2.1.

Number suffixes

In Bantawa we find the following number agreement suffixes in the verbal paradigm.

marker	*gloss*	*function*
<ci ~ c>	DU	Dual agent
<ci ~ c>	DUP	Dual patient and subject
<nin ~ nɨ>	2PL	Second person plural participants
<in>	12PLSP	first and second person plural patient and subject
<m>	12PLA	first and second person plural agent

The dual patient suffix <-ci> and second person plural suffix <-ni> trigger a special copy-effect. For this reason, these suffixes will be treated more extensively.

Dual agent or subject marking   Agents only have a number agreement marker when they rank higher on the person hierarchy. The dual marker is <ci ~ c> (DU). All transitive forms with a dual agent and a third person patient have the suffix <-ci> (DU) on the verb. This suffix is found in all dual agent forms with a third person patient, and there only.

Before the third person patient suffix <-u>, the dual suffix <-ci> has a phonologically conditioned allomorph <-c>. Either of the dual markers <-ci> (DU) or (DUP) may coalesce with the exclusive <-a> (E) to /-cya/ or /-ca/.

Second person plural 2PL   The second person plural suffix <nin ~ nɨ> (2PL) indicates second person plural agent or subject[20] in all positions of the paradigm where no other, less specific suffixes mark this category, i.e. transitive 2p→1s, 1s→2p

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[19]An inverse analysis of the <i> prefix would imply that the third person patient suffix be analysed as a direct marker. This analysis, however, is ruled out by the co-occurrence of the marked-scenario prefix <i-> and the third person patient suffix <-u>. Cf. footnote 14.

and intransitive 2p. In non-past forms 3→2p the combination of the second person plural and the negation suffix is MININ12plN or, in free variation, <nimin>. There is rampant uncertainty on the right form of this suffix and informants maintain that it does not matter much. It seems that in progressive forms, where even more *ni-mi*-syllables appear, articulatory stress kicks in and the right point of closure ceases to matter.

In the 2p→1s configuration, the second person plural suffix has the form <-nɨ> and triggers a copy, cf. §4.5.2.

First and second person plural subject or patient   In all other transitive and intransitive forms that involve a plural first or second person subject or patient, the less specific plural form <-in> (12PLSP) emerges. The suffix <-n ~ -in> (12PLSP) consistently designates first or second person plural subject or patient. The allomorphy <-n ~ -in> is conditioned by phonological context only: if preceded by a vowel, the initial vowel of the morpheme will be elided, cf. *sɨ-n* 'we die' vs. *kol-in* 'we walk'.

In the non-past negative forms, the first and second person plural morpheme has an allomorph <-im>, conditioned and followed by the negative suffix allomorph <-in> (NEGN). In the non-past 1→2 negative forms as well as the negative non-past 3→2pl forms, the sequence <-minin> is found, that I label 12PLN and leave unanalysed. Although this suffix superficially looks like a concoction of the plural suffixes <-in> (12PLSP) and <-n> (NEGN), analysing it proves to be very challenging.

First and second person plural agent   In all transitive forms that involve a plural first or second person agent that affects a third person patient, the morpheme <-m> (12PLA) appears. The first and second person plural suffix <-m> can be considered a conditioned allomorph of the first and second person plural subject and patient suffix <-in> (12PLSP). The form <-m> appears after the third person patient suffix <-u> (3P) while the form <-in> (12PLSP) appears elsewhere. The suffix <-m> designates a first or second person plural agent but does not appear in 2→1-forms. The portmanteau first and second person involvement suffix <-ni> (1NS2) is more specific and if applicable, prevents all other person suffixes from appearing. The first and second person plural agent suffix <-m> is always copied from and to the same slots and under the same conditions as the first person singular suffix -ŋ. The distribution and copying of 12PLA is outlined in Table 4.9.

Dual patient marking and copying

Dual number patients always have a dual agreement marker on the verb. The dual patient suffix <-ci> (DUP) is formally identical to the dual agent suffix <-ci> (DU). The morpheme <-ci> (DUP) occurs later in the string, after the markers associated with the higher ranking participant, with the exception of the exclusive marker.

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[20]The morpheme <-nin> (2PL) could be analysed as frozen combination of the second person patient suffix <*na> (2P) + the first and second person plural <-in> (12PLSP). However, this analysis is not synchronically relevant: The sequence <-nanin> (2P 2PL) also appears in the paradigm as the 1s→2p form.

Table 4.9: Distribution and copying of the first and second person plural agent suffix

patient series		→3s	→3ns
affirmative non-past	ip	Σ-um	Σ-umcum
affirmative non-past	2p	tɨ-Σ-um	tɨ-Σ-umcum
negative non-past	ip	ɨ-Σ-imin	ɨ-Σ-imincin
negative non-past	2p	tɨ-Σ-naminin	tɨ-Σ-namininci
affirmative past	ip	Σ-um	Σ-umcum
affirmative past	2p	tɨ-Σ-um	tɨ-Σ-umcum
negative past	ip	man-Σ-yuktum	man-Σ-yuktum
negative past	2p	mantɨ-Σ-yuktum	mantɨ-Σ-yuktumcum

The plural morphemes <-ci> (DUP) and <-nɨ> (2PL) cause the special effect of copying as much material from the preceding syllable as needed to form a good syllable. For third person patients, <-ci> (DUP) is used for both dual and plural number.

The copies that are seen are listed in Table 4.10. For details on what copies we find for the first person forms, Cf. Tables 4.8 and 4.9.

Table 4.10: Copies triggered by DUP

suffix string	*sfx*	-DUP	**copy**	*Comments*
-umcɨm	um	-cɨ	-m	first and second person plural
-(ŋ)aŋcɨŋ	aŋ	-cɨ	-ŋ	first person singular
-uŋcuŋ	uŋ	-cu	-ŋ	first person singular →third person)
-nancin	nan	-ci	-n	second person
-imincin	imin	-ci	-n	e.g. negative forms
-(c)uncin	(c)un	-ci	-n	third person NPT NEG
-(c)incin	(c)in	-ci	-n	e.g. reflexive forms
-cici	ci	-ci		reflexive forms

It appears that the rhyme of the preceding syllable gets copied. If the preceding syllable does not end in a consonant, no copy occurs. The dual patient morpheme <-ci> (DUP) is similar to the reflexive marker in both behaviour and form, cf. §4.5.6.

The copying of phonetic material is not elegantly described in a slot morphology approach. If we designate a separate slot for the copied phonetic material to land in, this slot obviously does not have a functional designation. Instead, its content is determined by form only. The copy is there only by virtue of the dual marker that triggers the copy operation. Apparently, introducing a non-singular patient participant restarts the affix string. In that sense, the copy process is comparable to reduplication: While the functional load is simple, the phonetic realisation may be widely different. The copying process is a shared feature found in several Central and Eastern Kiranti languages[21].

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[21]Bantawa has suffix copying triggered by <-ni> (2PL) and <-ci> (DUP). Suffix copying is also found

For descriptive purposes, we might equally well describe the copying as a matter of allomorphy on the DUP marker, e.g.

DUP: < -ci
　　　-cɨm / m _ ~
　　　-cuŋ / uŋ _ ~
　　　-cɨŋ / aŋ _ ~
　　　-cin / n _ >

In any case, what follows after DUP is formally determined, not functionally. After DUP, only the exclusive marker can follow, before other, optional non-tense or non-agreement morphology.

Tense suffixes

For a functional delineation of the past and non-past categories, cf. §4.6.1.

