

## **Agreement Morphology: The Case of Rgyalrongic and Kiranti\***

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The question of whether verbal agreement should be reconstructed to proto-Sino-Tibetan is a very controversial issue. The bewildering diversity of this family and our poor knowledge of sound laws make comparisons across sub-branches difficult.

This paper focuses on only two subgroups of the Sino-Tibetan family: Rgyalrongic and Kiranti. These two groups, although they have never been in contact, present striking similarities in their verbal morphology. The aim of this paper is to determine how much of this common morphology cannot be explained away as chance or parallel development, and must be reconstructed to their common ancestor.

Key words: Rgyalrong, Lavrung, Kiranti, agreement, analogy, Bantawa, Japhug

### **1. Introduction**

The question of the antiquity of the agreement markers in Sino-Tibetan is a very controversial issue. Some scholars such as Bauman (1975), van Driem (1993b), or DeLancey (2010a) argue that such a system must be reconstructed for proto-Sino-Tibetan, while others like LaPolla (2003) propose that the agreement systems found in various Sino-Tibetan languages are independent innovations.

This issue is difficult to settle until Sino-Tibetan languages are better described, and until their intricate historical phonology has been clarified. While some agreement systems in Sino-Tibetan could be old and go back to proto-Sino-Tibetan, it is obvious that many languages have recently innovated their agreement systems.

Nevertheless, it is possible to make meaningful comparisons between individual

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branches whose historical phonology is at least partly known. Limiting one's investigation to a few groups reduces the risk of making errors in comparisons by wrongly analyzing the data.

In this paper, I shall concentrate mainly on two language groups, Rgyalrongic<sup>1</sup> and Kiranti,<sup>2</sup> and try to determine how much of their verbal agreement morphology can be traced back to their common ancestor. The status of their common ancestor (whether it is proto-Sino-Tibetan or only a sub-branch of it) will only briefly be discussed in the conclusion.

The choice of Rgyalrongic is dictated by the fact that this group of languages is very conservative from the point of view of phonology and derivational morphology. Besides, the author has greater familiarity with the Rgyalrong languages than with any other branch of Sino-Tibetan. Kiranti was chosen to be compared to Rgyalrongic because its historical phonology is now well known thanks to the work of Michailovsky (1994, unpublished manuscript a), and because the structure of the verbal agreement systems in Kiranti languages present more similarities with Rgyalrongic than with any other branch of the Sino-Tibetan family, although these two branches of Sino-Tibetan have never been in direct contact.<sup>3</sup>

The verbal agreement systems of Rgyalrong and Kiranti present at least four common typological characteristics that are not shared with their respective neighbors.

First, they present a very strong distinction between transitive and intransitive verbal morphology. Unlike languages such as Tangut, Qiang or Tibetan, there are several unambiguous transitive markers in Rgyalrongic and Kiranti languages. We find a minority of ambitransitive verbs, which can be conjugated either as transitive or intransitive verbs. In Rgyalrong, they present an accusative alignment: used intransitively, the only argument of the verb corresponds to the agent of the transitive form (Jacques to appear). These verbs are limited to a restricted class, but it is significant that one of them in both Rgyalrong and Kiranti is the verb 'to steal':

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<sup>1</sup> A formal proof for the Rgyalrongic subgroup is given in Sun (2000). This group includes Horpa (at least three languages), Lavrung (maybe three distinct languages), and core Rgyalrong (Japhug, Tshobdun, Zbu, and Situ). All of these languages are spoken in the Tibetan areas of Sichuan, PRC.

<sup>2</sup> Kiranti is a group including about thirty-two languages spoken in Eastern Nepal, including Hayu, Bahing, Sunwar, Wambule, Jero, Chilling, Sampang, Thulung, Kulung, Koyi, Bantawa, Puma, Chamling, Dumi, Khaling, Lohorung, Chintang, Athpare, Belhare, Yakkha, Yamphu, Limbu, and a dozen other languages on which we have barely any data. This group may be paraphyletic, since no common innovations in the vocabulary have been detected. A possible common Kiranti morphological innovation is the #-nV portmanteau 1>2 suffix (see Table 1).

<sup>3</sup> The similarities between Rgyalrong and Kiranti have been discussed before by many authors, including Bauman (1975), DeLancey (1981), van Driem (1993b), Ebert (1990).

- (1) a.  $\text{t}\chi\text{-murku-a}$   
 AOR-steal-1SG  
 ‘I stole something.’ (intransitive use)
- b.  $\text{t}\chi\text{-murku-t-a}$   
 AOR-steal-PST.TR-1SG  
 ‘I stole it.’ (transitive use, with the *-t* past transitive 1SG or 2SG suffix)

Limbu *khutt-* ‘to steal’ (proto-Kiranti \*kutt-), the cognate of Japhug *murku* (proto-Japhug \*mərku), is also ambitransitive (van Driem 1991:527): both the intransitive form *khutte* ‘he stole something, it was stolen’ and the transitive one *khuttu* ‘he stole it’ are attested. Limbu only differs from Rgyalrong in that the intransitive use of this verb can be either patient- or agent-oriented.

Second, verbal agreement of transitive verbs is based on a person hierarchy, and is neither purely ergative nor accusative. In SAP  $\langle \rangle$  SAP forms, the suffixes are coreferent with the patient, which suggest an ergative alignment in this subset of the system (this feature is shared with Tangut).

Third, the reflexive forms are treated as intransitives, and one cannot use the reflexive to express a form like 1>12, 2>12 (I/you did something to both of us), 12>1 or 12>2 (both of us did something to me/you) where one entity is both agent and patient, but another entity is only patient or agent. For instance, in Japhug, the only way to say “I saw both of us in the mirror” is (2a):

- (2) a.  $\chi\epsilon\chi\text{lgon}$   $\text{u-}\eta\text{gu}$   $\text{k}\chi\text{-nt}\chi\chi\text{r-t}\epsilon\text{i}$   $\text{nura}$   $\text{pu-mto-t-a}$   
 mirror 3SG-inside AOR-appear-1DU DEM:PL AOR-see-PST-1SG  
 Lit.: “I saw that both of us appeared in the mirror.” (recorded from Chen Zhen in 2010)
- b. \* $\chi\epsilon\chi\text{lgon}$   $\text{u-}\eta\text{gu}$   $\text{t}\epsilon\text{i}zo$   $\text{pu-}\chi\chi\text{r-mto-a}$   
 mirror 3SG-inside we.two AOR-REFL-see-1SG  
 Intended meaning: ‘I saw both of us in the mirror.’, but unintelligible to native speakers.

Using a verb with the reflexive prefix  $\chi\chi\text{-}$  (Jacques 2010a) as in (2b) would be ungrammatical. In Limbu we find a similar structure (van Driem 1990:277):

- (3)  $\text{kh}\epsilon\eta\epsilon?$   $\text{anchi}$   $\text{aina-o}$   $\text{a-dha:p-si-ba}$   $\text{k}\epsilon\text{-ni}$   
 2SG 1DI mirror-LOC 1INCL-be.visible-DU-NMLZ 2-see  
 ‘You(SG) saw both of us in the mirror.’

Fourth, some Kiranti languages have prefixed nominalized forms (*ka-* in Athpare, *kɛ-* in Limbu) which can themselves be prefixed by a possessive prefix coreferent with the patient (never the agent) when the verbs are transitive (Ebert 2003a:514):

- (4) a-ka-pik  
 1SG-NMLZ:A-speak  
 ‘The one who speaks to me.’ (Athpare)

In the Rgyalrong languages, the same structure is observed:

- (5) a-kuu-fstuun  
 1SG-NMLZ:A-serve  
 ‘The one who serves me.’ (Japhug)

Aside from these four non-trivial typological similarities, the following agreement affixes present resemblances (for want of space, we only indicate one language in each case).<sup>4</sup>

**Table 1:** Potential cognate affixes between Rgyalrong and Kiranti

	Rgyalrong	Kiranti
1SG	-ŋ (Situ)	-Na < *-ŋa, -ŋ (Limbu)
2SG	-n (Situ)	-ne 1>2 (Limbu)
1DU	-tɕi (Japhug)	-si (Limbu)
2/3DU	-ndzi (Japhug)	
2/3PL	-nu (Japhug)	-ni (Koyi)
1PL	-i (Japhug)	-i 1PL.INCL (Camling)
2 <sup>nd</sup> person	tu- (Japhug)	ti- (Bantawa)
3O	-w (Situ)	-u (Limbu)
inverse	wə- (Situ)	i- (Bantawa)

The dual suffixes *-tɕi* and *-ndzi* are perhaps further analyzable as compounds of *\*C+ɕi* (where *\*C* represents a stop assimilating in place of articulation) and *\*nV+ɕi*, where *\*-ɕi* would be the dual marker corresponding to Limbu *-si*. The nasal element *\*-nV-* is potentially relatable to the *-ni* morpheme (2/3PL) found in Koyi, and more speculatively the postulated stop *\*C-* could be compared to the *-kV* first person exclusive suffix found

<sup>4</sup> Most of these comparisons have been proposed by Bauman (1975) on the basis of a more limited set of data. Bantawa data are from Doornenbal (2009), Limbu from van Driem (1987), Camling from Ebert (2003b), and Koyi from Lahaussais (2009:11).

in several Kiranti languages (Bantawa *-ka*),<sup>5</sup> supposing a fusion  $*kV\text{-}\text{t}\text{c}\text{i} > *-\text{k}\text{c}\text{i} > *t\text{c}\text{i}$ .<sup>6</sup>

All the personal affixes in the Rgyalrong languages have at least a potential equivalent in Kiranti languages. However, despite the fact that Rgyalrongic and Kiranti languages have surface similarities, we cannot conclude that all these similarities are necessarily inherited from their common ancestor.

