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ABSTRACT

This paper discusses the existence of phonological and lexical isoglosses in Tilung (Rai) and other Kiranti
groups on the basis of the scanty materials available, which are some 140 words and other morphemes
extracted from one article written by Sueyoshi Toba (2004) and a book written by Lal Rapaca (2006).
The Tilung data were compared with language data from various other Kiranti languages and
reconstructed Proto-Kiranti etyma. More than half of the collected Tilung words and other morphemes
could be assigned to particular cognate groups. These groups illustrate the various phonological
developments that have taken place in Tilung and mark important lexical isoglosses in Kiranti. It is shown
that, with respect to development of initial obstruents, Tilung is remarkably similar to the Western
Kiranti language Thulung. The shared phonological developments may perhaps have taken place at a
time when pre-Tilung and pre-Thulung were spoken in a contiguous area. From a lexical view point,
though, Tilung shares more etyma with Central and Eastern Kiranti languages than it does with Western
Kiranti. The data presented support Hanßon's (1991) claim that Tilung may well be a marginal member
of Western Kiranti, since it shares a unique phonological isogloss with Thulung, but also confirms Toba's
(2004) report that Tilung is lexically more close to Central and Eastern Kiranti.

A note on Tilung and its position within Kiranti[1]

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1 Introduction

Tilung is an unwritten and endangered Kiranti language about which very little is known, except the name, the number of speakers, the approximate location where it is spoken and some 130 words and affixes and a few short phrases. According to the 2001 Census of Nepal, there are only 310 speakers of Tilung, most of whom live in localities situated in खोटाङ Khoṭāṅ district in eastern Nepal, around the shamanistically important हलेंसी डाँडा Halẽsī Ḍā̃ḍā between the दूधकोसी Dūdhkosī and सुनकोसी Sunkosī rivers, just to the east of the Wambule-speaking area, to the south of the Bahing-speaking area and to the west of the Chamling-speaking area (see Map 1). Documentation of the Tilung language is considered to be of high priority.

According to Hanßon (1991: 98), Tilung, Tiling or Tilling, is "The least known Rai language among those which can be supposed to be still alive to some extent. The Tilung appear to be autochtonous within the Halesidanda range in the outer west of Khotang district between Dudhkosi and Sunkosi. They may represent the relics of a larger language group that seems to have been absorbed above all by Chamling, to some extent also by Umbule [Wambule] and Bahing groups. [...] they seem to live only in panchayats where also Chamling speakers can be found, whatever the reason for this symbiosis may be. [...] In the LSN materials only one questionnaire is available for Tilung [...] On the basis of the small amount of data available, Tilung may be tentatively classified a marginal member of Western Kiranti, nearly equidistant to Thulung, Bahing and the Khaling-Dumi-Koi group. A fairly large set of cognates is shared exclusively with Chamling." [2]

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[2] The Linguistics Survey of Nepal (LSN) was a research project funded by the German Research Council (Deutsche Forschungsgemeinschaft) to carry out fieldwork covering the three easternmost zones of Nepal (सगरमाथा Sagarmāthā, कोशी Kośī and मेची Mecī). The project was conducted between 1981 and 1984. Results of the LSN have appeared in various articles. The main result of the survey has been Gerd Hanßon's report from 1991. Regarding the questionnaires used, Van Driem (2001: 623) says that they were certainly well-designed, but that "Data from these Fragenbögen were collected by fieldworkers with very different linguistic aptitudes, and an indeterminate portion of the data is unreliable."

Van Driem (2001: 718) writes that "The name of the language, the scanty data available and its geographical location along the lower Dūdhkosī all raise the question whether Tilung could be an old relative of Thulung which moved downstream, a Western Kiranti language related to Chaurasiya [i.e. the Wambule-Jero language group], or some special variety of Chamling. At any rate the special features of this language are of comparative importance and hold the key to a deeper understanding of the population history of Dūdhkosī basin, which is the major linguistic crossroads of Kiranti language groups."
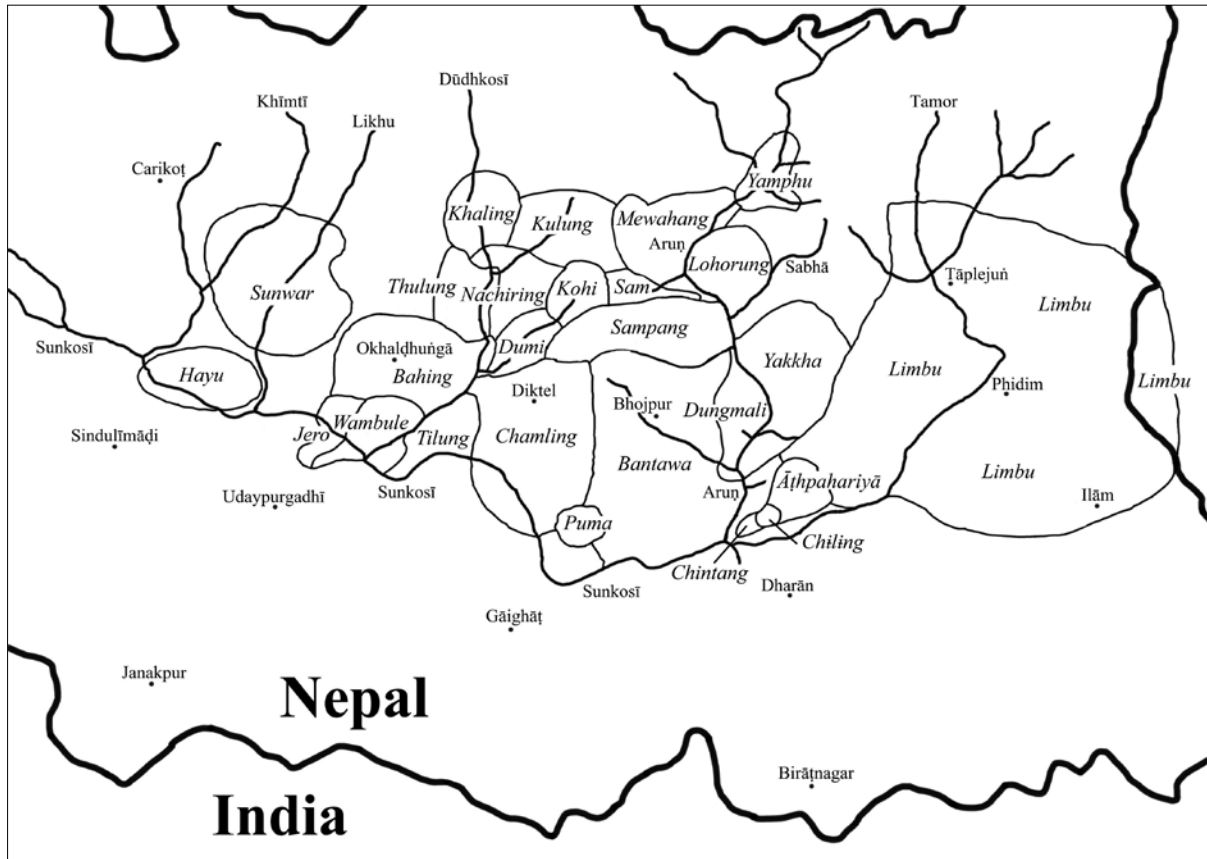
Map 1. The Kiranti-speaking area in eastern Nepal (adapted from Van Driem 2001)