Past tense marker   The past tense marker is <a ~ Ø> (PT). The past tense suffix is present in all imperative and past tense affirmative forms except transitive 1→2 and 2→1ns forms. The zero allomorph of the past tense suffix appears before vowel-initial suffixes and after verb stems that have no stem-final consonant or consonant position, cf. §4.3.6. The past tense suffix appears first in the array of suffixes, immediately after the stem.

Non-past marker   There is no overt non-past suffix. Analytically, we can assume that where there is no suffix marking past tense, there is a non-past suffix <-Ø> (NPT). An analysis of this kind presupposes that the opposition past vs. non-past is equipollent, i.e. one of the categories is always present.

There are formal arguments to warrant this assumption, e.g. the formal differences between more complex past and non-past forms as described in §4.3.6 and the difference between progressive forms as in example (306).

(306)   progressive forms in past vs. non-past for vowel final verb *cama*

　　　a. NPT 3s→2s

　　　　nɨ-ca-Ø-yaŋ-Ø
　　　　3A-eat-NPT-PROG-NPT

　　　　　'he is eating you'

　　　b. PT 3s→2s

　　　　nɨ-ca-Ø-ŋ-a
　　　　3A-eat-PT-PROG-PT

　　　　　'he was eating you'

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in Chamling (Ebert 1997a: 70-75), Belhare (Bickel 1996: 257) and Limbu (van Driem 1999), but not in, for example, Wāmbule or Kulung. In this respect, Eastern and Central Kiranti languages differ from Western Kiranti languages. The functional load of the copy process as apparent in Kiranti languages is identical across languages: Copying seems to stress the presence of a non-singular patient.

The two allomorphs for the progressive <-yaŋ ~ -ŋ> (PROG) are normally selected by phonological context only, cf. §7.2.6. However, the contrast in (306) is not conditioned by any phonological factor. Rather, the morphological fact that example (306a) is a non-past form dictates that <-yaŋ> be selected. The opposition is at least logically equipollent and yields different forms even if the suffixes representing past and non-past are not audible as such. On the other hand, there some forms in the paradigm where a binary opposition between past and non-past is hard to show. The transitive 1→2 and 2→1ns forms are identical for both tenses. An alternative analysis for these forms would be to suggest that these forms are underspecified for tense. Examples of non-past forms referring to past events cannot be found, but it is clear that the non-past forms are selected to express generic statements, i.e. statements that have no time reference as in example (307).

(307) nulok cɨ-Ø-ʔo   mina sɨ-Ø-ʔo   ɨ-dʰeŋ   paru-du   kʰat-Ø-ki
       well   do-NPT-NOM man die-NPT-NOM his/her-back heaven-LOC.high go-NPT-SEQ
       yuŋ-Ø.
       sit-NPT
         'a well-behaved man will live in heaven after he dies.'

The generic usage of the non-past suggests that the non-past forms are unmarked for tense in some way. However, the formal opposition is clearly present in the larger part of the verbal paradigm, therefore the opposition is equipollent[22].

4.5.3 Negation

Non-past Negation

Negation in the non-past tense is complicated. The negative forms do not always derive straightforwardly from the positive forms.

marker	*gloss*	*function*
<n ~ nin>	NEGN	Non-past negation suffix[23]

Many phonological processes happen when this morpheme is attached. During scrutiny of the verb paradigm tables for the non-past intransitive conjugation, we find examples for all of the processes below, cf. Appendix B.

The contrasts between some sample suffix strings from the affirmative and negative forms in (308) show that the negative suffix <-n> lands in a slot after the third person patient suffix <-u> (3P), but before the first person suffix <-ŋ> (1S).

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[22]Pragmatically, the non-past suffix is not glossed in the examples in this grammar. However, I glossed the non-past as a suffix in most progressive forms and forms that are otherwise contrastive.

[23]Apparently, for prosodic reasons, in the second person forms, the suffix <-na> (2P) is inserted, resulting in a affirmative vs. negative pair of forms *tɨkon* vs. *tɨkonnan* 'you walk, you do not walk'. In third person forms, where there is no suffix at all, the negative suffix emerges as <-nin>, viz. *ɨkonnin*, as apparently *ɨkonn.

(308)

form	affirm.	negat.	notes
1. DU	\<ci\>	\<ci-n\>	
2. 3P	\<u\>	\<u-n\>	
3. 3P DUP	\<u-ci\>	\<u-n-ci-n\>	
4. 3P	\<u\>	\<nan\>	(second person forms)
5. 3P DUP	\<uci\>	\<nan-ci-n\>	(second person forms)
6. 1s	\<ŋ\>	\<n-iŋ\>	note that the \<-u\> (3P) is not negated when \<-ŋ\> (1s) is present (*unniŋ)
7. 3P 12pA	\<u-m\>	\<nan-imin\>	(second person forms)
8. 3P 12pA	\<u-m\>	\<imin\>	
9. 2P	\<na\>	\<na-n\>	
10. 1ns2	\<ni\>	\<ni-n\>	but also: \<minin ~ nimin\>!

There are three morphophonological processes resulting in the final negated forms found in the conjugational paradigms.

- Due to the copying process triggered by the dual patient suffix \<-ci\>, cf. §4.5.2, we find the negative suffix \<-n\> either one or two times in the suffix string. This is a regular process, cf. (308-3/5).

- For the forms agreeing with the second person agent or subject that all have the second person prefix \<ti-\> (2AS), the second person suffix \<-na\> (2P) is inserted, while the morpheme \<-u\> (3P) is deleted from transitive forms, resulting in dramatically different forms, cf. (308-4/5).

- This contrast becomes even more dramatic if the rule of dissimilation applies. Throughout the paradigm we see that the sequence /VCn#/ (single /n/ after a consonant, at the end of a word) is illegal for Bantawa. In those sequences, the allomorph \<-nin\> is selected for the negative suffix. For an affirmative, transitive form such *ti-kʰatt-u-m* 2AS-take-3P-12plSP, 'you took him', the negative counterpart *ti-kʰatt-na-m-n* 2AS-take-2P-12plSP-NEGn would then result in *ti-kʰatt-na-m-nin*. However, this is not enough. The repetitive /m/ and /n/ evidently trigger further vowel epenthesis, resulting in the final form *ti-kʰat-na-mi-nin* (cf. 308-6).

The negative forms are quite different for the second person agent and patient series. In the negative forms the second person patient suffix \<-na\>, that only appears as patient-marker in affirmative forms, appears in the 2→3 forms as well as in the intransitive forms, coupled with the negative suffix \<-n\>. As a matter of fact, non-past negative forms with second person involvement are very reminiscent of intransitive forms. This must be associated with the fact that the transitivity of the entire phrase is reduced (on transitivity, cf. §6.1.2).

In the affirmative transitive paradigm, the 2→1ns forms are identical to the 1ns→2 forms, except for the prefix \<ti-\> (2AS). The contrast between *ti-kʰat-ni(n)* 'you take us' and *kʰat-ni(n)* 'we take you' is in the prefix only. In the negative paradigm however, the 2→1ns forms have a suffix string \<-niminin ~ -naminin\> that differs quite dramatically from the simple negated suffix \<-nin\> for 1ns→2 forms, cf. *ti-kʰat-naminin* 'you do not take us' and *i-kʰat-nin* 'we do not take you'. The insertion

of the <-na> (2P) suffix in negative forms seems to be motivated independently for forms with a second person subject, and results in the lengthened suffix string. Another explanatory factor is that there is a need for a contrast in the suffix string in the 2→1ns forms, because there is no contrast in the prefix that would differentiate affirmative from negative forms. If there were no change on the suffix string, affirmative and negative forms would be identical for 2→1ns forms, viz. *tɨ-kʰat-ni(n)* 'you take us' vs. *tɨ-kʰat-nin* 'you do not take us'.