The main problem with the theory that the system of verbal agreement is ancient in the Rgyalrong languages, the agreement suffixes are almost identical to the pronouns and the possessive prefixes in this group. The following data from Japhug illustrate this phenomenon:

**Table 2:** Person markers in Japhug

Person	Verbal affixes	Possessive prefix	Pronoun
1SG	$\Sigma$ -a	a-	azo
1DU	$\Sigma$ -tɕi	tɕi-	tɕizo
1PL	$\Sigma$ -i	ji-	jiɕo
2SG	tu- $\Sigma$	nɣ-	nɣɕo
2DU	tu- $\Sigma$ -ndzɿ	ndzɿ-	ndzɿɕo
2PL	tu- $\Sigma$ -nu	nu-	nuɕo
3SG	$\Sigma$	u-	uɕo
3DU	$\Sigma$ -ndzɿ	ndzɿ-	ɕɣni
3PL	$\Sigma$ -nu	nu-	ɕara

If the affixes had truly been inherited from proto-Sino-Tibetan without renewal and analogy, we would expect an important quantity of irregular forms; however, not a single irregular alternation linked to the personal suffixes is found in the Rgyalrong languages. If for instance a 1SG suffix  $*-\eta$  had existed, we would expect verbs with an *-a* stem to have *-o* in the 1SG in Japhug, as  $*-\text{a}\eta$  regularly becomes *-o*.

The regularity of the suffixes can be explained in two ways: either these are recently innovated affixes derived from the pronouns, or analogy has erased all traces of alternation. Since both interpretations are possible from a Japhug-internal perspective, it is necessary to adduce data from other languages.

<sup>5</sup> The reconstruction of the dual suffixes in Rgyalrongic languages presents an unsolved problem: some languages like Japhug and Situ have alveolo-palatal affricates, while others like Tshobdun have dental affricates *-tsə* and *-ndzə* (See Sun & Shi 2002, Sun 2003). The fact that these suffixes do not follow normal correspondences requires explanation in any future reconstruction of proto-Rgyalrongic.

<sup>6</sup> These comparisons are only possibilities to be further explored when the historical phonology of Rgyalrongic and Kiranti are better known.

In Situ Rgyalrong, the agreement suffixes are also quite similar to possessive prefixes (Lin 1993:168, 197-208), but we notice an interesting irregularity in stop-final verbs: the second person suffix *-n* (which has no equivalent in Japhug) does not cause the stem final to nasalize, unlike all other agreement suffixes with a nasal:<sup>7</sup>

**Table 3:** Situ agreement affixes

Person	Possessive	Pronoun	to sit <i>ni</i>	to stand <i>rjap</i>
1SG	ŋə-	ŋa	ni-ŋ	rjəm
1DU	ndzə-	ŋəndzə	ni-tʃ <sup>h</sup>	rjəp-tʃ <sup>h</sup>
1PL	jə-	ŋəje	ni-i	rjəp-i
2SG	nə-	no	tə-ni-n	tə-rjap
2DU	ndzə-	ndzə	tə-ni-ntʃ <sup>h</sup>	tə-rjəm-ntʃ <sup>h</sup>
2PL	jə-	jo	tə-ni-ŋ	tə-rjəm-ŋ
3SG	wə-	wəjo	ni	rjap
3DU	ndzə-	wəjondzəs	ni-ntʃ <sup>h</sup> / kə-ni	rjəm-ntʃ <sup>h</sup>
3PL	jə-	wəjəje	ni-ŋ / kə-ni	rjəm-ŋ

The prefix *kə-* in Situ will be discussed in §3.3.

In other Rgyalrongic languages such as Lavrung, a similarity exists between pronouns and affixes, but is less systematic:

**Table 4:** Lavrung personal affixes and pronouns

Person	Verbal affixes	Pronoun
1SG	Σ-aŋ	ŋâ
1DU	Σ-ɣ	ŋgəŋî
1PL	Σ-j	ŋgəjji / ŋgî
2SG	Σ-n	ŋê / nû
2DU	Σ-z	zəŋî
2PL	Σ-ŋ	ŋəjji / nəjji
3	ə-Σ	cçə / atə / étə

In Lavrung, unlike in Japhug and Situ, there is no straightforward way to predict the form of the suffixes from the free pronouns and vice-versa.

In Kiranti languages, personal affixes, free pronouns and possessive prefixes

<sup>7</sup> The first person singular of all verbs with final stop is the nasal consonant with the corresponding place of articulation. For *-k* and *-t* final stems, such as *ʃpak* ‘thirsty’ or *tʃ<sup>h</sup>et* ‘tired’, we have the first person singular *ʃpaŋ* and *tʃ<sup>h</sup>en*.

present even less similarities. Some Kiranti languages like Dumi (van Driem 1993a) have extensive stem alternations, and even though most of these alternations are explainable by internal reconstruction (Michailovsky unpublished manuscript a, Michailovsky 2010), they are proof of the antiquity of the agreement system in the Kiranti branch.

Although many comparisons between Rgyalrong and Kiranti are tantalizing, we shall not in this article discuss the affixes that can be transparently derived from the pronouns.

Of the similar forms in Table 1, only three affixes will be analyzed: the third person patient suffix *-u*, the second person prefix, and the inverse prefix. The other personal suffixes are too similar to the free pronouns in Rgyalrong, and determining whether they are retentions from the common ancestor of Rgyalrong and Kiranti or independent innovations in these two branches would require a much more thorough investigation, involving a complete phonological reconstruction of proto-Rgyalrong and proto-Kiranti.

## 2. Third person patient #-u

Among Rgyalrongic languages, this suffix is only found in Situ, and its use is described in Lin Xiangrong (1993:218-226) and Lin Youjing (2003:264). It is possibly ultimately related to the third person possessive *wə* (Situ), *u-* (Japhug). This suffix is particularly interesting because irregular forms involving it are found in various languages including Tangut, Kiranti, Dulong, and even Tibetan.

In Tangut, verbal stem alternations related to person are due to the fusion of the *\*-u* suffix with *\*-a*, *\*-o*, and even closed-syllable *\*-aC* stems (Jacques 2009). The fusion occurred very early, before the vowel change *\*-ja* to *-ji*.

In Kiranti, transitive *-a* stem verbs have forms in *-o* resulting from fusion with the *-u* suffix. This alternation has been documented in Limbu (*-a/-o* van Driem 1987:392-395), Hayu (*-a/-o* Michailovsky 1988:101-103), Yamphu (*-a/-o* Rutgers 1998:165), Bantawa (*-a/-o* Doornenbal 2009:401-402) and most other Kiranti languages.<sup>8</sup>

In Dulong, some transitive *-a* stem verbs have an alternant form *-o*, such as *waj<sup>55</sup>* ‘I do’, *ɔ<sup>53</sup>* ‘he does’ (Sun 1982:91-92). It is not clear how regular this pattern is in Dulong, as extensive textual data are not available, but no such forms are found in Rawang (LaPolla, p.c. 2010), though the third person *-o:* suffix is attested in this language (LaPolla 2007).

<sup>8</sup> In Hayu we find the *-a* form in 1>3 and 2/3>3 non-past form, and *-o* everywhere else (Michailovsky 1988:102). However, one should bear in mind that Hayu *-o* is the regular reflex of proto-Kiranti *\*-a*. The *-a* forms in this paradigm seem correspond to the *-o* forms of other languages. The fact that the alternation is linked to both person and tense is also relevant.

Finally, in Old Tibetan and some modern dialects (Balti, Amdo, Cone etc), we find an indirect trace of this vowel fusion in the irregular verb *za* ‘to eat’ whose past tense is *zos*, as we explained in Jacques (2010b).<sup>9</sup> Apparently, this alternation would seem to bear no relationship to the *-a/-o* alternations found in Kiranti and Dulong.