Toba (2004) gives a six-page long, tentative description of Tilung and concludes that "Tilung shares 14% cognates with Thulung, 60% with Chamling, and 26% with Bahing. This indicates a close relationship with Chamling, but not whether this relationship is the result of recent adjusting or whether it was there to begin with. It is noteworthy that Tilung is so close to Chamling but not so to Umbule, although geographically very close to a village of Umbule speakers. One guess may be that the Umbule speakers moved to that vicinity of the Tilung speakers in search for arable land as the population in the original Umbule area increased." (p. 146). Such a

In August 2002, the late Werner Winter was so kind as to give me some copies and abstracts from the questionnaires on Wambule and Jero which Hanßon prepared.

Wambule expansion could well be true. My main Wambule consultant, the late Candra Bahādur Rāī, informed me about a migration of Wambule speakers out of their original habitat around उँबु Uṃbu village. In this event, which happened several generations after the Gorkhā conquest of eastern Nepal by 1786, the once sparsely populated and highly forested Hilepānī area around the confluence of the Dūdhkosī and Sunkosī rivers became populated by Wambule people that migrated from the Uṃbu area after an internal quarrel (Opgenort 2004b: 12-13). The close relationship with Chamling suggests that Tilung may be classified as a member of Central Kiranti rather than Western Kiranti.

This paper is part of an ongoing investigation into Proto-Kiranti (PK) reconstruction, Proto-Kiranti reflexes in modern Kiranti languages and the classification and subgrouping of the Kiranti languages. The features of the Tilung language and its classification within Kiranti are of comparative importance for Tibeto-Burman linguistics. The goal of this paper is to discover the existence of phonological and lexical isoglosses in Tilung and other Kiranti groups on the basis of the scanty materials available. First I will present the data set that I worked with. I will then discuss a number of phonological developments in Tilung, identify shared lexical isoglosses with neighbouring languages and discuss known grammatical features. I will conclude with some remarks on the position of Tilung within Kiranti.

2 Data set

The data I worked with in this short comparative and historical study consist of words, affixes and phrases which I extracted from two publications, one article written by Sueyoshi Toba and a book written by Lāl Rāpacā. Toba (2004: 142-143) writes that "In 2000, K.R. Khambu went to the Tilung area to collect words for a basic wordlist. But he was able to collect only 25 words of the Swadesh list. Later on fragmentary LSN notes supply us with 55 more words, so that we now have a total of 80 Tilung words in addition to some phrases and sentences to work from." More recently, Rāpacā (VS 2065, i.e. AD 2008-2009) published a book entitled *Iṇḍo–Nepāl Kirãtī Bhāṣāharū*, in which he devoted 6 pages on the distribution of Tilung speakers, clan names and publications on Tilung. Rāpacā also presents a "Kiranti-Tilung sample wordlist" with 86 Tilung words (plus five additional words elsewhere in the text) which he took from the publication entitled *Kirãt Rāī Bhāṣāharūkā Tulnātmak Śabdasaṃgraha*, which was issued by *Kirãt Rāī Yāyokkhā* in VS 2062 (AD 2005). Rāpacā also lists three other words taken from a glossary compiled by Himāl Tiluṅ in VS 2062 (i.e. AD 2005-2006) and published in *Mī* magazine, of which I have been unable to get a copy.

The Tilung words given by Toba (2004) are written in a phonemic transcription, in which /c/ represent [ts], /ch/ [tsʰ], /j/ [dz] and /ng/ [ŋ]. By contrast, the words presented by Rāpacā (VS 2065) are written in Devanāgarī script following Nepalese orthographic conventions. Regarding the ways in which the Devanāgarī script has, or has not been adapted to the phonologies of six Tibeto-Burman languages from Nepal, Noonan (2005: 17) concludes that "Most writers adopt a rough and ready approach to writing their native languages, missing many distinctions and adhering to Nepali conventions wherever possible; where the Devanagari script using Nepali orthographic conventions fail to render a phonemic distinction, the distinction is ignored." The Tilung data presented here must therefore be treated with due caution.

Diagram 1 gives an overview of the phonemes and graphemes that are used for writing Tilung. Some additional observations are required here. Firstly, even though Toba does not list the phoneme *gh* in his phoneme inventory, he uses the verb stem *ghlang-* 'fall' with initial *gh-* in one of the examples. The breathy voiced velar obstruent *gh* also appears as घ *gh* in Rāpacā's data. Secondly, Rāpacā presents a richer sound inventory and adds several new graphemes, which may well represent additional phonemes or subphonemic distinctions: the consonants ट *ṭ*, ड *ḍ*, ढ *ḍh*, झ *jh* and ह *h*; the vowels अ *a* and ई *ī* [3]; the vowel sequences or diphthongs अइ *ai*, एइ *ei*, एए *ee* and इइ *ii*; the sequence या *yā*, which may either represent a sequence of a glide and a vowel or the open-mid front vowel [æ]; the sequence यँ *yā*, which may represent nasalised [ẽ] following Nepali spelling conventions; and the sequence यउ *yau*, which may represent another diphthong [eu]. Nasalisation appears to be marginal, as it is only marked in a few words.

ई *ī*	इ *i* /i/		उ *u* /u/		प *p* /p/	त *t* /t/	च *c* /c/	ट *ṭ*	क *k* /k/
	ए *e* /e/		ओ *o* /o/		फ *ph* /ph/	थ *th* /th/	छ *ch* /ch/		ख *kh* /kh/
		आ *ā* /a/	अ *a*		ब *b* /b/	द *d* /d/	ज *j* /j/	ड *ḍ*	ग *g* /g/
					भ *bh* /bh/	ध *dh* /dh/	झ *jh*	ढ *ḍh*	घ *gh* /gh/
			उइ *ui* /ui/		म *m* /m/	न *n* /n/			ङ *ṅ* /ng/
इइ *ii*			ओइ *oi* /oi/			स *s* /s/			
एइ *ei*	एए *ee*					र *r* /r/			
		आइ *āi* /ai/	अइ *ai*			ल *l* /l/			
		या *yā*	यँ *yā*						
			यउ *yau*		व *v* /w/	य *y* /y/			ह *h*

Diagram 1. Inventory of Tilung phonemes and graphemes according to Toba (2004) and Rāpacā (VS 2065). Graphemes that are not listed as phonemes by Toba (2004) are shaded in grey. Devanāgarī is transcribed following the Indological tradition.