In intransitive forms, and transitive forms with a third person patient, the first or second person plural suffix <-in> (12PLSP) appears in its negated form <-imin>. While many negated forms seem remote from the corresponding affirmatives on the surface, derivations are transparant. Table 4.11 illlustrates these processes and gives a clue to the non-past negation patterns.

Past tense negation

Formally, past tense negation forms are easy to describe. However, while these forms are formally transparant, they also represent two difficulties in Bantawa: a) perfective versus perfect, and b) the minor enigma that Bantawa shares with Chintange, i.e. that of prefix permutation. Here, I shall only outline the simple rules to understand the past tense negative morphology. In separate sections I shall discuss permutation (§4.5.5) and perfectivity (§4.6.1).

Past tense negative affixes   There are three morphemes that are relevant to the formation of the past tense negative .

marker	gloss	function
<man->	NEGPTP	Negative past tense prefix, used in all non-finite and past tense verbal forms
<do ~ da>	NEGPTS	Negative past tense suffix, simple negative past
<yuk ~ yukt>	NEGPTPF	Negative past tense perfect, perfect negative past

The one constant in the formation of the negative past is the prefix <man-> (NEGPTP). This prefix is obligatory and appears in front of the verb root. Its relative position to other prefixes is variable.

Negation in the past tense and imperatives may also be marked by either of the verbal formatives <da> (NEGPTS) or <yuk> (NEGPTPF), that appear after the verb root[24]. If <da> (NEGPTS) is a suffix, then it must be allocated to the tense slot sfx1, the first slot after the verb root. Both <da> (NEGPTS) and <yuk> (NEGPTPF) derive from an auxiliary verb root. The difference in meaning between these operators has to do with aspect and will therefore be discussed in the section on perfectivity.

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[24]In the formal discussion, I shall write about the simple negative past based on the suffix <-da> (NEGPTS). Formally, perfect past negatives are identical *modulo* the substitution of <-da> (NEGPTS) by <-yuk> (NEGPTPF).

Table 4.11: Copying triggered by the dual patient suffix <-ci> — non-past affirmative and negative forms contrasted

The first person inclusive dual and plural forms (id,ip) are formally similar to the first person exclusive forms (1d,1p) minus the exclusive marker. To reduce the size of this table, the inclusive forms have been left out.

Slot	pfx	Σ	sfx1	sfx2	sfx3	sfx4	sfx5	sfx6	sfx7	sfx8	sfx9
Affirmative non-past, 3s patient			TNS	2P	DU	3P	NEG	1s/12plSP	DUP	COPY	e
1s kʰattuŋ		kʰatt				u		ŋ			
1d kʰatcuʔa		kʰat			c	u					ʔa
1p kʰattumka		kʰatt				u		m			ka
2s tɨkʰattu	tɨ	kʰatt				u					
2d tɨkʰatcu	tɨ	kʰat			c	u					
2p tɨkʰattum	tɨ	kʰatt				u		m			
3s kʰattu		kʰatt				u					
3d ikʰatcu	i	kʰat			c	u					
3p ikʰat	i	kʰat				Ø					
Negative non-past, 3s patient											
1s ikʰatnɨŋ	i	kʰat					n	ŋ			
1d ikʰatcunka	i	kʰat			c	u	n				ka
1p ikʰattiminka	i	kʰatt					im	in			ka
2s tɨkʰatnan	tɨ	kʰat		na			n				
2d tɨkʰatnancin	tɨ	kʰat		nan	ci		n				
2p tɨkʰatnaminin	tɨ	kʰat		na			min	in			
3s ikʰattun	i	kʰatt				u	n				
3d ikʰatcun	i	kʰat			c	u	n				
3p nɨkʰattun	nɨ	kʰatt				u	n				
Affirmative non-past, 3ns patient											
1s kʰattuŋcɨŋ		kʰatt				u		ŋ	cɨ	ŋ	
1d kʰatcuciʔa		kʰat			c	u			ci		ʔa
1p kʰattumcimka		kʰatt				u		m	cu	m	ka
2s tɨkʰattuci	tɨ	kʰatt				u			ci		
2d tɨkʰatcuci	tɨ	kʰat			c	u			ci		
2p tɨkʰattumcum	tɨ	kʰatt				u		m	cu	m	
3s kʰattuci		kʰatt				u			ci		
3d ikʰatcuci	i	kʰat			c	u			ci		
3p mɨkʰattuci	mɨ	kʰatt				u			ci		
Negative non-past, 3ns patient											
1s ikʰatnɨŋcɨŋ	i	kʰat					n	ŋ	cɨ	ŋ	
1d ikʰatcuncinka	i	kʰat			c	u	n		ci	n	ka
1p ikʰattimincinka	i	kʰatt					im	in	ci	n	ka
2s tɨkʰatnancin	tɨ	kʰat		na			n		ci	n	
2d tɨkʰatnancinan	tɨ	kʰat		na			n		ci	nan	
2p tɨkʰatnannimincin	tɨ	kʰat		na			nim	in	ci	n	
3s ikʰattuncin	i	kʰatt				u	n		ci	n	
3d ikʰatcuncin	i	kʰat			c	u	n		ci	n	
3p nɨkʰattuncin	nɨ	kʰatt				u	n		ci	n	

All forms of the negative past tense are built by the schema outlined in (309):

(309)   General form for the negative past
        man-Σ {prefixes}-*da*-{suffixes}

The prefixes and suffixes are those of the affirmative non-past paradigm. The position of the prefixes is variable, and this issue is discussed in §4.5.5.

Periphrastic tense   The past tense negative forms are best understood as a periphrastic tense formation. The past tense negative has formal similarities to verbal compounding, cf. §7.2. In the past tense negative paradigm we regularly find two verb roots in each form, i.e. the main root compounds with either <da> (NEGPTs) or <yuk> (NEGPTPF). However, in spite of the transparant verbal origins of these morphemes, the morphology of these suffixes is different from the general scheme of verbal compounding in Bantawa to the extent that we could choose to consider these morphemes as a part of the suffix sequence.

In full verb compounding, a part of the suffix string is repeated after each compounding root. By contrast, in the past tense negative there are no suffixes on the first verb root. In this respect, past tense negative formation is more like verb complementation as described in §7.3.

The verb *dama* 'to effect' is a frequent second verb, appearing in many verb compound constructions. The suffix <-da> (NEGPTs) in the negative past construction is formally related to or derived from this vector verb. In some of the affirmative imperative forms, the root <-da> is inserted complying with the general rules of verbal compounding, for reasons of politeness or because 'it sounds nicer'.

(310)   pʰas-u-do-Ø-ci
        help-3P-aux-3P-DUP
            'youˢᵍ help them!'

As one can see, in verbal compounds, the latter part of the suffix string that starts from *sfx5* is dropped from the first verb. Otherwise, the form would have been *pʰasucidoci.*

The analysis of the <da> (NEGPTs) suffix as originating from a second verb in a compound construction is corroborated by the fact that this second root is not present in some intransitive and antipassive forms. If <da> (NEGPTs) is not obligatory, the left hand side of a past tense negative form apparently can be a full finite form in its own right. Similarly, main verbs of verbal compounds are valid verbal forms, with or without the vector verb of the construction.