However, the tense function is also present in Kiranti languages, alongside the function as a person marker mentioned above. In Bantawa, the *-a/-o* alternation only occurs in the **past tense third person object** forms (Doornenbal 2009:138). Bantawa is not the only language in which *\*-u* is both a person and a tense marker. In Kulung the 1>3 *-u* suffix only appears in preterite forms (Tolsma 2006:65). This is also true in Dumí according to Michailovsky’s internal reconstruction (Michailovsky unpublished manuscript a, Michailovsky 2010:162):

**Table 5:** Dumí singular intransitive and transitive third person patient forms with their reconstruction in proto-Dumí

	INTR (non-past)	INTR (past)	>3SG (non-past)	>3SG (past)
1SG	$\Sigma\text{-t}\bar{\alpha} < * \Sigma\text{-ta}\eta$	$\Sigma\text{-}\bar{\alpha} < * \Sigma\text{-a}\eta$	$\Sigma\text{-t}\bar{\alpha} < * \Sigma\text{-ta}\eta$	$\Sigma\text{-u} < * \Sigma\text{-u}\eta$
2SG	$a\text{-}\Sigma\text{-ta} < * a\text{-}\Sigma\text{-ta}$	$a\text{-}\Sigma\text{-a} < * a\text{-}\Sigma\text{-a}$	$a\text{-}\Sigma\text{-ta} < * a\text{-}\Sigma\text{-ta}$	$a\text{-}\Sigma\text{-i} < * a\text{-}\Sigma\text{-u}$
3SG	$\Sigma\text{-ta} < * \Sigma\text{-ta}$	$\Sigma\text{-a} < * \Sigma\text{-a}$	$\Sigma\text{-ta} < * \Sigma\text{-ta}$	$\Sigma\text{-i} < * \Sigma\text{-u}$

Dumí differs from Bantawa in that in Bantawa, the *\*-u* suffix appears in both past and non-past in regular verbs; the restriction to past tense is only present in *-a/-o* alternating verbs. Nevertheless, the independent testimony of Bantawa and Dumí can only be explained by reconstructing the restriction of *\*-u* suffix to the past forms back to proto-Kiranti.

Tibetan thus indirectly preserved this person marker because it also was a tense marker. Other Kiranti languages have generalized the past tense or the present tense forms of this class of verbs.

The Rawang third person patient *-o*: also fits in this pattern, as it is also conditioned by tense: it appears in non-past forms. The change from a past or perfective marker to a non-past one is not unheard of elsewhere in Sino-Tibetan. For instance, the Kiranti past tense *-t* suffix appears as a non-past marker in Dumí.

Given the widespread extent of irregular forms linked to the third person patient *-u* suffix, it is not conceivable that this suffix was grammaticalized independently from the third person pronouns in all these languages. Unlike other person suffixes, we therefore have a strong degree of confidence that this suffix can be reconstructed to the proto-

<sup>9</sup> Note that Tibetan *-a* regularly corresponds to Bantawa and Limbu *-a*, and Tibetan *-o* to Bantawa *-o* and Limbu *-ɔ* (for instance Tibetan *rngo*, Bantawa *ŋo-ma* ‘to fry’, Limbu *no:-maŋ*). The correspondences exhibited in this irregular paradigm are not isolated.

language. Given the comparison of Kiranti, Rgyalrong and Tibetan forms, it can be hypothesized that its function was as in Bantawa, Kulung and proto-Dumi: a third person patient marker only appearing in the past tense.

### 3. Second person *tuu-*

Rgyalrong languages have three prefixes related to the second person: the *tuu-* prefix, which appears on almost all forms, the 1>2 *ta-* prefix and the *kui-* prefix, restricted to 2>1 forms. Unlike the personal suffixes, these prefixes are not similar to the free pronouns and the possessive prefixes, and could therefore be ancient.

This idea is confirmed by the fact that we find **irregular second person forms** for the verbs *ɣɣzu* ‘to have, to be there’ and *maje* ‘not to have, not to be there’, respectively *ɣɣtɣzu* and *mataje*, where the second person marker appears as an infix rather than a prefix and with irregular vocalism, as in the following example:<sup>10</sup>

- (6) *icqha*                      *turme*   *nura*      *nui-rca*   *ɣɣtɣzu*  
 the.mentioned   people   DEM:PL   3PL-with   2:to.be.there  
 ‘(I saw) you with these people.’ (recorded from Dpalcan in 2010).

These two irregular verbs by themselves prove that the second person prefix cannot be a recent innovation in the Rgyalrong languages, despite the fact that no clear traces of the prefix are found in any other Qiangic language, even the closely related Lavrung.

Ebert (1990) noticed the resemblance of these prefixes with those found in southern Kiranti languages: Puma *ta-*, Camling *ta-* and Bantawa *tə-*, and argued for a common origin. Although *t-* in these languages corresponds to proto-Kiranti \**d-* according to Michailovsky’s laws (Michailovsky 1994), this comparison is possible, as the prefixes do not follow the same phonetic laws as the vocabulary.

In both Rgyalrong and Kiranti, the oldest layer of prefixes only include a limited set of consonants; typically the only stops allowed are the voiceless unaspirated series. In Japhug, of all 50 consonantal phonemes, only eight (t k ɣ j s ɕ m n) are found in flexional prefixes (and the only vowels allowed are /u/, /ɤ/, and /a/). The prefixes that are not affected by this constraint, such as the Japhug directional prefix *thu-* ‘downstream’ or the South-Eastern Camling *kha-* prefix (Ebert 2003b:538) appearing in 2>1 and 3>1 forms can always be transparently derived from a free element: this shows that they have not been integrated in the morphological system long enough for their

<sup>10</sup> These two verbs are highly irregular, and are defective in that they cannot be nominalized or bear any tense markers. Japhug seems to be the only Rgyalrongic language in which these verbs can be conjugated for person.

manner or articulation to be neutralized. We propose the following principle:

- (7) **Prefix neutralization:** in languages with reduced presyllables, any prefix which has not been subjected to phonetic reduction, that is a prefix with a voiced or aspirated stop, a consonant cluster or a non-schwa-like vowel must have been recently renewed.

Supposing that the prefixes in Southern Kiranti languages had a voiced initial coming from proto-Kiranti \*t, this would paradoxically be proof that these prefixes had been recent. From the point of view of phonetic correspondences, we can safely compare the Rgyalrong and Southern Kiranti dental prefixes.

Principle (7) is not uncontroversial. Authors such as Schiering et al. (2010:684-693) have suggested that in Kiranti languages such as Limbu, a stronger phonological boundary exists between prefix and stem than between stem and suffix. In particular, the rule of *l/r* alternation fails to apply before a prefix<sup>11</sup> and a glottal stop is inserted between a prefix and a vowel-initial verb-stem (*ke-im* ‘you sleep’ is realized [keʔim]), whereas with suffixes the *l/r* alternation occurs. This observation could suggest that the prefixes, preserving some features of independent words, could be immune to the processes of phonetic reduction supposed by principle (7).

However, concerning the failure of the *l/r* alternation to occur with prefixes in Limbu, an alternative explanation can be proposed. Prefixes are rather rare in the paradigm: most verbal forms are unprefixated (only second, third plural and first inclusive have prefixes). In this regard, the non-application of the *l > r* rule can be seen as a case of analogy: in an earlier stage of Limbu, the rule also applied to prefixes, but the stem-initial *l*- was restored after the non-prefixated (first person or third singular) forms.

This hypothesis is further strengthened by the fact that most compound verbs only have the *r*- allomorph. Compound verbs are made of a noun stem and a verb stem, for instance *ya\_rapt-* ‘to sharpen’, which includes the noun *ya* ‘blade’ and a verb root *lapt-* which never appears alone. The second person prefix appears between the noun and the verb root: *ya\_ke-rapt-u* ‘you sharpened it’. Since the incorporated noun always appears in front of the verb root, the *l*- allophone never appeared in the paradigm and analogy could not take place.<sup>12</sup> Only further empirical studies on Kiranti languages can fully solve this question.

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<sup>11</sup> In Limbu, [l] and [r] were originally allophones of the same phoneme, the former appearing word-initial and in clusters, the second after vowels. However, due to the introduction of Nepali loanwords, /r/ and /l/ are now contrastive in some contexts. After prefixes, the expected change *l > r* does not occur, for instance the second person of *loʔr* ‘say’ is *ke-loʔ* not \**ke-roʔ*.

<sup>12</sup> A few compound verbs such as *ij\_lapt-* ‘to flatter’ have *l*- initial, because the incorporated noun has a final consonant.

Now that our basic framework has been laid out, let us compare personal prefixes in Southern Kiranti and Rgyalrong for all verbal forms involving the second person (Camling data from Ebert 1990, Limbu from van Driem 1987, Bantawa from Doornenbal 2009:149, Puma from Sharma et al. 2005, and Bickel et al. 2007a):

**Table 6:** Second person prefixes in Rgyalrong and Kiranti

	Japhug	Camling	Puma	Bantawa
2. intransitive	tu-	ta-	tʌ-	ti-
2>3	tu-	ta-	tʌ-	ti-
3>2	tu- (-wy-)	ta-	tʌ-, ni-tʌ-	ni-
2>1	ku-	ta-	tʌ-	ti-
1>2	ta-	(-na)	(-na)	(-na)
2SG possessive	nɣ-	kap-	ka-	am-
2SG pronoun	nɣzo	khana	khʌnna	khana

It is significant to notice that in Rgyalrong, Limbu, Bantawa, and Camling the second person prefix never appears in the imperative of either transitive or intransitive verbs (with the exception of the 2>1 forms in Rgyalrong, which have the *ku-* prefix).

