

Temporal Concepts and Formulations of Time in Tibeto-Burman Languages

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Abstract

As a vast and diverse linguistic grouping, Tibeto-Burman languages vary in their usage of time constructs, both morphologically and semantically. Even between genetically related languages within the Tibeto-Burman language family, approaches to elements such as suffixation vary widely, while vocabulary from Indo-Aryan and distantly related Sinitic languages is differently incorporated and borrowed. In this article, we identify trends that only become apparent through the process of data collation and the careful comparison of numerous grammatical sketches and dictionaries. We further expand this rich, if understudied, area through the incorporation of original fieldwork data from the Thangmi/Thami-speaking communities of Nepal undertaken by one of the co-authors, and supplemented by the researcher's residence in the Himalayan region from 1996 to 2009.

The literature review and linguistic scope of this survey includes multiple grammars of languages spoken across the Greater Himalayan region, with specific emphasis on the Rāi-Kiranti sub-branch of languages autochthonous to eastern Nepal. In our comparative analysis, we focus on apparent cognates and shared paradigms with an emphasis on systems of segmental time measurement (e.g. 'two days hence,' 'this year') rather than on relative ones (e.g. 'now,' 'then'). Through this compilation, the relationship between Tibeto-Burman languages and their often-dominant regional Indo-Aryan counterparts becomes more visible, mediated by a better understanding of the shared yet conflicting epistemological, astrological, and organisational views of time held by the communities who speak Tibeto-Burman languages.

Features of note include the assimilation of Chinese and Indian religious and spiritual systems, as well as imported vocabulary that does not always replace—but is in fact sometimes incorporated into—the lexicon of a given language by the speech community. It is our observation that in Tibeto-Burman languages, Indigenous concepts, categories and classifications of time are usually grammatically encoded in adverbial forms, while the influential Indo-Aryan languages of the region mostly make use of nominal morphology in order to express temporal concepts. In addition, reflexes of Proto-Tibeto-Burman (hereafter PTB) nouns are still evident across the language family.

To conclude, we position this survey as a comparative and analytical contribution which focuses attention on the region's rich linguistic variation and the importance of rigorous documentation, conservation and revitalisation programs for Indigenous languages of the Tibeto-Burman family, as the communities who speak these languages continue to grapple with severe socio-political challenges and face the hegemonic pressures of linguistic assimilation.

Keywords: *Tibeto-Burman, Himalayan linguistics, time, temporality, borrowing*

Introduction¹

How people experience, categorise, and realise time is anything but uniform across human languages. In our globalised and interconnected world, standardised international systems of time and temporal management often run counter to or challenge culturally-specific temporal metrics, some of which we highlight in this contribution. Much like colour (see Turin & Chung 2018), time represents a cognitive abstraction expressed through a rationalisation and observation of the physical world; principally the sun's movement throughout the day, manifested in dawns and dusks, sunrises and sunsets, the changing phases of the moon, and the seasons of the year. However, while research into the physiology of colour and its interpretation has significantly shaped our understanding of how—both scientifically and culturally—our retinal cones and cognition determine what, for example, 'blue' is and how it is perceived, time remains more opaque and under-theorised in ways that invite greater scrutiny and attention.

In this article, we present and compare the time systems of thirteen Tibeto-Burman languages, which constitute a subgroup of the greater Sino-Tibetan family through a careful analysis of lexicon and grammar (van Driem 2011). Our primary focus is on the Tibeto-Burman languages spoken in Nepal, a recognized 'language hotspot,' and within that, the ethnolinguistic Rāi-Kiranti language group spoken in the eastern part of Nepal (Turin 2008; Harrison 2008: 2). We supplement this analysis with data from neighbouring Tibeto-Burman languages. Drawing on Turin's long-term fieldwork with the Thangmi community, also known as 'Thami,' the article focuses in particular on the varieties of Thangmi spoken in Dolakhā and Sindhupālcok districts of central eastern Nepal.