(311)   'he did not eat'

        a.   man-ca-Ø
             NEGPTp-eat-NPT
             (antipassive)
        b.   man-ca-d-o
             NEGPTp-eat-NEGPTs-3P

(312) 'I did not take'

    a. man-kʰat-ŋa
       NEGPTp-take-1s
       (antipassive)

    b. man-kʰat-do-Ø-ŋ
       NEGPTp-take-NEGPTs-3P-1s

(313) man-kʰat-Ø
    NEGPTp-take-NPT
      'he did not go'

(314) man-ta-ŋa
    NEGPTp-come-1s
      'I did not come'

In summary, the past tense negative is not a compound verb or complemented verb construction, nor a simplex finite form. The past tense negative is a periphrastic tense formation with its own syntax, given in (309).

4.5.4   A slot analysis of suffixes

The following diagram gives an overview of how the different suffixes are distributed over slots.

sfx1	*sfx2*	*sfx3*	*sfx4*	*sfx5*	*sfx6*	*sfx7*	*sfx8*	*sfx9*
PT	2P	DU	3P	NEGn	1s	2pl	*copy*	e
<a>	<na>	<c~ci>	<u>	<n~in>	<ŋ~aŋ>	<nin~nɨ>	*slot*	<ʔa~ka>
NEGPTs[25]	1ns2	12plSP		12plN	12plA	DUP		
<da~d>	<ni>	<in~im>		<minin>	<m>	<c~ci>		

There are nine suffixal slots.

The first slot sfx1 contains tense and aspect marking only.

The suffixal slot sfx2 contains second person markers only.

The suffixal slot sfx3 can contain the agent dual suffix <-ci> or the second person plural suffix <-in>.

The suffixal slot sfx4 holds the third person patient suffix <-u> (3P) for all →3 forms (but not 3p→3s).

The suffixal slot sfx5 contains the negative suffix <-n>

The suffixal slot sfx6 contains first person agreement marking, either the first person suffix <-ŋ> or the first or second person plural agent suffix <-m>.

The suffixal slot sfx7 contains the second person plural suffix <-nin> or the dual patient marker <-ci>. Whenever some morpheme lands in sfx7, elements from sfx4-sfx6 will be copied into sfx8, whichever are needed to make a good syllable.

The suffixal slot sfx8 is the copy slot.

The suffixal slot sfx9 finally is filled in all first person exclusive forms.

The irregular composite first and second person plural negative suffix <-minin> (12PLN) has tentatively been put in sfx5 as well.

4.5.5 Prefix order in past tense negative forms

Free ordering of verb prefixes in Bantawa

It seems that prefixes in Bantawa finite verb forms may occur in a variety of orders before the verb stem. The free ordering of prefixes in Bantawa only appears in the past tense negative forms. As an analysis for this remarkable phenomenon, I shall propose here that the apparent free permutability amounts to structural uncertainty. The past tense negative obviously is a periphrastic form and there are competing structural interpretations for its forms. The potential for competing structures accounts for the limited number of prefix orderings, i.e. that the ordering is not entirely free, and explains why permutation has such a limited scope only. First I shall describe the phenomenon of variable morpheme ordering and delineate its scope, before presenting an analytic account. As noted before, all forms of the negative past tense are built by the schema outlined in (309), repeated here.

(309) General form for the Negative Past
NEGPTp-Σ {prefixes}-NEGPTs-{suffixes}

The interesting fact about Bantawa is, that the position of the prefixes is entirely variable. The orders as listed in (315) are all attested.

(315) Attested prefix orders for negative past

    a. Ordering A: {prefixes}-NEGPTp-Σ-NEGPTs-{suffixes}
    (Rai 1985: 114, Rabi dialect),

    b. Ordering B: NEGPTp-{prefixes}-Σ-NEGPTs-{suffixes}
    (Rai 1985: 114, Rabi dialect), author's field notes, Sindrāṅ (Hatuvālī)

    c. Ordering C: NEGPTp-Σ {prefixes}-NEGPTs-{suffixes}
    author's field notes, Sindrāṅ(Hatuvālī)

Examples can be found for each of these orders.

(316) a. tɨ-man-ban-da
       2AS-NEGPTp-come-NEGPTs
        'you did not come'

     b. man-tɨ-ban-da
       NEGPTp-2AS-come-NEGPTs
        'you did not come'

     c. man-ban   tɨ-da
       NEGPTp-come 2AS-NEGPTs
        'you did not come'

Bantawa speakers generally accept any of these orders, but my informants were all consistent in using one form or the other. My informants rejected the order as in (315a), but accepted the order as in (315b) and (315c). Apparently, while there is regional variation, ordering must be said to be relatively free.

The variable {prefixes} can only contain one of the person prefixes <tɨ-> (2AS), <i-> (3AM), <ni-> (3A) or <mi-> (3PL). Those prefixes are assigned to a single prefix slot *pfx1* and generally refer to 'nominative' participants, i.e. agent and subject.

Scope of prefix permutability

The variability in Bantawa is nothing compared to the rampant variation reported for Bantawa's close neighbour Chintang. Bickel *et al.* (2007) report that up to four prefixes can freely occur in any order in Chintang. This more extensive permutability is possibly due to several factors, viz. a) that verb complements are not rigorously pushed to the left as in Bantawa, cf. §7.3, and b) that the Chintang verbal agreement is organised such that more than one person prefix are possible. In summary, in the absence of other constraints, all of these affixes can permute.

Bickel *et al.* (2007) go to great lengths to demonstrate that prefix permutability in Chintang is a real novel fact, that challenges perceived linguistic notions on affix ordering and morphological analysis. To do this, Bickel *et al.* demonstrate that Chintang prefixes can affix anywhere under phonological constraints only. These constraints are phonological, i.e. not structural or morphological. The most significant constraint is that prefixes are subcategorised for a phonological constituent ω that they further define in terms of phonological content (Bickel *et al.* 2007: 21). However, these findings for Chintang are not applicable to Bantawa.

Structural limitations   First of all, the free position of person prefixes in Bantawa is limited to negative past constructions only. This is contrary to what we would expect if it were the case that the prefixes are subcategorised for a phonological constituent only. All of the constructions attested in Chintang where a prefix re-orders are available in Bantawa, but only negative past constructions allow for this permutability.

Compare the following constructions:

(317)   Negative past

    a. Bantawa

        i. Cf. Example 316

    b. Chintang

        i. a-ma-im-yokt-e
          2-NEG-sleep-NEG-PST

       ii. ma-a-im-yokt-e
          NEG-2-sleep-NEG-PST
          'You did not sleep' (Bickel *et al.* 2007: ex.1)

      iii. ma-im-a-yokt-e
          NEG-sleep-2-NEG-PST
          'You did not sleep' (Bickel *et al.* 2007: ex.65)

(318)   Verb compounds

    a. Bantawa

        i. ti-man-nin   kʰan-nin
          2AS-lose-1ns2 send.away-1ns2
            'you[s] have forgotten us[pe]'

    ii. * man-nin tɨ-kʰan-nin
        lose-1ns2 2AS-send.away-1ns2
        'youˢ have forgotten usᵖᵉ'

  b. Chintang (Bickel *et al.* 2007: ex.12)

    i. u-kos-a-gond-e
       3nsS-walk-PST-AMB-PST
       'They walked around'

    ii. kos-a-u-gond-e
        walk-PST-3nsS-AMB-PST
        'They walked around'

(319) Morphological causatives

  a. Bantawa

    i. kʰa   mɨ-met
       show 3pl-cause
        'they showed us (made us see)'

    ii. * mɨ-kʰa   met
        3pl-show cause
        'they showed us (made us see)'

  b. Chintang (Bickel *et al.* 2007: ex.38)

    i. . . . khu kha-u-mett-a-k-e
          carry 1nsP-3nsA-cause-PST-IPFV-PST
       'They made us carry it'

    ii. . . . kha-u-khu   mett-a-k-e
          1nsP-3nsA-carry cause-PST-IPFV-PST
       'They made us carry it'

(320) Verb complements

  a. Bantawa

    i. wa   tɨ-sɨ-Ø
       water 2AS-wash-3P
        'you will wash up'

    ii. * tɨ-wa   sɨ-Ø
       2AS-water wash-3P
        'you will wash up'

  b. Chintang (Bickel *et al.* 2007: ex.3)

    i. {kha-u-kha-ma}-siŋ-yokt-e
       ask-3nsA-1nsP-NEG-ask-NEG-PST
       'They didn't ask us'
       (the bracketed prefixes can freely permute.)