The similarity between Southern Kiranti and Rgyalrong is striking, and in neither language can the prefixes be derived from either the second person possessive prefix or the second person pronoun.

The Kiranti languages without any second person prefix (Hayu, Bahing, Sunwar, Thulung, Koyi, Wambule, Jero, Lohorong, Kulung, Yakkha, Yamphu)<sup>13</sup> can be assumed to have lost it. These languages as a whole barely have any prefix (except the negative and the third person plural prefixes), in particular the nominalizing *kV-* prefix found in Limbu (*ke-*), Belhare (*ka-*), and Athpare (*ka-*), another prefix with a cognate in Rgyalrong (*ku-/kɣ-* nominalizer). Similarly, within the Rgyalrongic group the Lavrung dialects have no traces of the second person prefix (see the paradigm in Huang 2007:184-185) and have lost the nominalizing prefix,<sup>14</sup> although they preserve the inverse.

However, six other Kiranti languages also have prefixes that appear in second person forms: Limbu (van Driem 1987), Dumi (van Driem 1993a), Khaling, Chintang (Bickel et al. 2007a), Athpare (Ebert 2003a), and Belhare (Bickel 2003). These prefixes show

<sup>13</sup> No data on Chilling, Sampang, and other lesser-known Kiranti languages are available to me.

<sup>14</sup> However, this prefix is preserved in frozen forms such as Yelong Lavrung *ybjâm* ‘bird’ (Huang 2007:220), a form exactly comparable to Situ *kəbjâm* ‘bird’ in fact an agentive nominalization from *bjâm* ‘to fly’ (the flying one > bird). This is proof that the nominalization prefix existed in an earlier stage of Lavrung. It is possible that frozen traces of the dental second person prefix exist in Lavrung and prefix-less Kiranti languages.

considerable diversity, and do not correspond to Southern Kiranti *ta-/tʌ-/ti-* according to regular phonetic laws. Refection and analogy must have taken place in at least some of these languages.

The relevant data, including the verbal prefixes, the free pronouns and the possessive prefixes, are shown in Table 7:

**Table 7:** Second person prefixes in Kiranti languages

	2>3, 2>1		3>2	1I>3, 1I.INTR	3>1	2SG pronoun	2SG poss.
Camling	ta-	ta-	ta-		pa-	khana	kap-
Puma	tʌ-	tʌ-	tʌ-		pʌ-	khʌnna	ka-
Bantawa	ti-	ti-	ni-		i-	khana	am-
Dumi	<b>a-</b>	<b>a-</b>	<b>a-</b>		<b>a-</b>	<b>an</b>	<b>a-</b>
Khaling	<b>i-</b>	<b>i-</b>	<b>i-</b>		<b>i-</b>	<b>in</b>	<b>i-</b>
Chintang	a-	a-	<b>na-</b>		u- (3>1SG)	hana	i-
Athpare	a-	a-	a-			khana	ka-
Belhare		ka- (2>1SG) ma- (2>1NS)	<b>N-</b>		ka- (3>1NS.1) ma- (3>1SG/1NS.E)	han	<b>N-</b>
Limbu	<b>kɛ-</b>	<b>kɛ-</b>	<b>kɛ-</b>	a-		khene	<b>kɛ-</b>

It is striking that several languages have second prefixes that are similar to either second person possessive, free pronouns, or both. This is of crucial importance for addressing the reconstructibility of these prefixes in proto-Kiranti. I propose the following general principle:<sup>15</sup>

- (8) **Opacity principle:** when reconstructing a person agreement system, **if a form can be shown to be transparently derived from the corresponding pronoun or possessive affix, this form must be secondary.** Only opaque forms (distinct from the pronouns/possessives, and/or presenting unpredictable irregularities) can be reconstructed.

According to (8), in determining which form could be potentially reconstructed to proto-Kiranti, we must discard all those which are relatable to pronouns and possessive prefixes. These include the following:

<sup>15</sup> This principle by no means a methodological innovation, but is rarely explicitly used as an argument in Sino-Tibetan linguistics.

- (a) In Dumi, Khaling and Limbu, the second person prefixes (which merged with the inverse in Dumi and Khaling) are secondary, as they are identical to the second person possessive prefix.
- (b) In Chintang, the 3>2 prefix *na-* can be derived from a truncated form of the pronoun *hana* (only the second syllable, the one closest to the stem, was preserved).
- (c) In Belhare, the 3>2 prefix *N-* is identical to the second person prefix *N-* (however, see §3.2 for a competing hypothesis).
- (d) Limbu first person inclusive is identical to the first person prefix *a-*.

The second person *ta-/tA-/tʰ-* prefix of the Southern Kiranti languages cannot be argued to be a secondary development according to (8), as the second person pronouns and possessive are quite distinct. This is also the case with Athpare and Chintang second person *a-*, as well as Belhare *ka-* and *ma-*.

Belhare *ka-/ma-* are not at all second person prefixes synchronically, as they do not appear on intransitive and direct forms. The distribution of *ka-* cannot be simply described, as it appears on 2>1SG and 3>1INCL forms. It could be considered to be a remnant of an older second person prefix, assuming a hierarchy 2>1, in which 1INCL forms would be marked with the second person prefix. In this view, Belhare *ka-* could be compared in some way to Limbu *kɛ-*. The two following (mutually exclusive) hypotheses can be proposed:

Hypothesis 1: *ka-* as a trace of the second person possessive

- (a) In proto-Belhare, the second person possessive prefix was \**ka-* as in Athpare and Limbu.
- (b) This possessive prefix was extended to 2>1 and 3>1INCL forms (replacing the second person \**tV-* and the inverse \**u-* in these contexts), in other words all the forms involving the second person without either the second person suffix *-ka/-k* or the 1>2 suffix *-na*.
- (c) The possessive prefix was recreated from the free second person pronoun *han-* by chopping the first syllable, yielding *N-*. From that stage on, *ka-* in 2>1 form ceased to be synchronically analyzable.
- (d) *N-* was extended to 3>2 (replacing older \**tV-*). Another hypothesis is possible for this stage, see §3.2; this is of no incidence for the rest of the demonstration.
- (e) The prefix *ma-*, originally the third person plural marker (Limbu *mɛ-*) replaced *ka-* in 2>1DU and 2>PL.

Hypothesis 2: *ka-* corresponding to Camling *kha-*

- (a) In South-Eastern Camling, one finds a *kha-* prefix in the 3>2 and 3>1 forms.<sup>16</sup> This prefix also existed in proto-Belhare.
- (b) This prefix underwent the neutralization of aspiration and voicing affecting prefixes in Rgyalrong and Kiranti, according to the prefix neutralization principle (7).
- (c) This prefix originally appeared in combination with other prefixes such as the third person plural *mV-*, but a restriction on prefix cooccurrence caused these two prefixes to appear in mutually exclusive contexts in the 3>2 and 3>1 slots.

No such hypotheses can be proposed for Chintang and Athpare *a-*. Therefore, we could propose either \*tV- or \*a- to be two competing potential reconstructions for the second person prefix in proto-Kiranti.

Nevertheless, there is a reason why \*tV- is more probable as the second person prefix in proto-Kiranti. The irregular loss of stops in non-accented presyllables is not unheard of in various languages of the world, especially in the Austroasiatic family. For instance, in Mon, the presyllables *bi-*, *ki-*, *ti-* of Old Mon (where orthographic <i> probably transcribes a schwa) either disappear altogether or change to *hə-* in Modern Mon as in Old Mon *birtam* ‘night’, Modern Mon *hətəm* (Ferlus 1996). Only a minority of lexical items retain presyllables such as *tə-* or *kə-*. In the Viêt-Muong language Arem, many stop presyllables from proto-Viet-Muong change to *a-* or even disappear (reconstruction and data from Ferlus 1991[1997]):

**Table 8:** Unpredictable change from stop presyllables to *a-* in Arem

	proto-Viet-Muong	Arem	Other VM languages
remember	*kɲə:ʔ	ɲʌ:ʔ	kəɲə: <sup>3</sup> (Malieng)
smoke	*k-hə:jʔ	ahɑ:jʔ	kəhə:j <sup>3</sup> (Sach, Ruc)
tooth	*k-saŋ	athaŋ	kəsəŋ <sup>1</sup> (Sach, Ruc)
hail	*k-ca:ʔ	kəcə:ʔ	kəca: <sup>3</sup> (Sach, Ruc)
breathe	*t-ŋəs	aŋðh	təŋəh <sup>1</sup> (Sach, Ruc)
stump	*t-ko:k	təko:k	təko:k (Sach, Ruc), ko:k (Malieng)

In Austroasiatic and Sino-Tibetan languages, the attrition of presyllables is sporadic in its first stage (Michaud 2009:3-4), and affect lexical items or prefixes in an unpredictable way.

<sup>16</sup> Perhaps related to the first syllable of the free pronouns *khana* 2SG and *khu* 3SG.

Outside of Austroasiatic, one can also cite the Arandic languages (Koch 2004) in which all initial consonants have dropped, as an example of a typologically similar sound change.