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[3] The vowel ई *ī* is most probably not a phoneme but a grapheme that is used at the end of words. Noonan (2005: 16) writes that "Even when writing words clearly not borrowed from Nepali, Nepali spelling conventions — and, indeed, the look of Nepali written on the page — affect the way our six languages are written. For example, four of the languages do not contrast long and short high vowels. Nonetheless, most writers of those languages make use of both the long and short graphemes in writing. In general, the distribution seems to be based on what can only be described as aesthetic considerations. This is most pronounced with regard to the <इ> and <ई> graphemes: the long vowel grapheme, with an arc extending leftward over the horizontal bar is written at the ends of words; the short vowel grapheme, with an arc extending rightward over the horizontal bar, is written elsewhere."

In total, I was able to cull some 40 words and affixes from Toba (2004) and around 100 forms from Rāpacā (VS 2065). Of these items, a handful were duplicates or near-duplicates. For instance, म्याङ *myāṅ* 'fire' and किम *kim* 'house' occurred twice, whereas the words उङो *uṅo* and *nggo* 'I', नुम् *num* and *nung* 'name', लोम् *lom* and लम् *lam* 'path', and इम्मा *immā* and *imma* 'to sleep' are nearly identical.

I compared the Tilung data with language data in my Comparative and Etymological Kiranti Database (CEKiD), which currently holds extensive lexical and morphological information on the following Kiranti languages: Bahing, Bantawa, Chamling, Dumi, Dungmali, Hayu, Jero, Khaling, Kulung, Limbu, Lohorung, Mewahang, Nachiring, Sampang, Sunwar, Thulung, Wambule, Yakkha and Yamphu. The database also contains hundreds of reconstructed Proto-Kiranti etyma and was successfully used for the first time during the reconstruction of implosive and preglottalised stops in Western Kiranti (Opgenort 2004a) and my subsequent comparative study on the development of Proto-Kiranti initials in thirteen Kiranti languages, in which I proposed some 500 cognate groups (Opgenort 2005). CEKiD is continually improved, updated and expanded.[4]

I was able to assign more than half of the collected Tilung words and morphemes to particular cognate groups. These groups illustrate the various phonological developments that have taken place in Tilung and mark important lexical isoglosses in Kiranti.

In the present discussion, Western Kiranti comprises the following languages: Hayu, Sunwar, Bahing, Jero, Wambule, Thulung, Khaling and Dumi. Central Kiranti is represented by Chamling, Bantawa and Kulung, and Eastern Kiranti by Yamphu and Limbu.[5] The possible affiliation of Tilung is debated here. Hanßon (1991) tentatively classifies Tilung as a marginal member of Western Kiranti, whereas Toba (2004) points at a close relationship with the Central Kiranti language Chamling.

3 Phonological developments in Tilung

In this section, I will discuss some major phonological developments in Kiranti regarding initial obstruents, innovations in the rhotic sphere, consonant clusters and vowel backing.

3.1 Initial obstruents

The regular correspondences I have found between Kiranti initial obstruents are given in Diagram 2. In this diagram, the Kiranti languages are listed from west to east, according to the subgroups given by Van Driem (2001: 615). The Kiranti obstruents reconstructed include three

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[4] More information on CEKiD can be found on my personal website (http://www.opgenort.nl/cekid.php).

[5] The data used in this article are taken from the following publications: Bahing by Hodgson (1857); Bantawa by Winter (2003) and Doornenbal (2009); Chamling by Hodgson (1857) and Ebert (1997); Dumi by Hodgson (1857) and Van Driem (1993); Hayu by Hodgson (1857) and Michailovsky (1981); Jero by Opgenort (2005); Khaling by Toba and Toba (1975) and Toba (1979); Kulung by Hodgson (1857) and Tolsma (1999); Limbu by Van Driem (1987); Sunwar by Bieri and Schulze (1971, 1973a, 1973b) and Borchers (2007); Thulung by Allen (1975); Tilung by Toba (2004) and Rāpacā (VS 2065); Yamphu by Rutgers (1998); Wambule by Opgenort (2004b); and Tibeto-Burman by Benedict (1972).

positions of articulation (bilabial, alveolar, velar) and one series of affricates (alveolar). I propose a four-way contrast in manner of articulation for obstruents: voiceless, preglottalised, voiceless aspirated and voiced.[6] I follow Michailovsky (1994) in reconstructing a contrast between voiceless, voiceless aspirated and voiced obstruents, and Starostin (1994, 1994-2000) in reconstructing a preglottalised manner series. I also follow Michailovsky (1994) in not reconstructing a series of breathy voiced consonants and retroflex consonants.[7] Breathy voiced consonants are not reconstructed here because voiced aspiration appears to have developed sporadically from plain voiced initials under Indo-Aryan influence. There is a considerable variation between plain voiced and breathy voiced initials in Bahing and Thulung. Allen (1975: 12) notes that "aspiration of voiced stops, whether or not before liquids, differs from that of voiceless ones in that in many words it is subject to free or dialectal variation."

PK	Hayu	Sunwar	Bahing	Jero	Wambule	Thulung	Khaling	Dumi	Tilung	Chamling	Bantawa	Kulung	Yamphu	Limbu
*p-	p-	p-	p-	p-	p-	p-	p-	p-	p-	p-	p-	p-	p-	p-
*ʔp-	p-	p-	p-	p-	p-	b-	p-	p-	b-	b-	b-	b-	Ø	ph-
*ph-	ph-	ph-	ph-	ph-	ph-	ph-	ph-	ph-	—	ph-	ph-	ph-	ph-	ph-
*b-	b-	b-	b-	b-	b-	b-	b-	b-	b-	p-	p-	p-	p-	p-
*t-	t-	t-	t-	t-	t-	t-	t-	—	ʈ-	—	t-	t-	t-	t-
*ʔt-	t-	t-	t-	t-	t-	ɖ-	t-	t-	d-	d-	d-	d-	Ø	th-
*th-	th-	th-	th-	th-	th-	th-	th-	th-	—	th-	th-	th-	th-	th-
*d-	d-	d-	d-	d-	d-	d-	d-	d-	—	t-	t-	t-	t-	t-

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[6] Matisoff (2003) reconstructs the Proto-Tibeto-Burman obstruents with a voiced/unvoiced contrast with stops at three points of articulation (labial *p and *b, dental *t and *d, velar *k and *g) and two series of affricates (dental *ts and *dz, palatal *tś and *dź).