In conclusion, we must say that the permutation in Bantawa is restricted by morphotactical constraints, and cannot say that prefixes only select 'any phonological constituent of type ω in a verbal complex'. The fact that person prefixes are not free

to choose to which root of a verbal compound they affix, cf. (318), also rules out an analysis that says that 'prefixes select any stem of lexical category verb in a verbal complex'.

What we are left with is a single construction that triggers this permutability, and no apparent pattern in different constructions to identify a general rule to explain it.

Towards an account for prefix permutability

Compared to the non-past negative forms, the impact of the prefix <man-> (NEGPTP) on the verb form is minimal. Non-past negative morphemes are completely integrated with the verbal affixes, while we have analysed the negative past as a periphrastic verb form.

The morpheme *man-* has a solid Tibeto-Burman pedigree (Matisoff 2003: 488) as a free operator, an adverbial marker. Normally, negative operators tend to have a wide applicability and move freely, but *man-* has only a very limited distribution in Kiranti languages, viz. as a verb prefix[26]. The adverbial origin of the negative prefix *man-* explains why the structural status of *man-* as part of the finite verb is not yet fixed. Similarly, person prefixes are a recent innovation in Kiranti languages. The Western languages Thulung and Wāmbule do not have person prefixes, while Khaling only has one prefix <i->[27]. All Eastern Kiranti languages have person prefixes, but there is considerable variation. For that reason, I would suggest that structural ambiguity about the past tense negation is the factor that causes the free prefix ordering.

(321)   Different structural interpretation for past tense negation.

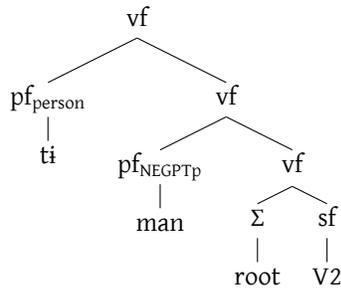>   **Ordering A:**   {prefixes}-NEGPTP-Σ-NEGPTS-{suffixes}
>   This ordering encapsulates the negative prefix in the person marking and represents the bound affix interpretation of the morphemes NEGPTP and NEGPTS.

---

[26]Yamphu: <æ ~ ʔæn ~ mæn > (Rutgers 1998), Limbu: <mɛn- ~ n- ~ mɛ-> (van Driem 1999), Thulung: <mi ~ me> (Allen 1975: 54). All of these languages have obvious cognates of proto-Tibeto-Burman <*ma ~ *may>. Opgenort (2002: 237) writes that Wāmbule <a-> is also cognate, but does not give an etymological history.
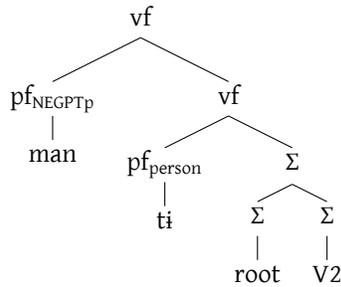
Yamphu and Kulung share the feature with Bantawa that *man-* only appears in the negative past, together with specific suffixes, while the non-past negative is formed with <-no> i.e. an /n/-based suffix (Tolsma 1999: 70). While the prefix shows different allomorphy, the distribution in Yamphu is the same (Rutgers 1998).

The Eastern Kiranti languages share the feature that /n/-based suffixes are inserted in the suffix string once, or twice by copying, to signal negation. Limbu and Athpariya have it for both the past and non-past tenses, Bantawa, Kulung and Yamphu only for the non-past.
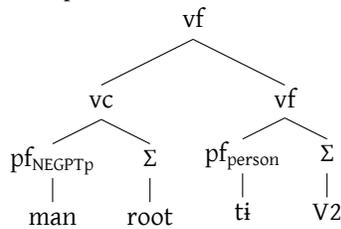
[27](Ebert 1994: 148): 'The Khaling prefix marks a large area of the paradigm without obvious common functional denominator.'

```
                          vf
                  ┌────────┴────────┐
              pf_person            vf
                  │          ┌──────┴──────┐
                 tɨ      pf_NEGPTp         vf
                             │        ┌────┴────┐
                            man       Σ        sf
                                      │         │
                                    root       V2
```

Ordering B: NEGPTP-{prefixes}-Σ-NEGPTS-{suffixes}
This ordering projects the negative prefix out of the verbal finite morphology and represents the adverbial interpretation of <man-> (NEGPTP).

```
                          vf
                  ┌────────┴────────┐
              pf_NEGPTp            vf
                  │          ┌──────┴──────┐
                 man      pf_person        Σ
                             │        ┌────┴────┐
                            tɨ        Σ         Σ
                                      │         │
                                    root       V2
```

Ordering C: NEGPTP-Σ {prefixes}-NEGPTS-{suffixes}
This ordering projects both the negative prefix and the verb root out of the verbal finite morphology. Finite agreement is hosted on the V2, the second verb root. This ordering represents the verb complement interpretation of the NEGPTP-V1 complex.

```
                          vf
                  ┌────────┴────────┐
                 vc                 vf
            ┌─────┴─────┐      ┌─────┴─────┐
        pf_NEGPTp       Σ   pf_person      Σ
            │           │      │           │
           man        root    tɨ          V2
```

These are all of the ordering possibilities of the Bantawa past tense negative forms. They can be represented by different bracketings of forms as follows:

(322)   'you did not go'

    a. tɨmankʰatda
       [tɨ[man[[kʰat][da]]$_Σ$]$_{vf}$]$_{vf}$

    b. mantɨkʰatda
       [man[[tɨ]$_{pref}$[kʰat]$_Σ$[da]$_{V2}$]$_{vf}$]

    c. mankʰattɨda
       [[mankʰat]$_{vc}$[tɨda]$_{vf}$]

This analysis in terms of structure is further affirmed by the fact that we find no phonological, prosodic word break in the forms for orderings A and B where the negative and person prefix are both part of the same prefix string, i.e. on the main verb, while ordering C introduces a word break. Not only is this a prosodic fact, but we also can see that the prefixes on the second verb <-da> (NEGPTs) are not suffixed to the first verb stem, by the fact that even in front of vowel-initial prefixes, the pre-consonantal stem is selected, and not the pre-vocalic stem that is normally selected before vowel-initial suffixes, cf. (323).

(323)   'They[d] did not forget him'

   a. man-man-kʰan   ɨ-da-c-u
       NEGPTp-lose-send 3AM-NEGPTs-DU-3P
          'They[d] did not forget him'

   b. *man-man-kʰaĩs-ɨ-da-c-u
       NEGPTp-lose-send-3AM-NEGPTs-DU-3P

It seems then that ordering C forms represent another structure rather than just another ordering. If the reordering were induced by phonological constraints only, we would have to answer the questions why a) the reordering does not occur in other conditions where the same phonological conditions are met, cf. examples 318-320 b) why non-person prefixes, e.g. <man-> (NEGPTP) do not reorder.