Thus, postulating an irregular change *\*ta-* > *a-* affecting the second person prefix (perhaps other prefixes as well, though in-depth research would be necessary) in Chintang and Athpare should be considered as a serious possibility. The fact that Chintang prefixes present free ordering in some contexts (Bickel et al. 2007b) is a further indication that this language underwent tremendous analogy and morphological renewals.

The reverse change (*\*a-* > *ta-* in a non-accented syllable) is not attested, and precludes reconstructing *\*a-* for the second person prefix in proto-Kiranti.

For this reason, we shall favor reconstructing *\*tV-* as the second person prefix in proto-Kiranti rather than *\*a-*.<sup>17</sup> We shall now discuss in more detail the other forms in Table 9 which clearly differ between Rgyalrong and Southern Kiranti: the Rgyalrong portmanteau prefixes 2>1 *ku-* and 1>2 *ta-* and the Bantawa 3>2 form.

### 3.1 The Rgyalrong portmanteau forms 2>1 and 1>2

The Rgyalrong portmanteau prefixes 2>1 *ku-* and 1>2 *ta-* have no direct equivalent among Kiranti languages. The SAP <> SAP forms in Rgyalrong involve two portmanteau prefixes, and a suffix coreferent with the patient; this of suffixes is the same as those found on intransitive verbs, direct or inverse (3>SAP) forms. Situ differs from the three other Rgyalrong languages in two ways: 1) the 1>2SG is marked with an *-n* second person singular suffix. This suffix has no equivalent in the northern languages. 2) The 2>1 form is additionally marked with the inverse prefix (see §4). The following table shows the forms in Japhug and Situ:

**Table 9:** SAP <> SAP forms in Japhug and Situ

	Japhug	Situ
1>2SG	ta-Σ	ta-Σ-n
1>2DU	ta-Σ-ndzi	ta-Σ-ntʃ
1>2PL	ta-Σ-nu	ta-Σ-ŋ

<sup>17</sup> Reconstructing no prefix (as in Northern Kiranti languages) cannot explain how the second person *tV-* emerged in Southern Kiranti, since it is not derivable from pronouns or possessive, whereas supposing the loss of second person prefix (and of all agreement prefixes) in these languages is a straightforward hypothesis. The vowel of the prefix is a mere ‘peg’ vowel, realized as *ɨ* in Bantawa, *a* in Camling and *ɛ* in Limbu. Another possibility would be to reconstruct **both** *\*a-* and *\*tV-* as second person prefixes in proto-Kiranti, though it is not clear what their difference would have been originally.

2>1SG	kʷ-Σ-a	kə-w-Σ-ŋ
2>1DU	kʷ-Σ-tʃi	kə-w-Σ-tʃ
2>1PL	kʷ-Σ-i	kə-w-Σ-i

At this stage of our knowledge of Rgyalrong and Kiranti historical phonology and morphology, it would be premature to propose only one possible scenario to explain their origins. Therefore, we chose to present here two competing explanations for the origin of these synchronically opaque prefixes in Rgyalrong.

### 3.1.1 A Rgyalrong-type system

First, a Rgyalrong-centric point of view would be to assume that the pattern found in Rgyalrong is the original one, and that it is the one that must be reconstructed for proto-Kiranti; Bantawa would then have generalized the dental form, and Limbu the velar one. This hypothesis is based on the same principle (Hetzron 1976:93) as the reconstruction of personal suffixes in Semitic languages:

**Table 10:** Illustration of Hetzron's principle

	proto-Semitic	Akkadian	Arabic	Ge'ez
1SG	*-ku	-āku	-tu	-ku
2SG.M	*-ta	-āta	-ta	-kā
2SG.F	*-ti	-āti	-ti	-ki

Some languages (Hebrew, Aramaic, Arabic, etc.) have *-t* for both 1SG and 2SG, while others (Ethiopic and South Arabian) have *-k* for these three forms. It is generally assumed in Semitic studies that Akkadian, which has a velar in the first person and a dental in the second person forms, preserved the proto-Semitic pattern, and that the others generalized one of the forms.

The weakness of this hypothesis is the 1>2 form. Why would the prefix be lost in Kiranti only in this form? And the fact that the 1>2 *ta*- prefix and the second person *tʷ*- prefix share the same initial consonant is a coincidence in this hypothesis.

### 3.1.2 The portmanteau prefixes as ancient possessive prefixes

Another possibility would be to assume that SAP<>SAP forms in Rgyalrong come from a structure radically different from the other verbal forms, one in which the agent is marked as prefix (by a possessive prefix) and the patient by a suffix (as it still is in the Rgyalrong languages). This theory involves two basic hypotheses:

- (a) The set of personal prefixes in modern Rgyalrong languages are secondary, and were recently created from the pronouns. This hypothesis is supported by the similarity of free pronouns and personal prefixes.
- (b) The original set of possessive pronouns involved a velar prefix in the second person singular (as in Southern Qiang *kuə* ‘you’ (see Jacques 2007) but also as in Kiranti), and a prefix such as *\*a-*, *\*ŋa-* or *\*aŋ-* in the first person singular, a system similar to the one found in Limbu:

**Table 11:** Hypothesis concerning the set of personal prefixes in proto-Rgyalrong

	Japhug	proto-Rgyalrong	Limbu
1SG	a- < <i>*ŋa</i>	<i>*a-</i> , <i>*ŋa-</i> or <i>*aŋ-</i>	a-
2SG	nɣ- < <i>*naŋ</i>	<i>*kə-</i>	kɛ-

In this hypothesis, the 2>1 and 1>2 forms would have been the following at a stage of proto-Rgyalrong 1. Then, at the stage proto-Rgyalrong 2, the second person prefix was generalized to the 1>2 form, and the resulting complex prefix *\*tə-ŋa-* (or *\*tə-aŋ-*) merged as *\*ta-*, the ancestral form of the 1>2 prefix, as in shown in the following table:

**Table 12:** The origin of the SAP <> SAP portmanteau prefixes in Rgyalrong

	Japhug	Situ	proto-Rgyalrong 1	proto-Rgyalrong 2
1>2	ta-Σ	ta-Σ	<i>*ŋa-Σ-n</i>	<i>*tə-ŋa-Σ-n</i>
2>1	kuw-Σ-a	kə-w-Σ-ŋ	<i>*kə-Σ-ŋ</i>	<i>*kə-Σ-ŋ</i>
2INTR	tuw-Σ	tə-Σ-n	<i>*tə-Σ-n</i>	<i>*tə-Σ-n</i>
2TR	tuw-Σ	tə-Σ-w	<i>*tə-Σ-u</i>	<i>*tə-Σ-u</i>

This *\*tə-ŋa-* > *\*ta-* merger is not entirely straightforward, though examples are attested in Japhug (and sporadically in Situ) involving for instance the proto-Rgyalrong *\*ŋa-/ŋe-* intransitivizing prefix.

After the set of possessive prefixes was renewed on the basis of the free pronominal forms, the ancient 1SG possessive prefix *\*kə-* became opaque in this context and reanalyzed as a portmanteau prefix (hence the inverse marked in Situ, which in this theory would be an innovation, as it should not have existed when the prefix was a possessive).

### 3.1.3 Other possibilities

The two hypotheses proposed here by no means exhaust the logical possibilities to explain the origin of the Rgyalrong SAP <> SAP prefixes. It could be argued for instance

that the 2>1 *ku-* prefix derives from a non-finite form with the nominalizing prefix *ku-*, though the exact path would be unclear, especially why the personal suffixes would have been added.

### 3.2 The Bantawa forms 3>2 and 1>2

For 3>2 and 1>2 in Bantawa, a more detailed discussion is necessary. The function of the Bantawa *ni-* prefix found in 3>2 is very complex (Doornenbal 2009:150-151). It appears in 3>1 and 3>2 forms expect 3DS>1S, 3S>1DP (these cases will be treated in §3.4) and 3>1IP. In 3>1IP, we find instead the prefix *mi-*. Doornenbal insightfully explains the appearance of *mi-* in this context as the result of a merger of impersonal forms with 1IP object forms; this is therefore a Bantawa-specific innovation which is not relevant to the discussion here.

**Table 13:** Prefixes in the Bantawa paradigm for 3>1 and 3>2 forms

	1SG	1DE	1PE	1DI	1PI	2S	2D	2P
3S	i-	ni-/i-	ni/i	ni-	mi-	ni-	ni-	ni-
3D	i-	ni-	ni-	ni-	mi-	ni-	ni-	ni-
3P	ni-	ni-	ni-	ni-	mi-	ni-	ni-	ni-

Puma (from Ebert 1990) data are critical to make sense out of the Bantawa paradigm. We find a *ni-* prefix before the second person *tA-* in all 3>2 forms except 3S>2S (which has only *tA-*), and 3P>1S forms.