Tibeto-Burman languages are a subgroup within the contested Sino-Tibetan family, the latter including the diverse range of Chinese languages. Taxonomic and genetic descriptions of the Tibeto-Burman family are rife with complexity and disagreement. For example, van Driem (2011) proposes the term “Trans-Himalayan” to better describe and acknowledge the linguistic geography of the region (32). Tibeto-Burman languages are spoken from Kashmir to Vietnam, and thanks to massive aerial variation and internal diversity, genetic affiliations remain disputed (Bradley 1997; DeLancey 1987; Kansakar 1993; Thurgood & LaPolla 2003). The term Tibeto-Burman, however, continues to be widely used to describe this language grouping. Given the level of diversity within the language family, then, it is perhaps unsurprising that conceptualisations of time also vary widely.

Loan Words in Tibeto-Burman Languages

When discussing loans, we would do well to bear in mind Wierzbicka’s (2008) good counsel: We must challenge ourselves to distinguish between instances when there is an actual lexical gap versus situations that are better explained as an alternative viewpoint or worldview that cannot be easily lexicalised or rationalised in another language. To that end, we take no position on factors influencing specific borrowing, and we restrict ourselves to locating and describing cognates and loans of particular note and interest when present in the data. Well-attested across the Tibeto-Burman family, lexical borrowings can and do arise for a multitude of reasons. However, in acknowledgement of the diversity and vastness of the language family, we find ourselves underqualified to retrace and reconstruct the more complex histories of borrowed terms that we identify in the data.

Many Tibeto-Burman languages—and certainly those spoken in Nepal—borrow lexical terms from socially dominant and politically standardised languages such as Nepali, an Indo-Aryan language which is constitutionally enshrined as the official language of Nepal. In some cases, two-time systems that differentiate between segmented time (e.g. hours and minutes) and observable episodes (e.g. midday and sunset/sunrise) may exist in either free variation or complementary distribution in the same lexicon. Simply put, foreign time systems and temporal forms can either replace existent Indigenous forms in a lexicon or work in concert with them to appear in specific environments. Sunwar offers one such example, in which Nepali is used alongside an Indigenous system to express concepts of time (Borchers 2008). Wambule and Jero also offer examples of languages that have integrated and hybridised time-related terms from Nepali into their Indigenous lexicons (Opgenort 2004).

In his work on lexical borrowing, Grzega (2003) identifies a number of factors that can help us describe the abundance of borrowed terms relating to time in Tibeto-Burman languages. Explanations for borrowing include, among others: The “feeling of insufficiently differentiated conceptual fields [between speaking groups]” (Weinreich 1954: 59 as cited by Grzega 2003: 23); the “rise of a specific conceptual field [like new technologies]” (Grzega 2002: 1030 as cited by Grzega 2003: 23); the “political or cultural dominion of one people by another” (Fritz 1988: 1622 as cited by Grzega 2003:

23); the “mere oversight or temporary lack of remembering the indigenous name [or word]” (Weinreich 1954: 60; Baranow 1973: 138; Tesch 1978: 209, 214 as cited in Grzega 2003: 23); and the “low frequency of indigenous words and instability of words within a region” (Weinreich 1954: 57; Scheler 1977: 88 as cited in Grzega 2003: 24).

In the context of the Tibeto-Burman languages spoken in Nepal, the most salient of the factors outlined above to explain borrowing is the “political or cultural dominion of one people by another” (Fritz 1988: 1622 as cited by Grzega 2003: 23). The rapid transformation of traditional lives and livelihoods—through rampant urbanisation, the impact of state media, economic pressures, social upheaval and compulsory education—may further accentuate the “feeling of insufficiently differentiated conceptual fields” (Weinreich 1954: 59 as cited in Grzega 2003: 24), the subsequent “rise of a specific conceptual field” that may have been previously absent in these languages or, in the case of time, the emergence of an unmeasured category (Grzega 2002: 1030 as cited in Grzega 2003: 23). In addition, Wallace (2005) suggests that time is inherently political and that it serves as a mechanism to maintain ideologies of power. As he explains,

all societies produce and maintain maps of time, historical and futuristic frames of reference, large constructions, generally beginning in the past with a creation myth, providing chronicles of relatively recent histories of significant events (the “now”), and in some cases extending far into the future, possibly to an end of the world or to a cyclical renewal. (Wallace 2005: 5)

Time can be conceptually and systematically regulated and used to enforce the legitimacy of a nation state, a dominant culture or a political ideology. It is therefore quite reasonable to suggest that terminology relating to time might readily be substituted by, or assimilate to, the terminology of a more dominant group.