[7] Michailovsky (1994: 768) notes, however, that the reconstruction of a voiceless aspirated series is somewhat doubtful, as it does not correspond very reliably across the group, adding that "the aspiration of individual lexical items may not have been fixed at the time of Common Kiranti, and it may be necessary to reconstruct prefixes in PK [Proto-Kiranti]."

PK	Hayu	Sunwar	Bahing	Jero	Wambule	Thulung	Khaling	Dumi	Tilung	Chamling	Bantawa	Kulung	Yamphu	Limbu
*c-	c-	c-	c-	c-	c-	c-	c-	c-	c-	c-	c-	c-	c-	c-
*ʔc-	c-	c-	c-	c-	c-	c-	c-	c-	—	ch-	ch-	ch-	s-	s-
*ch-	ch-	—	s-	s-	s-	ch-	ch-	c-	—	ch-	ch-	ch-	s-	s-
*j-	j-	j-	j-	j-	j-	j-	j-	j-	j-	c-	c-	c-	c-	c-
*k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-	k-
*ʔk-	k-	k-	k-	k-	k-	k-	k-	k-	k-	kh-	kh-	kh-	kh-	kh-
*kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-	kh-
*g-	g-	g-	g-	g-	g-	g-	g-	g-	—	k-	k-	k-	k-	k-

Diagram 2. Correspondences of Kiranti initial obstruents

Please note that Diagram 2 is somewhat simplified in the sense that Chamling, Kulung and Bantawa occasionally (irregularly) have voiced stops as reflexes of the voiced series *b-, *d-, *j- and *g-, that Sunwar also has *gy-* as a reflex of PK *j-, that Dumi also has *c-* as a reflex of PK *j-* and that Thulung also has *ḍ-* as a reflex of PK *d-.[8] However, these observations are considered irrelevant for the present discussion.

The two most salient series of obstruents that may be used for Kiranti subgrouping are the preglottalised series *ʔp-, *ʔt-, *ʔc- and *ʔk- and the voiced series *b-, *d-, *j- and *g-, since these series have undergone different developments in the various Kiranti languages. The relevant correspondence sets in Diagram 2 are explained on the basis of the following phonological developments in Kiranti obstruents:

- Devoicing of the voiced proto-series in Central and Eastern Kiranti.

- Deglottalisation and voicing of preglottalised *ʔp- and *ʔt- and aspiration of *ʔc- and *ʔk- in Central Kiranti.

- Deglottalisation of the preglottalised proto-series in Western Kiranti.

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[8] Allen (1975: 15) states that "Word-initially there is considerable dialectal fluctuation between dental and retroflex."

Devoicing of the voiced proto-series sets Central and Eastern Kiranti apart from Western Kiranti, which did not undergo this innovation. Deglottalisation and voicing of preglottalised *ʔp- and *ʔt- sets Central Kiranti apart from Western and Eastern Kiranti, which underwent different changes in this series. In order to explain the present-day variation in manner of articulation for obstruents in Central and Eastern Kiranti, the devoicing of the voiced proto-series must have preceded the developments in the preglottalised proto-series.[9]

Reflexes of the Proto-Kiranti voiced series *b-, *d-, *j- and *g- are generally voiced in Western Kiranti but unvoiced in Central and Eastern Kiranti. The following etyma with initial *b- and *j- illustrate that Tilung has not undergone Central and Eastern Kiranti devoicing.

PK *bek- 'die, break' Tilung बेए *bee* 'die'
no reflexes found in Chamling, Bantawa and Kulung[10]
Bahing *byákko* 'die', Sunwar *'beek-tsa 'die'*,
Thulung *beaks-* 'break on stretching'

PK *bi- 'give' Tilung बिमा *bimā*
Chamling *pid-*, Bantawa *pü-(a)*, Kulung *pima*
Thulung (no reflex)[11], Khaling *bi-nä*, Dumi *biːnɨ*

PK *bit 'cow' Tilung बी *bī*
Chamling *pyupa*, Bantawa *pit-ma*, Kulung *pi*
Bahing *bing* 'bull', Wambule *biya*, Thulung *beno*, Khaling *bay*

PK *ja- 'eat' Tilung जुखमा *jukhma*
Chamling *ca-ma*, Bantawa *ca-(a)*, Kulung *cama*
Bahing *jáwo*, Wambule *jacam*, Thulung *jam* 'food', Dumi *dzunɨ*

Developments in the preglottalised proto-series points at other important phonological isoglosses between the Western Kiranti languages Hayu, Sunwar, Bahing, Jero, Wambule, Khaling and Dumi, which have reflexes with initial *p-*, *t-*, *c-* and *k-*, the Western Kiranti language Thulung, which has reflexes with initial *b-*, *q-*, *c-* and *k-*, the Central Kiranti languages Chamling, Bantawa and Kulung, which have reflexes with initial *b-*, *d-*, *ch-* and *kh-*, the Eastern Kiranti language Yamphu, which has reflexes with initial Ø, Ø, *s-* and *kh-*, and Limbu, which has reflexes with initial *ph-*, *th-*, *s-* and *kh-*. The following etyma show that PK *ʔp and *ʔt have undergone the same deglottalisation and voicing in Tilung as in Central Kiranti and Thulung.

PK *ʔpak 'pig' Tilung बो *bo*
Chamling *bose*, Bantawa *bak*, Kulung *boː*

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[9] The reverse order would have resulted in the initial merger of preglottalised *ʔp- and *ʔt- with voiced *b- and *d-, and in a subsequent devoicing of all voiced obstruents. This order yields the wrong results.

[10] Chamling, Bantawa and Kulung have reflexes of PK *si 'die' instead, which is the common word in Kiranti.

[11] Bahing, Wambule and Thulung have reflexes of *gak 'give' instead, which occurrence is limited to Western Kiranti.