**Table 14:** Prefixes in the Puma paradigm for 3>1 and 3>2 forms

	1SG	1PI	2S	2P
3S	pA-	kha-	tA-	ni-tA-
3P	ni-pA-	kha-ma-	ni-tA-	ni-tA-

In the Puma data, it seems that this *ni-* prefix marks third person agent, SAP patient and non-singular. The *ni-* prefix in Bantawa is visibly a fusion of the *ni-* prefix with the second person prefix: the *t-* assimilated to the preceding nasal as *n-*. The paradigm became opaque (presenting a \**ti-/ni-* alternation instead of earlier \**ti-/ni-ti-*), and the *n-* form was generalized to the 3S>2S form. The presence of *ni-* in Bantawa 3>1NS forms, on the other hand, is probably a preservation, while Puma innovated with the *kha-* prefix coming from the possessive paradigm.

In other dialects of Bantawa, such as the one described by Novel Kishore Rai (whose data is published in Ebert 2003a:510), the 3>2SG forms also have the *ti-* prefix (the

3>2DU/PL forms are prefixed with *im-* in that dialect), and we find no trace of *ni-*. This shows that the prefix fusion is quite recent, and had not even occurred yet in proto-Bantawa.<sup>18</sup>

In conclusion, the 3>2 forms in proto-Southern Kiranti had a #tV- prefix, which was obscured only in some dialects of Bantawa. The #nV- 3>SAPNS prefix is possibly a Kiranti innovation, only found in Bantawa and Puma. Belhare 3>2 *N-* could also be a trace of the same form, though phonological attrition in this language makes it difficult to prove (another hypothesis concerning Belhare 3>2 *N-* was proposed above).

### 3.3 The Situ third person *kə-* prefix

In Situ, unlike Japhug, third person intransitive forms can be conjugated either with a prefix *kə-* or with the number suffixes *-ntʃ<sup>h</sup>* and *-ɲ*. Here is the paradigm of the verb *ni* ‘to sit’ given by Lin (1993):

**Table 15:** Third person intransitives according to Lin (1993:197-198)

3SG	<i>ni</i>
3DU	<i>ni-ntʃ<sup>h</sup></i>
3PL	<i>ni-ɲ</i>
3DU/PL	<i>kə-ɲi</i>

This *kə-* prefix is analyzed as a ‘plural’ marker by both Lin Xiangrong (1993) and Lin Youjing (2009:163) who cites the following example:

- (9) *tʂəla = zdi      wə-mbro      kəwdî      nâ-kə-tʃ<sup>h</sup>ət      nə-ɲos*  
 road=westwards 3SG:POSS-horse four PV:EVI-PL-be.exhausted2 OBV-COP1  
 ‘On the road towards the west, his four horses got exhausted.’

A possible alternative hypothesis would be that *kə-* is an intransitive obviative marker like the *-wad/-i)nid* third obviative suffixes of animate intransitive verbs in Ojibwe (see Valentine 2001:232-236) and all other Algonquian languages. In this theory, obviative intransitive verbs are unmarked for number, so that, appearing with dual or plural arguments, they are easily mistaken for non-singular markers. In sentence (9) above, this would indicate that the horses are obviative arguments.

<sup>18</sup> Doornenbal and Kishore Rai’s paradigms are quite different, and a detailed study of Bantawa dialects is a task of utmost importance for the reconstruction of proto-Kiranti morphology.

The absence of plural marking would be typologically similar with Ojibwe and other Algonquian languages, where number distinction is neutralized in obviative forms. We would have a four-fold system of number indexation of third person arguments:

**Table 16:** Four categories of verbal forms in Situ

Category	Semantic role indexed by agreement suffixes
Proximate intransitive	S
Obviative intransitive	none
Direct transitive	A
Inverse transitive	O

In inverse non-local (3>3) verbal forms, the number agreement suffixes are coreferent with the patient, whereas they are coreferent with the agent in direct non-local forms.

This idea has to be tested on the basis of textual data from Situ dialects. If true, we should find examples of *kə-* forms with singular arguments too. This *kə-* is probably etymologically related to the generic argument prefixes (see Sun 2005).

### 3.4 Chepang *-teʔ*

Chepang<sup>19</sup> presents interesting phenomena relevant to the question of the antiquity of the second person prefix #tV-. This language has been described as having complex suffixal agreement morphology (Caughley 1982). As in Rgyalrong and Kiranti, some verbal suffixes are clearly related to the free pronouns (Caughley 1982:54-55):

**Table 17:** Pronouns and agreement clitics in Chepang

	Pronoun	Agreement suffix
1SG	ŋa	-ŋ
2SG	naŋ	-na (1>2, 3>2)
1PL	ŋi	-ŋi

Finite verb forms have at least one TAM marker, the most common ones being non-past =*naʔ*, past =*ʔaʔ*, and irrealis =*caʔ*. Almost all agreement morphemes are suffixed to these TAM markers, and present many vowel fusion phenomena; for instance, non-past =*naʔ* and the third person patient *-u* merge as =*nəwʔ*:

<sup>19</sup> Chepang is a language of Nepal which is probably the closest relative of the Kiranti group. Chepang is not in direct contact with Kiranti languages that preserve prefixes.

- (10) ?amh bəyh=nəw?  
 food give-N.PST:3O  
 ‘He gives food.’ (Caughley 1982:89)

On the other hand, unlike Rgyalrong and Kiranti TAM and person suffixes, the Chepang TAM markers present no accident or morphophonological phenomena with the verb stem according to Caughley’s description. For this reason, it is safer to consider them to be clitics rather than suffixes.

The only element of the agreement system which is not suffixed is the second person =*te?*, which appears after the verb stem, but before the TAM marker:

- (11) ?amh bəyh=**te?**=nəw?  
 food give=2=N.PST:3O  
 ‘You give food.’ (Caughley 1982:89)

Caughley glosses it as “Contrary Information Flow” marker. An interesting property of this clitic is that it can be suffixed to any sentence constituent, not just the verb stem, focalizing the element in question:

- (12) ?amh=**te?** bəyh=nəw?  
 food=FOC:2 give=N.PST:3O  
 ‘You give FOOD.’ (Caughley 1982:89)

Compare also (13) and (14):

- (13) ten ?al=**te?**=?a  
 today go=FOC:2=PST  
 ‘Today, you went.’ (Caughley 1982:89)
- (14) ten=**te?** ?al=?a  
 today=FOC:2 go=PST  
 ‘TODAY, you went.’ (Caughley 1982:89)

Therefore, it is simpler to analyze it as a portmanteau morpheme marking both second person and focus.

Caughley himself noted the superficial similarity of this clitic with the Rgyalrong second person prefix. In fact, the Chepang data could be a threat to the hypothesis that the second person prefix #tV- found in Rgyalrong and Kiranti is reconstructible as a prefix in the protolanguage. It is common for clitics to become affixes while the reverse

is exceedingly rare. Therefore, one could argue that given two related languages A and B, if a cognate morpheme is a clitic in language A and an affix in language B, it is more likely that this morpheme ought to be reconstructed as a clitic in the proto-language.

Applying this line of thought to Chepang and Kiranti, we would have to conclude that in their common ancestor, the second person marker was either a free person pronoun or a pronominal clitic that later became a prefix in Kiranti, while it remained a clitic in Chepang. In this hypothesis, Kiranti and Rgyalrong second person prefixes would be parallel developments.

However, it is clear that this cannot be the case. As Caughley (1982:86) noticed himself, one cannot easily argue that *=teʔ* is a recent grammaticalization from a pronoun, as it appears in all forms involving the second person **except 1>2**, that is, exactly the only forms which have no *tV-* prefix in Southern Kiranti:

**Table 18:** Distribution of *=teʔ* in Chepang

	1O	2O	3O	Intr
1A				
2A	<i>=teʔ</i>	<i>=teʔ</i>	<i>=teʔ</i>	<i>=teʔ</i>
3A		<i>=teʔ</i>		

If *=teʔ* were recently derived from a pronoun, one would expect it either to occur in all forms involving second person **including 1>2**, or to be restricted to a functionally transparent subset of forms, that is either (i) accusative alignment: 2<INTR, 2>3 and 2>1 (ii) ergative alignment: 2<INTR, 3>2 and 1>2 (iii) hierarchical alignment (with 1>2>3): 2<INTR, 2>3 and 3>2.<sup>20</sup> Also, this hypothesis fails to explain why this affix appears before, not after, the TAM clitics like other personal markers derived from pronouns, and why it also works as a focalization marker.<sup>21</sup>

To account for the origin of this clitic and its potential relationship to Kiranti and Rgyalrong *#tV-*, a detailed hypothesis is needed.

I propose that the portmanteau clitic *=teʔ* is related to the focalizer *=leʔ*, which Caughley glosses as “referential emphasis”, and whose function he compares to English cleft sentences. As *=teʔ*, this focalizer can appear on any constituent:

- (15)  $\eta a=koʔ$  kim  $?i=leʔ$  (kheʔ=naʔ)  
 ISG=GEN house this=FOC (be=N.PST)  
 ‘My house is this one.’ (Caughley 1982:92)

<sup>20</sup> With a hierarchy 2>1>3, *=teʔ* would appear on all second person forms.