One diffusional feature of cultural significance in the High Himalayan region is the presence of regionally dominant religions, liturgical traditions, and their effects on local customs and Indigenous religions. Grounded in the heritage of the Indian subcontinent, astrological principles such as the *kālachakra* (the wheel of time) observe lunar cycles (Ramble 2013). These Indian influences have contributed foundational features to Tibetan Buddhism through, in particular, the introduction of lunar tables in timekeeping (Erlewine 2012: 36). Moreover, Erlewine (2012) suggests that “Tibetan astrology is inextricably bound to Tibetan Buddhism” (31), and argues that the two concepts cannot be disassociated from one other.

Referring to more culturally Chinese areas of influence, Ying-chin (1999) notes that temporal borrowings have considerable sociolinguistic and philological significance. Acknowledging the contemporary use of the Gregorian calendar throughout larger China, Ying-chin emphasises that, “by observing what minorities without independent written characters call the twelve months, we may gain insight into their speakers’ Indigenous conceptualisations of time, as reflected in their own languages” (1999: 71). Well-documented Qiangic languages like Ersu and Gyarong, both spoken in the Chinese

province of Sichuan, offer compelling illustrations of the adoption of Chinese temporal elements, most evident in the annual sequence of the Chinese zodiac. However, given that the observation of heavenly bodies is a universal human tendency—across time and space—it is impossible to say how much the Indian or Chinese lunar systems have directly influenced Indigenous calendars in the Himalayas that may already have been lunar-centric prior to sustained contact with dominant regional and religious traditions.

We identify the possible religious motivation for the adoption of foreign vocabulary into Indigenous Himalayan lexicons as a fertile area for future research. Nevertheless, as noted above, borrowings are not the focus of this paper. In the comparative analysis that follows, we focus on similarities, trends and differences in the temporal systems of Tibeto-Burman languages, making reference to loaned terminologies when relevant to the social and linguistic context.

Methodological Framework

In this contribution, we concentrate on contrasting segmental and specific time (e.g. ‘the day after tomorrow,’ ‘dates,’ ‘months,’ ‘years’) rather than focusing on a comparative analysis of relative time constructs (e.g. ‘soon,’ ‘then,’ ‘earlier’). Underscoring the complexity of understanding time cross-linguistically, Wallace reminds us that words like ‘now’ can encompass all measures of time depending on the context in which the term is used (2005: 1). Although time is in many ways relative, the research data we present invite further discussion and comparison of the various temporal *systems* and *constructs* used across Indigenous groups in the Himalayan region. Temporal polysemy is a related and interesting avenue of research, although not our primary emphasis in this contribution (Evans 2005).

Our analysis in this paper moves from the more reserved, smaller temporal systems to the more complex and idiosyncratic ones. While the focus of this paper is centred on the linguistic presentation and analysis of temporal systems and less on the related cultural contexts in which these languages are spoken, this decision is simply a practical choice in response to space constraints and in no way a judgement on the relative merits of one approach over another. When immediately relevant to the linguistic analysis in ways that would aid better understanding of temporal frames, we provide ethnographic and cultural context. We encourage interested readers to engage with the references identified in our bibliography for more detailed information about the livelihoods and cultures of the speakers whose languages we celebrate in this article.

Although none of the languages we review in this comparative survey could be called ‘temporal outliers,’ some systems are strikingly more intricate than others. Moreover, many languages with more developed temporal schemes borrow from and appear to have assimilated time systems from neighboring languages, while at the same time still maintaining a large Indigenous temporal lexicon. For this reason, such languages in particular excite our curiosity with regard to the cognitive and social

aspects of time management and organisation, and the many ways that these are expressed together. Beginning in the Section on Basic Tibeto-Burman Time Terminology in Comparative Perspective, we present an in-depth analysis of what we consider to be more standard time terminology in the Tibeto-Burman family. This is then followed by the Section Complex Tibeto-Burman Time Terminology in Comparative Perspective which offers a presentation and analysis of the more idiosyncratic systems attested in other languages in the language family. Consolidated comparisons between both data sets follow in the Discussion Section with an emphasis on apparent cognates and shared paradigms.