In the verb paradigms in the Appendix, I shall list forms in ordering C, as these are the forms that my main informants regularly offered. In Hatuvālī ordering B is equally frequent and valid. In contrast, ordering A is considered foreign.

4.5.6   Reflexives: morphology

The morphology of the reflexive in Bantawa is integrated into the ordinary simplex verb agreement morphology. The Bantawa reflexive morphemes are <-nan ~ -n> (REFL), which is found in the reflexive paradigm only, and the dual patient marker <-ci> (DUP).

The forms of the reflexives are given below.

(324)

tag	NPT		PT		NPT N	
1s	Σ-ŋaŋ-cɨŋ		Σ-a -ŋ	-ci-ŋ	ɨ-Σ-nɨŋ	-cɨŋ
1d	Σ-ci -ciʔa		Σ-a -	-ci-ʔa	ɨ-Σ-cin	-cinka
1p	Σ-in -cinka		Σ-Ø-in	-ci-n-ka	ɨ-Σ-imin	-cinka
id	Σ-ci -ci		Σ-a -ci	-ci	ɨ-Σ-cin	-cin
ip	Σ-in -cin		Σ-Ø-in	-ci-n	ɨ-Σ-imin	-cin
2s	tɨ-Σ-nan-cin		tɨ-Σ-a -n	-ci-n	tɨ-Σ-nan	-cinin
2d	tɨ-Σ-ci -ci		tɨ-Σ-a -na-n-ci-n		tɨ-Σ-nan	-cinin
2p	tɨ-Σ-in -cin		tɨ-Σ-a -na-n-ci-n		tɨ-Σ-nanminin-cin	
3s	Σ-an -cin		Σ-a -n	-ci-n	ɨ-Σ-nin	-cin
3d	Σ-ci -ci		Σ-a -ci	-ci	ɨ-Σ-cin	-cin
3p	mɨ-Σ-nan-cin		mɨ-Σ-a -n	-ci-n	nɨ-Σ-nin	-cin

Usage of more complex forms, e.g. negated and progressive, is not frequent.

However, these forms are certainly understood and current. The usage of the reflexive is discussed in §6.4.2. The following morphemes have a role in forming the reflexive.

marker	gloss	function
<-nan ~ -n>	REFL	Reflexive marker for non-dual forms
<-ci>	DUP	Dual patient marker
<-n>	REFLc	Copy of the reflexive marker, triggered by DUP

Reflexive morphemes are applied to transitive verbs only. Throughout the reflexive paradigm, in both singular and non-singular forms, the suffix <-ci> appears. In fact, this is the only morpheme that appears in every reflexive form. At least formally, this marker can be identified with the dual patient marker <-ci> (DUP). The suffix <-ci> in reflexive forms is homophonous to the dual suffix, appears in the same slot and triggers the same copying effect.

For all forms that have no content in either suffixal slot sfx2 or sfx3, i.e. 2s and 3s/3p forms, the reflexive suffix <-nan ~ -n> is required and positioned in slot sfx2. For past tense and non-finite forms that have vocalic content in slot sfx1, i.e. infinitives and participles, the phonologically conditioned allomorph /n/ is used.

(325)   ka-sat-ma-n-ci-n
        APpref-drag-APf-REFL-DUP-REFLc
            'reptile' (lit. one that drags itself)

If we add the apparent constraint that some morphemes require previous slots to be filled for purely morphotactical reasons, the slot analysis can account for these forms without complications. The reflexive morpheme <-nan ~ -n> (REFL) is unique to the reflexive forms and, where applicable, gets copied regularly. Its position is in suffixal slot sfx5 and like all markers in slot sfx5 it is copied to slot sfx8.

The above slot table is easily extended. For negative forms, some forms proved to be hard to elicit, particularly those forms with a second person subject, where affirmative forms formally start to coincide with the negative forms. However, it can be seen that negative formation is regular.

sfx1	sfx2	sfx3	sfx4	sfx5	sfx6	sfx7	sfx8	sfx9
				REFL <na ~ n>			REFLc <n>	

Alternatively, one might opt for a portmanteau analysis for reflexives. However, considering the regularity in the paradigm, this is a bad idea. The affix string must be taken to be composite. Not only does the occurrence of morphemes pattern neatly with the copying phenomenon observed with the morpheme <-ci> (DUP), but also the suffix string can be split up in the case of verbal compounding (cf. §7.2), as in the following example.

(326)   ciŋs-a-n   ser-a-n-ci-n
        hang-PT-REFL kill-PT-REFL-DUP-REFLc
            'he killed himself by hanging'

Obviously, an analysis positing a portmanteau morpheme <-ncin> cannot account for the truncated suffix string on the first member of the verbal compound.

4.6   Tense, aspect and mood

4.6.1   Tense and aspect

Past vs. Non-past

Simplex finite verbs in Bantawa are those verbs that carry finite morphology, but are not further affixed with aspectual or compounding morphology. Simplex verbs code two tenses: past (PT) and non-past (NPT).

Since these labels are in use for tense markers in a host of languages, I shall delineate the meaning of these labels in Bantawa. It has been noted for languages of the area, including Nepali, an Indo-European language, that for the forms that we label as past tense, in fact the perfective aspect of meaning is more prominent than the past reading, i.e. that the more important function of the usage of the past tense form, is to note the result of the action (ex. 327). These past tense forms are inherently perfective and perhaps best described as preterite (Payne 1997: 239).

(327)   inherent perfectivity

    a. nam lunt-a
        sun   set-PT
           'the sun has set'

    b. yum luw-a
        salt   feel-PT
           'it's salty'

By contrast, non-past forms are not understood as denoting the present situation. Rather non-past forms describe a) something that will happen in future, cf. example (328a), b) something that usually happens, habitual, ex. (329), or c) something that always happens, generic, ex. (330).

(328)   to insult

    a. ti-rim-ŋa
        2AS-insult-1s
           'you will insult me'

    b. ti-rimt-a-ŋ
        2AS-insult-PT-1s
           'you have insulted me'

(329)   kʰon-ki   watmasi-da   cɨlok kirawa tʰapsɨŋ-da-nalo mecʰacʰa-ci suna
        he/she-SEQ jewellery-LOC many Kiranti ritual-LOC-COND daughter-PL gold
        rupa-ʔo   watmasi mɨ-wat-Ø-ʔo   kʰaŋ-ma tokt-u-m.
        silver-GEN jewellery 3pl-put.on-NPT-NOM look-INF receive-3P-12pA
          'Then, in the ornaments, often in the Kiranti tradition we can see the girls wearing golden and silver ornaments.' [Gr]

(330) mo gagɨtyaŋ-ʔo   i-tʰen-da   i-hut-ci   mɨ-yak-Ø.
       that distillation.vessel-GEN his/her-bottom-LOC his/her-hole-PL 3pl-be.in-NPT
          'There are holes in the bottom of the gagityang.' [Hm]

The label non-past (NPT) is chosen in line with a nascent tradition in Kiranti grammars[28].

4.6.2   Explicit aspect marking

In contrast with or on top of the implicit aspectual notions associated with Bantawa verb forms, we also find many explicit markers of aspect in Bantawa. There are two quite distinct morphological strategies to mark aspect:

● verb compounding, with the vector verb indicating aspect, or

● verb nominalisation or nominalisation with auxiliary support.

Aspect by verbal compounding

Verbal compounding is an instance of verb serialisation where two successive verbs form a single verb phrase heading one clause. The morphology and semantics of verbal compounding will be discussed more extensively in §7.2. Here we only touch upon two categories: the progressive and the perfect.