<sup>21</sup> Like Rgyalrong and Kiranti *#tV-*, *=teʔ* does not occur in imperative forms (Caughley 1982: 101). However, this is not a valid argument against its possible origin as a pronoun.

- (16) ram=koʔ    ʔama    sita=taŋʔ=**leʔ**  
 Ram=GEN    mother    Sita=HEARSAY=FOC  
 ‘Ram’s mother is Sita.’ (Caughley 1982:84)

When it appears on a verb, it is located before the TAM markers, as =*teʔ*:

- (17) ʔowʔ=koʔ    ri    payh=**leʔ**=ʔa  
 this=GEN    spirit    return=FOC=PST  
 ‘His spirit has returned.’ (Caughley 1982:92)

Additionally, I suppose that =*leʔ* originally was a copula; the change from copula to focalization marker is well attested enough cross-linguistically so that this hypothesis is not problematic. I also assume that proto-Chepeng had a \**t-* prefix whose distribution was similar to Kiranti *tV-*: intransitive second person, 2>3, 3>2 and 2>1, but NOT 1>2. Being a verb, \**leʔ* was normally inflected in the second person as \**t-leʔ*. Since the cluster \**tl-* does not exist in modern Chepeng, there is no obstacle to proposing a sound change \**tl-* > \**t-*. In this theory, =*teʔ* is the regular outcome of the second person of the proto-Chepeng copula \**t-leʔ*.

In modern Chepeng, the relationship between the two morphemes has been obscured, as both can appear together, =*leʔ* being placed before =*teʔ*:

- (18) niŋ-ji    ʔowʔ=koʔ    həw=**leʔ**=**teʔ**=ʔa-jə  
 you-DU    this=GEN    younger.brother=FOC=FOC:2=FOC-DU  
 ‘You two are his younger brothers.’ (Caughley 1982:134)

This hypothesis explains the peculiar distribution of this clitic, in particular why it appears in the same contexts as =*leʔ* and why it is also a focalization marker.

The reason why modern Chepeng verbs have no second person prefix is because all verbal forms originate in complex predicates. What is now the verb stem used to be a non-finite form devoid of agreement markers, and TAM markers originally were fully inflected auxiliaries. This explains why there is no phonetic accident between the verb stems and the TAM markers, while the TAM markers and the personal suffixes show fusional phenomena. One important piece of evidence in favor of this hypothesis is the fact that complex verbal forms with several TAM clitics also bear several agreement markers:

- (19) cyok=**teʔ**=dhaŋ=**teʔ**=ak=lə  
 get.up=FOC:2=NEAR.FUTURE=FOC:2=RELATIVE.PAST=NEG  
 ‘You had not yet got up.’ (Caughley 1982:123)

The second person clitic *=teʔ* appears two times, one before each TAM marker. The focalization markers *=leʔ* and *=teʔ* are cliticized after the non-finite main verb, but precede the inflected auxiliary. To illustrate our hypothesis in more detail, let us take the verbal form in (11).

First, the form resembled Rgyalrong or Kiranti:

- (20) \*t-bəyh-u  
\*2-give-3O

Second, the personal markers were raised to the TAM auxiliary:

- (21) \*bəyh t-naʔ-u  
\*give 2-N.PST-3O

Third, the copula/focalizer became commonly used on the uninflected verb before the TAM auxiliary; the second person could be redundantly marked on both the TAM auxiliary and the copula/focalizer:

- (22) \*bəyh (t-leʔ) t-naʔ-u  
\*give 2-FOC 2-N.PST-3O

Fourth, various sound changes took place; we have no exact idea what the outcome of clusters like *\*tn-* were, but in any case the paradigms of the auxiliaries, having become too complex, were regularized after the third person; the second person focalizer became the only way to distinguish 3>3 from 2>3 and third intransitive to second intransitive, yielding attested forms like (11)/(23):

- (23) bəyh=**teʔ**=nəwʔ  
give=2=N.PST:3O

Outside of Kiranti, Rgyalrong and Chepang, it is probable that traces of the second person prefix are found in Jingpo and some Kuki-Chin languages as proposed by DeLancey (2010a:18-20, 2011:8-14), but we leave this issue to further research. In any case, the Chepang clitic *=teʔ* does not constitute a valid counter-argument against reconstructing a second person prefix *tV-* in the common ancestor of Rgyalrongic and Kiranti.

### 3.5 Concluding remarks

In this section, we have provided further arguments supporting the hypothesis that the second-person prefix #*tV-* found in the Rgyalrong languages goes back to the common ancestor of Rgyalrong and Kiranti (which would include most Sino-Tibetan languages). In the proto-language, the prefix occurred in 2>3, 3>2, intransitive second person and perhaps also 2>1 forms. It was absent in the imperative form.

The three main arguments in favor of this hypothesis are that these prefixes cannot be derived from the pronominal forms in either Rgyalrongic or Kiranti, that we do find irregular forms involving these prefixes in Rgyalrong, and that Kiranti-internal evidence suggests that the dental prefixes of Southern Kiranti are the ones which must be reconstructed to proto-Kiranti.

One could argue that the similarity of the prefixes in Rgyalrong and Kiranti is due to chance; many unrelated languages have second person *tV-* prefixes (Semitic for instance). We agree that the similarity of these prefixes could not be a valid argument to **prove** the relationship between Rgyalrong and Kiranti if these languages had no common vocabulary.<sup>22</sup>

However, since no linguist doubts that Rgyalrong and Kiranti belong to the same family, given the existence of an affix with (i) the same function and (ii) compatible phonetic forms in the two groups, (iii) old enough to produce irregular forms, and (iv) not explainable as a recent grammaticalization or (v) as a borrowing, the **null hypothesis** is that these affixes are related and **inherited from their common ancestor**. This hypothesis can only be refuted if Rgyalrongic-internal or Kiranti-internal evidence can be adduced to show that one (or both) of these second person prefixes is derived from another prefix or from an independent word. Only further fieldwork on Rgyalrongic and Kiranti languages can decide this question.

One could refute the claims presented in this section if any Rgyalrongic or Kiranti language with a second person pronoun or possessive prefix in *tV-* was discovered (among those which have not been described yet).

## 4. Inverse

DeLancey (1981) first proposed the idea that an inverse marking system could possibly be reconstructed for proto-Sino-Tibetan. In Sino-Tibetan, and Eurasia in general,

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<sup>22</sup> For instance, Semitic languages have two affixes which happen by chance to be similar to affixes in Rgyalrong: the second person prefix \**ta-* and the causative \**ʃa-*. No serious linguist, however, would entertain the hypothesis of a relationship between Semitic and Sino-Tibetan on the basis of such data.

the only languages with a full-fledged inverse systems are the Rgyalrongic languages.

In all four Rgyalrong languages the inverse system presents few differences, as the following data from Situ and Japhug show:

**Table 19:** The inverse form in Situ and Japhug

	Situ	Japhug
2>1SG	kə-w-Σ-ŋ	kw-Σ-a
2>1DU	kə-w-Σ-tʃ	kw-Σ-tçi
2>1PL	kə-w-Σ-i	kw-Σ-i
3>1SG	wə-Σ-ŋ/-tʃ/-i	ɣw-Σ-a
3>1DU	wə-Σ-tʃ	ɣw-Σ-tçi
3>1PL	wə-Σ-i	ɣw-Σ-i
3>2SG	tə-w-Σ-n	tú-wɣ-Σ-Ø
3>2DU	tə-w-Σ-ntʃ	tú-wɣ-Σ-ndzi
3>2PL	tə-w-Σ-ɲ	tú-wɣ-Σ-nu
3>3SG	wə-Σ-Ø	ɣú-Σ-Ø
3>3DU	wə-Σ-ntʃ	ɣú-Σ-ndzi
3>3PL	wə-Σ-ɲ	ɣú-Σ-nu

Japhug *ɣ-* is the regular outcome of proto-Japhug \*w-, so that the phonological difference between Situ and Japhug is expected. In Japhug, it is one of the few prefixes to bear the accent. The 3>3 inverse forms are actually obviative, with an agent lower than the patient on the empathy hierarchy (Sun & Shi 2002, Jacques 2010a). The major difference between Situ and Japhug is the fact that the inverse also appears in 2>1 configurations; it is unclear which language has the original pattern here (according to the hypothesis presented in §3.1.2, Situ should be the innovative language).

In Lavrung, the inverse prefix has been preserved, as the following forms show (Huang 2007:69-70):

**Table 20:** Verbal agreement in Lavrung

	Inverse forms		Direct forms
2>1SG	ə-Σ-aŋ	1>2SG	Σ-n
2>1DU	ə-Σ-ɣ	1>2DU	Σ-z
2>1PL	ə-Σ-j	1>2PL	Σ-ɲ
3>1SG	ə-Σ-aŋ	1SG>3	Σ-aŋ
3>1DU	ə-Σ-ɣ	1DU>3	Σ-ɣ
3>1PL	ə-Σ-j	1PL>3	Σ-j

3>2SG	ə-Σ-n	2SG>3	Σ-n
3>2DU	ə-Σ-z	2DU>3	Σ-z
3>2PL	ə-Σ-ɲ	2PL>3	Σ-ɲ
3>3	ə-Σ	3>3	ə-Σ

The loss of the second person and the portmanteau prefixes has created two sets of homophonous forms: as 1>2 and 2>3 on the one hand and 2>1 and 3>1 on the other hand.