Basic Tibeto-Burman Time Terminology in Comparative Perspective

The languages presented in this section include Lepcha, Sunwar, Dhimal, Wambule, Jero, Kham, and Dolakha Newar. In these languages, we identify more predictable and common terminology relating to time including loans from Nepali or other Indo-Aryan languages, such as Hindi.

Lepcha

Lepcha is spoken in Sikkim, Darjeeling, the Ilām District in Nepal and areas of Bhutan, and is home to a relatively classic temporal paradigm within the parameters of the Tibeto-Burman family.

Like its sibling languages, most Lepcha terminology that relates to specific points in time is constructed through the compounding of lexemes. Compounding is a common mechanism with which to create new meaning from existing lexical and grammatical forms. As a result of the many monosyllabic morphemes in Tibeto-Burman languages, compounding is unsurprising in time terminology (Matisoff 1978). For example, Lepcha *lúkʔál* can be glossed as ‘tomorrow:’ a construction comprised of the verbal and nominal *lúk* ‘to get up, rise’ or ‘morning’ and *ʔál*, which means ‘new’ (Plaisier 2006: 99). Certain suffixes also combine to describe sequences of days in the near past in the same manner (Table 1) (Plaisier 2006: 99). Nevertheless, some Lepcha terms such as ‘today’ and ‘yesterday’ appear to be monomorphemic, e.g. *saróng* and *tasó* (shortened to *só*) respectively (Plaisier 2006: 99).

<i>-tshóng</i>	<i>-chám</i>	<i>-chót</i>
<i>ʔyotshóng</i> or <i>ʔitshóng</i> – the day before yesterday	<i>ʔyochám</i> – three days ago	<i>ʔyochót</i> – four days ago
<i>katshóng</i> – day after tomorrow	<i>káchám</i> – in three days	<i>káchót</i> – in four days

Table 1 – Lepcha ‘Day’ Compounds (Plaisier 2006: 99)

In Lepcha, specifying the time of day distinguishes ‘daytime’ (*sanyí* or *sanyím* or *suknyím*) from ‘nighttime’ (*sonáp*). While *saʔyák* refers to ‘day and night,’ and thus constitutes a full cycle, an

alternative way of expressing one full cycle or time period is simply to add ‘daytime’ and ‘night’ together: *sanyí sonáp* (Plaisier 2006: 99). The concept of ‘midday’ is constructed by adding the suffix *phet* ‘half’ to *sanyím* to create *sanyím phet* (or the shortened *nyímphet*). By extension, ‘midnight’ is *sonápphet* (Plaisier 2006: 99). From this we note that while compounding is common in Lepcha, the hybridisation of Indigenous and borrowed time systems is not attested in the language although this phenomenon is common in other closely-related languages.

Sunwar

Sunwar, spoken in central eastern Nepal, exhibits a relatively transparent array of temporal adverbs when compared to the systems of neighbouring Tibeto-Burman languages. Many time-related terms in Sunwar are also borrowed from Nepali. Borchers (2008) attests that, “references to a certain time of day are always made in Nepali,” as in *dui baje*, ‘two hour or two o’clock’ (Nep.) [sic, *recte*: ‘at two o’clock’] (89). As in other Tibeto-Burman languages, compounding is prevalent in Sunwar. Common bases for Sunwar compounds include *nāt* ‘day’ and *lādo* ‘night’ (Borchers 2008: 91).