(331)   VERB COMPOUNDING is the formation of a compound verb by concatenating two inflected verbs. The semantics of the whole is a product of the lexical meaning of the main verb (V1), which is the first, left-hand member of the compound, and an aspectual contribution of the second verb in the compound (V2, or 'vector verb'). The contribution of the second verbs varies widely, from an aspect marker to an almost independent, coordinated meaning.

Progressive   To form a progressive form, additional morphology must be added to the inherently perfective simplex verb forms. Progressives forms are used to express ongoing, progressing actions. Progressive forms are typically found in the scope of a subordinator or clause complementiser such as <-hida> 'while'. Even for states, progressive forms are used in these contexts. Bantawa has two suffixes that indicate simultaneity of actions: <-sa> (SIM), forming non-finite forms and <-hida> (SIMc), suffixed to fully finite clauses.

(332)   to be small

   a. citt-a
       be.small-PT
          'it's small' (perfective: 'it has become small')
   b. Un   citt-a-ŋ-y-a-ŋ-hida...
       that.size be.small-PT-1s-PROG-PT-1s-SIMc

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[28]e.g. Ebert (1997b), Tolsma (1999).

'When I was small (young)' (progressive)

To express a current activity, the progressive is required. A current activity may include states that are perceived as continuous or continuously maintained. From the viewpoint of English, this results in somewhat counter-intuitive forms. When we ask whether someone knows about something, we must ask whether 'he is knowing' it.

(333)   o   tɨ-sint-u-ŋ-o.
         this 2AS-know-3P-PROG-3P
            'do you know this?'

(334)   cʰap-ma les-u-ŋ-y-u-ŋ.
         write-INF be.able-3P-1s-PROG-3P-1s
            'I am able to write'

The morphology of progressives is discussed extensively in §7.2.6.

Perfect and perfective   In Bantawa simple past forms typically present an event or action as a transition, a change. For that reason simple finite forms are characterised as perfective (§4.6.1). Even for state or attribute verbs such as *lemma* 'to be sweet' or *omma* 'to be white', simplex verb forms express a state as the result of a process. Simplex verb forms contrast with verbal compounds that express many different aspectual and *Aktionsart* nuances. The perfect may be expressed by a verbal compound form or by a periphrastic perfect form, cf. §5.2.3. Here we mention the completive perfect vector verb, that focuses on the result of an event. The completive perfect vector verb is based on a verb root family that includes the verbs *yuŋma* 'to sit' and *yukma* 'to put', for intransitive and transitive forms respectively.

(335)   hyuna abɨ   watatma   ni-ʔo   bʰɨ-hut-da   heŋmawa
         down   *now (N)* collection.jug NAR-NOM earthen.vessel-hole-LOC liquor
         tam-Ø-yuŋ-Ø-ʔo   yuŋ-Ø.
         fill.up-NPT-PERF-NPT-NOM sit-NPT
            'Below, now, in the vessel called 'collecting vessel' the liquor will be collected.'

(336)   ott-u-ŋ   yuŋs-u-ŋ
         break-3P-1s PERF-3P-1s
            'I broke it' (completive)

This completive perfect aspect differs from the periphrastic perfect in its focus on the result and its *Aktionsart* connotation of placement, putting down and ending up in a certain location. Completive forms can be combined with the progressive, which highlights that this aspect is independent of the perfective vs. progressive contrast.

The perfective aspect that is inherent in simplex finite verb forms can be focused by the aspectual vector verb *dama* that I mention here as the final example of aspect expressed by verbal compounding. The vector verb *dama* operates as an 'effect' auxiliary expressing the perfective transition in a verbal action. As most verbs are

inherently perfective, its function is that of emphasising perfectivity or adding the perfective aspect to verbs that do not inherently have it.

The function and morphology of aspectual vector verbs is discussed extensively in §7.2.6.

Past tense negation

Form   As outlined in §4.5.3, the past tense negative forms are best understood as a periphrastic verb paradigm. There are two competing paradigms for the formation of the negative forms in the past tense. The two past negative paradigms are structurally completely identical: Only the negative auxiliary is different[29].   Full paradigms can be elicited using either of the negative auxiliaries *da* or *yuk*, cf. example (337).

(337)   a.   pʰon man-mu   tɨ-da-ŋ
                 phone NEGPTp-do 2AS-NEGPTs-1s
                     'You did not call me (at all).'

          b.   pʰon man-mu   tɨ-yuk-ŋa
                 phone NEGPTp-do 2AS-NEGPTs-1s
                     'You did not call me (or, at least, get through).'

For every form, the *yuk*-paradigm patterns exactly with the *da*-paradigm with due allowance for phonological alternations. The *yuk*-forms suffer a lot less from contraction and are more useful in demonstrating the paradigm.

In ordinary speech or elicitation, the *yuk*-forms are preferred in many cases. In spite of the still transparant verbal root meanings of these morphemes, the morphology of these suffixes in the past tense negative is different from the general scheme of verbal compounding in Bantawa, cf. §7.2. The negative past markers can be considered either as a part of the suffix sequence, or as the main inflected verb of the construction that takes the left hand member, which is the semantically most important verb, as a complement.

Semantics   The aspectual difference between the two competing forms can be cast in terms of a perfect vs. perfective negation. The *yuk*-based forms focus on the completion of an event. In many cases, to say that 'I did not...' is only relevant with respect to the result: if the action is not completed, it did not take place.

By contrast, the *da*-based forms are perfective forms. These forms deny that the entire action was started or that the effect as would have been intended by a perfective form was reached. The possible different interpretations of a default perfective form is clearly highlighted with the contrast between the two verbs 'to go' and 'to come'. If someone 'did not go' than he did not set out in the first place. If someone 'did not come', he may have been on the way, but just did not reach.

(338)   Perfective negation

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[29]Under a different analysis of the structure of the negative past, the elements <da>NEGPTs and <yuk>NEGPTpf are the content of a suffixal slot on the first verb. On the different analyses and morpheme orders of the past negation forms, §4.5.3 and §4.5.5.

    a. kʰo   kʰim kʰar-a-ŋ-a   tara man-ta-la.
      he/she house go-PT-PROG-PT *but (N)* NEGPTp-come-arrive
         'He was going home, but did not get there.'

    b. man-kʰat
      NEGPTp-go
         'He did not go.' (did not even start)

    c. man-ta
      NEGPTp-come
         'He did not come.' (could have started)

(339)   Perfect negation

    a. man-kʰat-yuk.
      NEGPTp-go-NEGPTpf
         'He has not gone.' (i.e. he may have been on his way and have returned,
         or not have started out at all)

(340)   perfective vs. perfect

    a. man-kʰat-do-Ø-m
      NEGPTp-take-NEGPTs-3P-12plA
         'we did not take it, i.e. we never did anything of the kind' - Nepali
      'लगेनौं'

    b. man-kʰat-yukt-u-m
      NEGPTp-take-NEGPTpf-3P-12plA
         'we did not take it, i.e. in any case we did not succeed in doing that' -
      Nepali 'लगेको छैनौं'

Aspect in the negative does not completely correspond to affirmative forms. The negative has semantic side-effects that the affirmative does not have. There are also negative forms with neither *da-* nor *yuk-* suffix. It would be tempting to say that these are aspectually 'unmarked,' however this is not so in contrast with *-da* forms. The alternation with suffix-less forms and *da*-forms is paradigmatic and not meaningful.

Parallels in imperatives   When the morpheme <da-> is inserted in affirmative forms, it is significant. In some of the affirmative imperative forms, the auxiliary *dama* is inserted, complying with the general rules of verbal compounding, for reasons of politeness or because it sounds 'nicer'. In singular negated intransitive forms, it is required to distinguish imperative forms from past tense negative forms: Example (341) differs minimally from example (338b).