Bahing *po*, Wambule *pa*, Dumi *poʔo*
Thulung *boa*

PK **ʔpu* 'head'	Tilung बियो *biyo*

no reflexes found in Chamling, Bantawa and Kulung[12]
Hayu *pú-chhi*, Bahing *píya*, Wambule *phutir* (initial unexplained)
Thulung *buy*

PK **ʔtuŋ-* 'drink'   Tilung दुङमा *duṅma*
Chamling *dungma*, Bantawa *duŋ-ma*, Kulung *duːma*
Bahing *túgno*, Wambule *tuːcam*, Dumi *tïŋnï*
Thulung *ɖu(ŋ)-*

PK **ʔtin* 'egg'   Tilung *-ɖi-* in वाडिमा *vāḍimā* 'egg (of a chicken)'
Chamling *dai*, Bantawa *dim*, Kulung *wa ʥi* 'egg (of a chicken)'
Bahing *di* (initial unexplained), Dumi *ti ꞉*
Thulung *dí i*

PK **ʔkaŋ-* 'look'   Tilung केइमा *keimā* 'see'
Chamling *khanga-* ~ *khō-*, Bantawa *khaŋ-(u)*, Kulung *khoːma* 'see'
Sunwar *koo-tsa* 'see', Bahing *kwó-gno* 'see', Wambule *kwacam*
Thulung: no reflex

The data presented here indicate that Tilung did not undergo the first wave of language change (that of devoicing the voiced proto-series, as shown by the Tilung reflexes of PK **b-* and **j-*) which occurred in Central and Eastern Kiranti, but that Tilung did undergo the second change, which also happened in Central Kiranti and in Thulung, and in which **ʔp-* and **ʔt-* were generally deglottalised and voiced. In most of Western Kiranti, by contrast, the preglottalised series was simply deglottalised. The fact that Tilung and Thulung both seem to have undergone strikingly similar developments in the obstruent proto-series, which set them apart from Central and Eastern Kiranti, on the one hand, and from the rest of Western Kiranti, on the other, could well prove that Tilung is an old relative of Thulung.

The plain voiceless proto-series are reflected in Tilung *-pā* 'father, male' in ख्लिपा *khlipā* 'dog' (PK **pa*), टाँ *ṭā̃* 'hair' (PK **taŋ*), *cap-* 'be able, can' (PK **cap-*), काम्मा *kāmmā* 'bark, skin' (PK **kak*), कु *ku* 'water' (PK **ku* or **kwa*) and कुकु *kuku* 'maternal uncle' (PK **ku*). The word ओखामा *okhāmā* 'earth' (PK **kha* 'earth, soil') reflects the voiceless aspirated proto-series. Cognates of Tilung (किम) *kim* 'house' generally show voiceless aspirates in Central and Eastern Kiranti languages (i.e. *khim* in Chamling, Bantawa, Kulung, Yamphu and Limbu). Western Kiranti Sunwar *khiin* and Bahing *khim* also have voiceless aspirates, but Hayu *kem*, Jero *kul*, Wambule *kuɖu*, Khaling *kam* and Dumi *ki꞉* have plain voiceless initials. Thulung has *nem* (< **ŋem* < **kim*). I reconstruct either **ʔkim* or **khim*, but the aspiration does not correspond very reliably.

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[12] Chamling, Bantawa and Kulung have reflexes of PK **daŋ* 'head' instead. Reflexes of **ʔpu* 'head' are generally found in Western Kiranti.

3.2 Rhotics and glides

Proto-Kiranti *r- corresponds to *r-* or *y-* in the modern Kiranti languages as the result of complex historical developments. According to Van Driem (1990b), word-initial Tibeto-Burman *r- regularly went to *y-* in the historical evolution of the Eastern Kiranti languages Limbu, Yakkha, Mewahang and Yamphu. He further claims that the reintroduction of the phoneme *r* in Eastern Kiranti must be attributed to Indo-Aryan influence taking place around the time of the Gorkhā conquest of the Kiranti area. By contrast, the Western Kiranti languages regularly preserve Proto-Kiranti *r- as *r-*.

PK	Hayu	Sunwar	Bahing	Jero	Wambule	Thulung	Khaling	Dumi	Tilung	Chamling	Bantawa	Kulung	Yamphu	Limbu
*r-	r-	r-	r-	r-	r-	r-	r-	r-	r-	r-/y-	r-/y-	r-/y-	y-	y-
*ŕ-	y-	r-	r-/y-	r-/y-	r-/y-	r-	r-	r-	r-	r-	r-/y-	g-	y-	y-
*ry-	y-	r-	r-	y-	y-	y-	r-	r-	r-	r-	y-	r-	y-	y-
*y-	y-	y-	y-	y-	y-	y-	y-	y-	—	y-	y-	y-	y-	y-

Diagram 3. Correspondences of Proto-Kiranti initial *r-, *ŕ-/*ry- and *y-

The alternation between Tilung रोन्मा *ronmā* 'hear' and Chamling *yen-* and Kulung *ye ːma* suggests that the etymon for 'hear' is best reconstructed as PK *ren-*, rather than with initial *y-* as I claimed earlier (Opgenort 2005: 367). PK *r- is also reflected in Tilung रो *ro* 'rain' (PK *rwa). Tilung, like Chamling and its Western Kiranti neighbours in general, did not participate in the development of Proto-Kiranti *r- to *y-*. Tilung रोन्मा *ronmā* 'hear' also suggests that not only in Bantawa, but also in Kulung, Proto-Kiranti *r- sometimes went to *y-* and sometimes remained unchanged, albeit not necessarily in the same etyma, e.g. Bantawa *yüŋ* ~ Kulung *riŋ* 'word, say' (PK *riŋ), Bantawa *yüwa* ~ Kulung *-ri* in *tupri* 'bone' (PK *ru), Bantawa *ript-(u)* ~ Kulung *rəmma* 'twist' (PK *rim-), and Kulung *ye ːma* 'hear' (PK *ren-). In Central Kiranti, the phonological change of *r- to *y-* that occurred in Eastern Kiranti seems to have taken place only partially. Examples of Tilung words with initial *y-* are यासी *yāsī* 'two' and युगो *yugo* 'thou, you', but I have not yet found any reflexes of PK *y-*.

In Opgenort (2005: 35), I argued that there is some evidence for distinguishing *r- from *ry- as distinct units at the Proto-Kiranti level, and that *ry- is reflected in etyma that have *g-* in modern Kulung but *r-* or *y-* in Western and Central Kiranti and *y-* in Eastern Kiranti. Initial *ry-, much like initial *kw-, seems to have undergone re-analysis in various Kiranti groups because the semi-vowels *y and *w are basically capable of phonetic interaction with the syllable's initial consonant and its nuclear vowel. I still entertain the idea that there is evidence for distinguishing *r- from *ry- as distinct units at the Proto-Kiranti level, but I must also acknowledge that the