The obviative contrast on 3>3 forms has been lost, but it is the inverse form which was generalized. This change might look surprising, but it is in fact to be expected: after the loss of the second person prefix, 2>3 and 3>3 forms would have become homophonous if the direct forms had been generalized:

**Table 21:** Origin of the Lavrung third person form

	Situ	Japhug	Lavrung
2SG>3	tə-Σ-w	tu-Σ	Σ-n
2DU>3	tə-Σ-ntʃ	tu-Σ-ndzi	Σ-z
2PL>3	tə-Σ-ɲ	tu-Σ-nu	Σ-ɲ
3SG>3	Σ-w	Σ-Ø	
3DU>3	Σ-ntʃ	Σ-ndzi	
3PL>3	Σ-ɲ	Σ-nu	
3>3SG	w-Σ-Ø	γú-Σ-Ø	ə-Σ
3>3DU>	w-Σ-ntʃ	γú-Σ-ndzi	
3>3PL>	w-Σ-ɲ	γú-Σ-nu	

Generalizing the inverse 3>3 form had the advantage of preserving the 2>3 vs. 3>3 distinction at the cost of the loss of obviation in the third person. The absence of number marking on 3>3 forms is also a consequence of the origin of this prefix as an inverse: in Rgyalrong inverse forms, suffixes agree with the patient, never with the agent. We would expect the third person to agree with the patient, but neutralization of the inverse/direct contrast on 3>3 forms also neutralized the number marking.<sup>23</sup>

<sup>23</sup> Interpreting the Rgyalrongic data with the opposite assumption, namely that the Lavrung system better preserves the proto-Rgyalrongic prototype, is out of the question. If the second person prefix and the two SAP <math>\diamond</math> SAP prefixes were recent innovations (postdating the proto-Rgyalrongic unity), one would expect them to be diachronically transparent, and no irregular verbs to exist. Besides, the peculiarities of the Lavrung system, in particular the confusion of the 1>2 / 2>3 and 2>1 / 3>1, are explained by the hypothesis outlined above, while it would be difficult to envision how these originally homophonous forms came to be distinguished in core Rgyalrong languages by opaque prefixes in the opposite hypothesis.

Outside of Rgyalrongic, we do not find such a neat system, but suggestive traces appear in Dulong/Rawang and Kiranti. In Kiranti, the clearest trace of this inverse marker is found in Southern Kiranti. In Bantawa, the corresponding prefix is *i-*.<sup>24</sup>

**Table 22:** Traces of the inverse prefix in Bantawa (Doornenbal 2009:150)

	1SG	1DE	1PE	1DI	1PI	2S	2D	2P	3S	3NS
3S	<i>i-</i>	<i>ni-/i-</i>	<i>ni-/i-</i>						∅	∅
3D	<i>i-</i>		<i>ni-</i>		<i>mi-</i>		<i>ni-</i>		<i>i-</i>	<i>i-</i>
3P									<i>i-</i>	<i>mi-</i>

Doornenbal (2009) calls *i-* ‘marked third person agent prefix’ and argues that it is improper to consider it to be an inverse marker. Synchronically, it is certainly the case that Bantawa *i-* is not a prototypical inverse, but it appears in contexts where an inverse would be expected: 3>1 and 3NS>3S forms (assuming a hierarchy 3S>3NS). The abnormality here is in fact the absence of the *i-* prefix in 3P>1SG, 3>1NS and 3>2 forms. However, since these forms already have the prefix *ni-* (which, as explained in §3.2, comes from \**ni-ti-* in the case of 3>2 forms), we may assume that the inverse prefix, occurring after the *ni-* prefix, disappeared by merging with it (\**ni-i-* > *ni-*). This hypothesis is illustrated in the following table (excluding the innovated 3>1PI forms):

**Table 23:** A hypothesis concerning the inverse in proto-Bantawa

	1SG	1DE	1PE	1DI	2S	2D	2P	3S	3NS
3S	* <i>i-</i>	* <i>i-</i>	* <i>i-</i>		* <i>ti-i-</i>			∅	∅
3D	* <i>i-</i>		* <i>ni-i-</i>			* <i>ni-ti-i-</i>		* <i>i-</i>	* <i>i-</i>
3P								* <i>i-</i>	* <i>mi-(i-)</i>

In this theory, all the 3A forms in this paradigm would have had an inverse marker in proto-Bantawa except the 3S>3. In 3>3 forms, the use of the inverse followed thus the 3S>3NS hierarchy, and was not related to the relative animacy/topicality of the arguments as in Rgyalrong.

The hypothesis that an inverse prefix can be reconstructed for the common ancestor of Rgyalrong and Kiranti is not without problems. In both Situ Rgyalrong (but not in Japhug) and Bantawa, the inverse prefix is homophonous with the third person prefix, unlike the second person prefixes studied in §3, which are different from the second person pronoun. Besides, we have no irregular forms linked to the inverse, unlike those we have for the #-u suffix (see §2). This would seem to go counter to our opacity principle (8).

<sup>24</sup> Phonologically it could come from proto-Kiranti \**u-*. Chintang *u-* also appears in 3>1 forms.

However, one reason to reconstruct inverse in the common ancestor of Rgyalrongic and Kiranti is that inverse marking is highly unusual in Eurasia as a whole. Among languages of Eurasia, true inverse marking only appears in core Rgyalrong, and even pseudo-inverse systems based on a person hierarchy are only found in Kiranti and Dulong/Rawang (perhaps in Northern Naga languages too, but this requires further confirmation). Since Rgyalrong, Kiranti and Dulong are not spoken in contiguous zones (and surrounded by languages with much simpler, or without, verbal agreement systems), it cannot be argued that this pattern is the result of contact. Entirely parallel development of such systems seems unlikely in view of their overall rarity.

## 5. Conclusion

Although the verbal systems of Rgyalrong and Kiranti languages present striking resemblances, we cannot exclude that some of their common features could be due to parallel development, especially the suffixes.

Nevertheless, among the affixes that are potentially cognates, we find a core of three affixes which cannot be explained as parallel development or contact, and should be inherited from the common ancestor of Rgyalrong and Kiranti: the #-u third person object suffix, the #tV- second person prefix and also the inverse prefix.

Obviously, the verbal system of the common ancestor of Rgyalrong and Kiranti is unlikely to have been restricted to these three markers: a complete set of affixes (and stem alternation) ought to be reconstructed. Unfortunately, the regularity of agreement systems in Rgyalrongic and Kiranti shows that the systems have undergone extensive analogy, and that reconstructing the rest of the system is not within our reach at the present moment. A careful phonological and morphological reconstruction of Rgyalrongic and Kiranti, taking into account the whole lexicon of these languages to track down frozen forms, will be needed before the rest of the system can be recovered.

It is significant that two of these affixes are restricted to *transitive verbs*, which is sufficient to prove that biactantial agreement system goes back to the common ancestor of Rgyalrongic and Kiranti.

Rgyalrongic and Kiranti share very little common vocabulary and a careful study of Boyd Michailovsky's Kiranti etymological database only revealed less than 150 potential cognates between the two branches (one finds just as many cognates with Chinese). Therefore, their common morphology cannot be an innovation usable in subgrouping, and should be viewed instead as retention from a much earlier stage. Their common ancestor is certainly the ancestor of Tibetan (which preserves one trace of agreement, see Jacques 2010b), Qiangic, and possibly even Chinese.

The intricate verbal system of this proto-language has been entirely lost in most branches (see DeLancey 2010b), and only a few conservative language groups such as Rgyalrong and Kiranti do preserve some traces of it. In historical linguistics, not all languages are equally informative, and one cannot decide by majority rule which features should be reconstructed to the proto-language. Quite the contrary, it is often the case that archaic features are only preserved in a few distant branches of the family. Even though a considerable part of Sino-Tibetan languages have no trace of verbal agreement, we have to bear in mind that losing an agreement system is a much quicker process than creating one.

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## 論嘉絨語支與基蘭提語支的人稱範疇

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原始漢藏語人稱範疇的存在與否一直是學術界爭論不休的一個問題。由於漢藏語系語言的多樣性非常豐富，而且語言之間的語音對應關係研究的不夠深入，所以至今無法成功地進行跨語支人稱範疇的比較，也無法解答這個問題。

本文重點討論漢藏語系的兩個語支：嘉絨語支和基蘭提語支。這兩個語支的語言雖然在歷史上從來沒有過任何接觸關係，但是在動詞結構和句法類型學上（特別是人稱範疇）有著許多共同的特徵。本文旨在判斷這些共同點到底是巧合、平行發展的結果還是原始語遺留下來的存古特徵。

關鍵詞：嘉絨語支，拉塢榮語，基蘭提語支，人稱範疇，對協，類推，班塔瓦語，嘉絨語茶堡話