(341)   man-kʰat-da
      NEGPTp-go-eff
        'Don't go!'

(342)   pʰas-u-do-Ø-ci
      help-3P-eff-3P-DU
        'Youˢᵍ help them!'

In example (342), effect vector verb <da> adds emphasis and politeness, aspectual information, as any vector verb in a verbal compound would add. Therefore, this is a normal instance of verb compounding as discussed in §7.2.

4.7 Mood

Now we shall discuss two more types of finite verbs, viz. the optative and the imperative forms. These forms can be the head of a full sentence, even if they have reduced scope for tense. Tense marking is imposed or superseded by mood. Verb forms in the imperative or optative cannot be nominalised, in the senses discussed in §5.2, and mood markers do not suffix to nominalised forms.

4.7.1 Optative

The optative is formed by simply affixing the morpheme <-ne> (OPT) to a finite verb in the non-past tense.

marker	*gloss*	*function*
<-ne>	OPT	optative, hortative, subjunctive

The optative has two functions:

1. Optative, hortative or exhortative, depending on person and typically translates as 'let us, let him...', cf. ex. (343).

2. Subjunctive: To express wishes, to mark commands or conditions in subordinate clauses, emotion and possibility, cf. ex. (344, 345).

(343) pʰeri   tup-ci-ne!
       again (N) meet-DU-OPT
          'let's meet again!'

(344) iŋka nu-lok   nu-lok   mu-na-ne niki-na mit-na-ŋ-na-ʔo
       I   be.good-MAN be.good-MAN do-2P-OPT REP-TOP remember-2P-PROG-2P-NOM
       tʰiyo...
       PPTaux
          'I had been thinking, "let me do you very well"...' [Gn]

(345) ankenka-sudda ti-kʰat-ne-para   nəu s̃ige   yak-Ø-yaŋ-Ø-ʔo
       weᵖᵉ-with   2AS-go-OPT-COND nine *horned (N)* be.in-NPT-PROG-NPT-NOM
       kʰana-lai rãga   ni-pi.
       youˢ-DAT *buffalo.bull (N)* 3A-give
          'If you go with us, they will give you a nine-horned one, come with us and
          go!' [Gn]

The morphology of the optative is not complicated. Neither are the semantics.

4.7.2 Imperative

Imperative forms are interpreted as commands that are directed at a second person. The imperative forms are identical to the second person past tense forms under deletion of the second person prefix <ti->, except for the transitive plural forms. In these forms, unpredictably, the second person suffix <-na> (2P) is inserted, viz. (346).

(346)

'to take'	PT forms	Imperative
2s→3s	tikʰattu	kʰattu
2d→3s	tikʰattacu	kʰattacu
2p→3s	tikʰattum	kʰattanum

The appearance of the second person suffix <-na> in negated transitive forms is regular. Apart from the 2p→3 forms, the imperative paradigm is entirely predictable. Therefore, I left the imperative paradigms out of the appendix listing verb conjugation paradigms.

The suffixes found on the forms in the imperative paradigm agree with the number of the addressed and the person and number of the object of the desired action. Imperatives are frequently extended by verbal compounding, with vector verbs <dama> (EFF) 'effect' and <kʰama> (SEE) 'see'. Both verbs have the effect of reducing the directness, adding politeness[30].

(347)   mo-da   kʰar-a!
         that-LOC go-PT!
             'go there!'

(348)   ɨ-cilok   pɨw-a-ŋ-kʰa-ŋ
         his/her-few give-PT-1s-see-1s
             'give me a little bit'

The morphology of the imperative is not complicated. Neither are the semantics.

4.7.3 Irrealis

The irrealis in Bantawa is formed by marking the protasis or conditional clause by the somewhat indefinable marker *de* (cf.§8.3.3). In irrealis constructions *de* will be glossed IRR. The marker *de* seems an obvious cognate of <di> 'what' and is associated with it by Bantawa speakers. However, the variant <di> 'what' is not used in irrealis constructions. The irrealis describes a hypothetical situation. In contrast with a conditional construction, in the irrealis construction both the condition and the consequence are false. The condition in an irrealis construction is always put in the past tense. The aspect marking on the verb can be varied to express subtle differences in the scope of the verb, e.g. (349-352).

(349)   ta-ma   rɨw-a-ŋ ni-ʔo   *de,* ta-Ø-ŋ-y-a-ŋ-ʔo   ŋe
         come-INF can-PT-1s NAR-NOM IRR come-PT-1s-PROG-PT-1s-NOM EMPH
             'If I could have come, I would have been coming.'

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[30]The vector verb *kʰama* 'to see' is defective and irregular, such that it may not be a vector verb after all. See §7.2.6.

(350) ta-ma   rɨw-a-ŋ-y-a-ŋ-ʔo   *de*, ta-Ø-ŋ-ʔo   yuw-a-ŋ-a.
       come-INF can-PT-1s-PROG-PT-1s-NOM IRR, come-PT-1s-NOM be-PT-PROG-PT
           'If I had been able to come, I would have come.'

(351) but-ma rɨ-na-ŋ-na   (ni) -ʔo *de*, but-na-ŋ-na-ʔo   yuw-a-ŋ-a.
       call-INF can-2P-PROG-2P (NAR) -NOM IRR call-2P-PROG-2P-NOM be-PT-PROG-PT
           'If I could have called you, I would have.'

(352) o-da   kʰwakko onjʰoŋlo gʰyu yuw-a-ŋ-a-ʔo   *de*,
       this-LOC such   big   *ghee (N)* be-PT-PROG-PT-NOM IRR,
       co-m-y-u-m-ʔo.
       eat.3P-12plA-PROG-3P-12plA-NOM
           'If there had been that much ghee (butter), we'd be eating it.'

The quotative or narrative marker <ni> is optional in the irrealis construction, e.g. (349, 351), but may add a flavour of remoteness to the condition (§8.5).

The nominaliser <-ʔo> (NOM) plays a significant role in past tense irrealis constructions, where the speaker and hearer both know that the condition mentioned does not hold true. The nominaliser <-ʔo> is used for known facts (§5.2) and has more or less grammaticalised to obligatorily appear on either side of past tense irrealis constructions, i.e. both in the subordinate and main clause. See examples (353) and (354). This reflects the fact that past tense irrealis constructions often function to rhetorically explain how known facts came about.

In future irrealis constructions, the past tense must be used in the subordinate clause, but use of the nominaliser <-ʔo> is impossible, e.g. (355).

(353) ɨŋka badde kʰɨpt-a-ŋ-ʔo   *de*, ɨdʰiwaŋ mɨna lis-a-ŋ-y-a-ŋ-ʔo.
       I   much read-PT-1s-NOM IRR big   man become-PT-1s-PROG-PT-1s-NOM
           'Had I learnt much, I would have been an important man.'

(354) badde saki siw-a *de*, ɨŋ-nɨŋa now-a-ŋ-a-ʔo.
       much   potato fruit-PT IRR my-mood be.good-PT-PROG-PT-NOM
           'If the potatoes had given more fruit, I would have been happy.'

(355) o   mɨna o gəri leksaid-ya   kʰar-a *de*, nam-ʔa cʰos-u-ŋ-o.
       this man this *time (N) Lakeside*-LOC.level go-PT IRR sun-ERG be.strong-3P-PROG-3P
           'If this man were to go to Lakeside now, the sun would scorch him.'

A future irrealis such as (355) implies that, of course, the situation will not occur.