situation may have been more complex, since this distinction cannot explain the phonological differences between the reflexes for 'stand' and 'body' in the modern Kiranti languages. Thus, it may well be that the PK etymon for 'stand' is best reconstructed as *ryap- ~ *ryam- (with the cluster *ry- rather than *r-), which is reflected with initial r- in Sunwar 'rap-tsa, Bahing răpo, Khaling 'rem-nä 'erect', Dumi repnɨ, Tilung रेफ्सु rephsu, Chamling repa- and Kulung remma, and with initial y- in Hayu yĕp-che 'get up', Jero yɔmcap, Wambule yamcam, Thulung yem- ~ yep-, Bantawa ʔep(a) (< *yep-), Yamphu ye·pma and Limbu yɛpma. In this case, Kulung remma suggests a development from *rya- to re-. In the case of PK *ry-, reflexes with initial r- and initial y- are erratically distributed among the various Kiranti languages. By contrast, the PK etymon for 'body' may perhaps best be reconstructed as *ŕam (with a dorsal rhotic *ŕ- rather than a consonant cluster *ry-), as Kulung gives evidence the dorsal articulation was limited here to the syllable's initial consonant, which was 'hardened', but did not affect the nucleus. However, this claim can only be made equivocally. In Tilung, PK *ŕam 'body' is reflected in –rām in मराम् marām 'skin' and perhaps रोम rom 'breast'. Other etyma that are reconstructed with PK *ŕ- are *ŕal- 'rub', *ŕi- 'laugh', *ŕim 'shadow' (vs. *rim- 'twist'), *ŕik- 'destroy', *ŕum 'salt' and *ŕen- 'be sharp'. Note that the etymon *ŕen- 'be sharp' has reflexes with initial y- in Jero yacap, Wambule yacam, Yamphu yemma and Limbu yarapma 'whet, sharpen, make sharp', a reflex with initial g- in Kulung ge·pa, but reflexes with initial h- in Sunwar hesh-sho, Bahing héba 'sharp', Thulung hən- (but also ya 'blade') and Khaling henpä (but also 'ren-nä 'sharpen, whet'), which is unexplained.

It may well be the case that in Eastern Kiranti *r- initially merged with *ŕ-, and that the resulting dorsal rhotic *ŕ- eventually merged with *y-. In Western Kiranti, by contrast, *r- did not merge with *ŕ and *y-, but was kept distinct. However, here the phoneme *ŕ seems to have been reanalysed: in some languages *ŕ- was absorbed by *r- (e.g. before –i in Wambule and Jero) or by *y- (elsewhere), but in Kulung *ŕ became a voiced velar stop, except in the case of the word for the trade good 'salt', which is perhaps a loan word. The split of *ŕ into *r- and *y- remains largely unaccounted for.

3.3 Consonant clusters

Most Western Kiranti languages have /Cr-/ and /Cl-/ clusters which consist of an initial bilabial or velar plosive plus *l or *r. Dumi, however, lacks these clusters and, in this respect, resembles Central and Eastern Kiranti languages such as Bantawa, Kulung, Yamphu and Limbu. Note, however, that Hodgson (1857) recorded the Dumi form blet'te 'say', which may suggest that onset simplification was not yet fixed at that time. Tilung has consonant clusters in ख्लिपा khlipā 'dog' (PK *khli, or with the male gender suffix *-pa in *khlipa), blama 'language, word' (PK *la 'language, word, speech'), ब्लिमा blimā 'say' (PK *blat-), प्ले ple 'feather' and ग्रोम्मा grommā 'sit'. Ebert (2003: 533) notes that there is a great deal of dialectal variation in Chamling. The northwestern dialects (which border Tilung to the east) have initial consonant clusters, whereas the southeastern dialects do not. Consonant cluster simplification seems to be another wave of Eastern Kiranti innovation, which did not spread as far west as the Tilung-speaking area.

3.4 Vowel backing

Tilung exemplifies the historical backing and rounding of PK *i before *-ŋ that occurred in some Kiranti languages. Tilung shares this feature with the neighbouring Chamling, Bantawa and

Dumi. The Dumi phoneme *i* is "[...] a short unrounded high back [ɯ] to central [ɨ] vowel [...]" which "[...] has a regular front rounded allophone [y] following the glide phoneme /y/ [j] [...]" (Van Driem 1993: 49). The Bantawa phoneme *ü*, which is transcribed as *i* by Marius Doornenbal (2009: 45), is generally realised as [ɯ] before a velar. North of the Dūdhkosī river, where neighbouring Wambule and Bahing are spoken, **i* was not rounded before **-ŋ*. Further up north, in Khaling and Thulung, PK **i* was lowered to *ə* and *a* in this environment.

PK **ʔniŋ* 'name'[13]	[+back]	Tilung *nung*, Chamling *nung*, Bantawa *nüŋ*, Dumi *nɨ*
	[-back]	Bahing *ning*, Wambule *dî*, Kulung *niŋ*, Yamphu *niŋ*, Limbu *miŋ*
	[+low]	Thulung *nəŋ*, Khaling *nang*
PK **siŋ* 'tree'	[+back]	Tilung *sung*, Chamling *suŋ*, Bantawa *süŋ*, Dumi *sɨ*
	[-back]	Bahing *sing*, Wambule *siŋ*, Kulung *siŋ*, Yamphu *siŋ*, Limbu *siŋ*
	[+low]	Thulung *səŋ*, Khaling *sang*
PK **riŋ* 'word'		Tilung: no reflex
	[+back]	Chamling *rungma ~ ringma*, Bantawa *yüŋ* 'language'
	[-back]	Kulung *riŋ*

By contrast, there is no evidence for backing (and rounding) of **i* before **-k* in Tilung. In Kulung, however, **i* seems to be backed before **-k*, but not before **-ŋ*. In Bantawa, **i* was backed before velars in general.

PK **ʔmik* 'eye'[14]	[-back]	Tilung मिक्ची *mikcī*, Bahing *michi*, Wambule *ɓisi*, Thulung *miksi*, Dumi *miksi*, Chamling *micu*, Yamphu *mik*, Limbu *mik*
	[+back]	Bantawa *mük*, Kulung *muksi*
	[+low]	Khaling *mas*
PK **ik* 'one'	[-back]	Tilung इया *iyā*, Chamling *i-*, Yamphu *ikko*
	[+back]	Bantawa *ʔük*, Kulung *ubúm*

There is also evidence for the backing (and rounding) of **a* before **-k* and **-ŋ* in Kiranti:

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[13] The Proto-Kiranti preglottalised alveolar nasal **ʔn-* is reflected in words which regularly have initial *n-* in the modern Kiranti languages except Wambule, which has *ɗ-* instead. However, this glottalisation of *n-* in Wambule, just like that of *m-* and *l-* may also be a typical Wambule innovation for which no conditioning factors can be found, except prefixes that are no longer traceable.

[14] The Proto-Kiranti preglottalised bilabial nasal **ʔm-* is reflected in words which regularly have initial *m-* in the modern Kiranti languages except Wambule, which has *ɓ-* instead.

PK *ʔpak 'pig'   [-back]   Jero *pa*, Wambule *pa*, Bantawa *bak*, Yamphu *akma*,
                              Limbu *phak*
                  [+back]   Tilung बो *bo*, Sunwar *poo*, Bahing *po*, Thulung *boa*,
                              Khaling *'po*, Dumi *poʔo*, Chamling *bose*, Kulung *bo:*

PK *kak 'skin, bark'   [-back]   Tilung काम्मा *kāmmā*, Khaling *'kaa*
                       [+back]   Hayu *kuktsho*, Sunwar *'kusul*, Bahing *kokte*, Jero *kɔkte*,
                                  Wambule *kwakte*, Thulung *kokte*, Dumi *hok-wa*,
                                  Bantawa *sáhok*, Kulung *-ko-* in *sokowar*

PK *daŋ 'head'   Tilung: no reflex
                       [-back]   Bantawa *taŋ*, Yamphu *-taŋa* in *nindaŋa*
                       [+back]   Khaling *dhong* (*d-* expected), Chamling *tō*, Kulung *toŋ*

PK *ʔkaŋ- 'look'   [-back]   Tilung केइमा *keimā* 'see', Jero *kicap*, Bantawa *khaŋ-(u)*
                       [+back]   Sunwar *koo-tsa* 'see', Bahing *kwó-gno* 'see', Wambule
                                  kwacam, Chamling *khanga- ~ khō-*, Kulung *kho:ma*
                                  'see'

PK *ʔlaŋ 'foot, leg'[15]   [-back]   Hayu *le*, Bantawa *laŋ*, Limbu *laŋ*, Yamphu *laŋ*
                           [+back]   Tilung फिलुक *philuk*, Wambule *ʔlɔsu*, Dumi *-lɨ* in
                                      phoʔlɨ, Chamling *-lu* in *phílú*, Kulung *lɔŋ*

There is also evidence for the backing of *a after velars and *s-:

PK *ŋa 'fish'   [-back]   Tilung डइसो *ṅaiso*, Sunwar *ṅa*, Bahing *gná*, Chamling
                                 gnása
                      [+back]   Hayu *hó*, Jero *mũ*, Wambule *ŋwaso*, Thulung *ŋō*,
                                 Khaling *ngö*

PK *(ʔ)ka 'one'   Tilung: no reflex
                      [-back]   Sunwar *kaa*
                      [+back]   Hayu *kolu*, Bahing *kwong*, Jero *kɔʔlo*, Wambule *kwalo*,
                                 Thulung *ko*

PK *sa 'flesh, meat'   [-back]   Chamling *-sa* 'animal noun class marker', Bantawa *sa*,
                                  Kulung *sa*, Yamphu *sa*, Limbu *sa*
                       [+back]   Tilung सो *so*, Sunwar *she*, Bahing *syé*, Jero *su*,
                                  Wambule *so*, Thulung *seo*, Khaling *sö*, Dumi *su*

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[15] The Proto-Kiranti preglottalised alveolar lateral *ʔl- is reflected in words which regularly have initial *l-* in the modern Kiranti languages except Wambule and Jero, which have *ʔl-* instead.

Sunwar, Bahing, Thulung and Khaling seem to have undergone an additional sound change, viz. *sa > *so > sö*. In Sunwar and Bahing, the rounded front vowel *ö* was subsequently unrounded to *e* following a postalveolar or palatalised fricative.

4 Shared lexical isoglosses

Kiranti subgroups cannot only be identified on the basis of shared phonological developments, but also on the basis of isoglosses for different words which bundle together. Diagram 4 presents the distribution of 30 etyma with 12 different meanings in modern Kiranti.

Gloss	PK	Hayu	Sunwar	Bahing	Jero	Wambule	Thulung	Khaling	Dumi	Tilung	Chamling	Bantawa	Kulung	Yamphu	Limbu
arm	*huk	x	x	x						x	x	x	x	x	x
	*ʔla				x	x	x								
	*khVr							x	x						
be able	*phat-	x			x										
	*cap-		x	x	x	x	x	x	x	x	x	x			(x)
	*dur-												x		
	*he-													x	x
black	*ʔkVk	x	x	x	x	x	x	x	x				(x)		
	*mak									x	x	x	x		x	x
dog	*khli			x			x	x	x	x	x		x		x
	*kuti		x		x	x							x		
earth	*(ʔ)kak	x			x	x	x								
	*kham		x	x		x				x	x	x	x		x	x
egg	*phV		x		x	x		x							
	*ʔtin			x			x		x	x	x	x	x	x	x
give	*gak-	x	x	x	x	x	x								
	*bi-							x	x	x	x	x	x	x	x
hair	*som		x	x	x	x	x	x	x				x		x
	*taŋ								x	x	x			x	
head	*ʔpu	x	x	x	x	x	x			x					

Gloss	PK	Hayu	Sunwar	Bahing	Jero	Wambule	Thulung	Khaling	Dumi	Tilung	Chamling	Bantawa	Kulung	Yamphu	Limbu
	*daŋ							x	x		x	x	x	x	x
hear	*tho-	x			x	x	x	x							
	*ŋi-		x	x				x	x						
	*ren-									x	x	x	x		
	*khem-													x	x
lie down	*glem-		x	x	x	x	x	x				x			
	*ip-	x	x	x			x	x	x	x	x	x	x	x	x
one	*(ʔ)ka	x	x	x	x	x	x								
	*ʔtik							x	x						x
	*ik									x	x	x	x	x	

Diagram 4. Distribution of Kiranti cognate sets

Diagram 4 shows that the etyma *huk 'arm, hand', *cap- 'be able, can', *khli 'dog', *kham 'earth', *ʔtin 'egg' and *ip- 'lie down, go to bed' may be considered common Kiranti words, since they are found throughout the Kiranti-speaking area. By contrast, etyma like *he- 'be able, can' and *khem- 'hear' are only found in Eastern Kiranti, whereas other etyma are apparently only attested in Western Kiranti subgroups, e.g. *ʔla 'arm, hand' in Wambule, Jero and Thulung, and *khVr 'arm, hand' in Khaling and Dumi. The etyma *gak- 'give', *ʔpu 'head' and *(ʔ)ka 'one' seem to be the usual Western Kiranti words, but they are not reflected in Khaling and Dumi, which have retained the common Kiranti etyma. The etyma *mak 'black', *bi- 'give', *taŋ 'hair', *ren- 'hear' and *ik 'one'[16] are shared between Tilung and Central and Eastern Kiranti languages. Interestingly, though, the Western Kiranti etymon *ʔpu 'head' is also reflected in Tilung.

Khaling and Dumi, which Van Driem (2001: 615) classifies as members of his 'Upper Dūdhkosī' subgroup of Western Kiranti, share some etyma with Eastern Kiranti but not Western Kiranti, e.g. *bi- 'give' (Tibeto-Burman *biy = *bəy), *daŋ 'head', *ʔtik 'one' (Tibeto-Burman *t(y)ik = *(g-)tyik). From a lexical viewpoint, Khaling and Dumi appear to be slightly marginal members of Western Kiranti. By contrast, from a phonological viewpoint, Khaling and Dumi are unmistakably Western Kiranti languages, since they did not devoice the voiced proto-series and simply deglottalised the preglottalised proto-series. By contrast, Tilung and Thulung are phonologically marginal, both with respect to Western Kiranti and Eastern Kiranti. Tilung seems to have retained some common Kiranti etyma that were lost or replaced by other words in Western Kiranti. The Tilung word *dambu* 'last' (in 'last night'), which is not listed in Diagram 4, is cognate to Wambule *dambi* 'front, previously, before', or may actually be a loan from Wambule. Toba (2004) concludes from his study that Tilung has most cognates with Chamling. Diagram 4 shows that Tilung shares

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[16] The etyma *ik and *ʔtik may perhaps be traced back to the same etymon.

11 cognates with Chamling, 9 with Bantawa, 8 with Dumi,Yamphu and Limbu, 7 with Kulung and Bahing, 5 with Thulung, and only 3 with Wambule.

For the sake of completeness, I will list here the Tilung reflexes for PK etyma that are commonly found in the Kiranti area: PK *kak 'bark' > Tilung काम्मा *kāmmā*; **ʔnu–* 'be good' > Tilung –*no–* in खाइनोबा *khāinobā*; PK *hi or perhaps *si 'blood' > Tilung हि *hi*; PK *ŕam 'body' > Tilung –*rām* in मराम् *marām* 'skin'; PK *kwa 'chicken, fowl' > Tilung वासा *vāsā* 'bird'; PK *bit 'cow' > Tilung बी *bī*; PK **ʔtuŋ–* 'drink' > Tilung दुङ्मा *duṅmā*; PK *ʔna or **ʔno–* 'ear' > Tilung नाफुङ *nāphuṅ*; PK **ja–* 'eat' > Tilung जुखमा *jukhmā*; PK *ʔmik 'eye' > Tilung मिक्ची *mikcī*; PK *mi 'fire' > Tilung म्याङ *myāṅ*; PK *ŋa 'fish' > Tilung ङइसो *ṅaiso*; PK *sa 'flesh' > Tilung सो *so*; PK *ʔkim or *khim 'house' > Tilung (किम) *kim*; PK *ʔlaŋ 'leg, foot' > Tilung –*luk* in फिलुक *philuk*; PK *seri 'louse' > Tilung सिर *sir*; PK *min 'man, mankind' > Tilung मित्रा *minnā* 'person'; PK *ku 'maternal uncle' > Tilung कुकु *kuku*; PK *la 'moon' > Tilung *lā–* in लाकान्यउ *lākānyau*; PK *ʔniŋ 'name' > Tilung *nung* or नुम् *num*; PK *ʔna 'nose' > Tilung नादिपु *nādipu*; PK *ʔpak 'pig' > Tilung बो *bo*; PK *war or *rwa 'rain' > Tilung रो *ro*; PK *ʔlam 'road, path' > Tilung लोम् *lom* or लम् *lam*; PK **ryap–* ~ **ryam–* 'stand' > Tilung रेफ्सु *rephsu*; PK *ʔluŋ 'stone' > Tilung लुङ्यँ *luṅyā̃*; PK *ʔnam 'sun' > Tilung नोम *nom*; PK *ʔmeri 'tail' > Tilung सामेरी *sāmerī*; PK *lem 'tongue' > Tilung लिम *lim*; PK *ku or *kwa 'water' > Tilung कु *ku*; PK *ʔme 'woman' > Tilung मारी *mārī*; and PK *siŋ 'wood, firewood, tree' > Tilung *sung*.

5   Grammatical features

Tilung verbs mark negation, tense, person and number on the verb. Toba (2004) gives the verb forms *ghlang-te-ngo* (fall-PT-1s) 'I fell' and *ma-cap-te-ngo* (NEG-can-PT-1s) 'I could not', in which the Tilung preterite tense (PT) marker *–te* is suffixed directly to the verb stem and followed by person and number agreement suffixes. The Tilung preterite tense marker is a reflex of PK **–ta*, which is also reflected in Sunwar *–tā–*, Bahing *–ta*, Thulung *–ti–* and Khaling *–t–*. In Central and Eastern Kiranti, the preterite tense marker is realised as Chamling *–a*, Bantawa *–a*, Kulung *–a* and Limbu *–ɛ*. The preterite tense markers **–ta–* and **–a* are likely to represent the same etymon, but the loss of initial **t–* may represent a Central and Eastern Kiranti development which did not occur in Tilung. The Tilung negative prefix *ma–* (NEG) and the Tilung first person suffix *–ngo* (1s) are cognates of the PK negative marker **ma–* and first person singular marker **–ŋa*, which are found throughout the Kiranti-speaking area and beyond. The Tilung suffix *–ma* (-मा *–mā*), which is used in the citation form of verbs, is cognate of the following 'infinitival' suffixes: Chamling *–ma*, Kulung *–ma*, Yamphu *–ma* and Limbu *–maʔ*. Thulung *–mu*, Khaling *–nä* and Dumi *–nɨ* also seem to be related.

6   Conclusion

Despite the fact that the available Tilung data are scanty and must be treated with due caution, several conclusions can be drawn from the present discussion:

- With respect to development of initial obstruents, Tilung is remarkably similar to the Western Kiranti language Thulung. The shared phonological developments may perhaps have taken place at a time when pre-Tilung and pre-Thulung were spoken in a contiguous area.

- From a lexical view point, though, Tilung shares more etyma with Central and Eastern Kiranti languages than it does with Western Kiranti.

- Like most Western Kiranti languages and the northwestern dialects of Chamling, Tilung shows a retention of consonant clusters. Tilung did not participate in this Eastern Kiranti innovation, which also conquered most of Central Kiranti.

- Innovations in the rhotic sphere seem to be rather irregular in Western and Central Kiranti, and cannot (yet) be successfully used for grouping Western and Central Kiranti languages.

- Backing of vowels before or after velars happened quite regularly in Kiranti, but it affected various languages to different degrees.

The data presented here support Hanßon's claim that Tilung may well be a marginal member of Western Kiranti, since it shares a unique phonological development with Thulung, but also confirms Toba's report that Tilung is lexically closer to Central and Eastern Kiranti. The lexical closeness with Chamling may be related to the fact that Tilung, like Dumi, has preserved a number of PK etyma that were generally replaced by other etyma in Western Kiranti (such as those for 'give' and 'one'), but also through the influence of its eastern neighbour Chamling. In the etyma presented above, Western Kiranti seems to be phonologically more conservative but lexically more innovative, whereas Central and Eastern Kiranti appears to be phonologically more innovative but lexically more conservative. More research, especially on grammatical peculiarities in the verbal conjugation, is considered to be of high priority and should shed more light on the position of Tilung in Kiranti and further advance the reconstruction of Proto-Kiranti.

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