<i>nāt</i> (‘day’)	<i>lādo</i> (‘night’)
<i>sināti</i> – yesterday	<i>mulādo</i> – tonight, this evening
<i>mulāti</i> ~ <i>munāti</i> – today, now	

Table 2 – Day/Night Compounds in Sunwar (Borchers 2008: 91)

In Table 2 above, the Sunwar morpheme *mul* can be isolated to mean ‘new,’ conceptually similar to constructions with *ʔál* in Lepcha (Borchers 2008: 89). Other common Sunwar terms that constitute the present or near future include *disā* ‘tomorrow, next day,’ *ici nā* ‘now, nowadays,’ *mulayo* ‘now, today,’ *nātre* ‘all day,’ and *nādore* ‘all night.’ It is worth noting that while *disā* signifies ‘tomorrow or next day,’ the morphologically and phonologically similar term *adisā* ‘next day’ does not mean ‘tomorrow’ (Borchers 2009: 90). Employed in this sense, *adisā* references future points in time that remain unspecified, while *disā* can refer to both general and specific points in the future. The following two examples present the contextual use and application of the term *adisā* from narrative excerpts of Sunwar dialogues.

1	<i>minu</i>	<i>adisā.nādo</i>	<i>ḍhol</i>	<i>jemta</i>	<i>kur.ṣā</i>	<i>raga</i>	<i>dot</i>	<i>lai.ni.m</i>
	and	next-day.evening	drum	cymbal	carry.PF	buffalo	everywhere	take.NPT-23d/-p.3p/s ^{vi}

‘And in the evening of the next day they carry and beat the drum and then they take the buffalo everywhere.’ (Borchers 2006: 90)

2	<i>adisā.nāti</i>	<i>gaũ.nā</i>	<i>mur</i>	<i>nel ḍhol</i>	<i>jemta</i>	<i>kur.ḥā.</i>
	next-day	village.GEN	men	all drum	cymbal	carry.PF

‘The next day all the men of the village, after beating the drums and cymbals ...’ (Borchers 2006: 91)

In examples 1 and 2 above, Sunwar *adisā* refers to the future, but not to a specifically-defined ‘tomorrow.’ Rather, *adisā* signifies temporal progression as a whole and does not appear to fix time with the precision that *disā* would.

Dhimal

Dhimal is spoken in the Jhāpā and Morañ districts of southeastern Nepal. Like Sunwar, specific time is usually expressed through Nepali numerals using Nepali terms for hours and days (King 2009).

Dhimal	English	Dhimal	English
<i>ek baje</i>	at one o’clock	<i>sat baje</i>	at seven o’clock
<i>dui baje</i>	at two o’clock	<i>aṭh baje</i>	at eight o’clock
<i>tin baje</i>	at three o’clock	<i>nāu bajihi</i>	It is nine o’clock
<i>car baje</i>	at four o’clock	<i>dās bajihi</i>	It is ten o’clock
<i>pāc baje</i>	at five o’clock	<i>egharā bajihi</i>	It is eleven o’clock
<i>chā baje</i>	at six o’clock	<i>barā bajihi</i>	It is twelve o’clock

Table 3 – Nepali Numerals in Dhimal Time (King 2009: 62)

In Dhimal, *ni* or *nani* are synonyms for ‘day’ (King 2009: 89, 566). It may be that *ni* and *nani*, which both contain the morpheme <-ni>, are modern reflexes of the PTB **nəy* meaning ‘day’ and thus cognate with many other extant Tibeto-Burman languages (Oggenort 2005: 82).

3	<i>aitabar</i>	<i>kidhimi</i>	<i>ma-yha-a-niṅ.</i>
	Sunday (Nep.)	we.dual	NEG-remain-FUT-1.dual

‘On Sunday we (two people) won’t be here.’ (King 2009: 121)

4	<i>te</i>	<i>nani-heŋ</i>	<i>ethe</i>
	okay	day-DAT	this.much

‘Okay, that’s all for today.’ (King 2009: 89)

Unlike Sunwar and other Tibeto-Burman languages, however, the descriptive scope of time in Dhimal is noticeably more restrictive. Starting from the present, temporal increments only generally extend to two steps into the past or future.

Dhimal	<i>udini</i>	<i>anji</i>	<i>nani - ni</i>	<i>jumni</i>	<i>itini</i>	<i>nhu?dina</i>
English	the day before yesterday	yesterday	today	tomorrow	the day after tomorrow	the following day, next day

Table 4 – Past, Present, and Future Days in Dhimal (King 2009: 89, 121, 488, 533, 538, 565, 569, 602)

It is unclear to what degree *nhu?dina* ‘the following day, next day’ can extend further into the future or whether it is synonymous with *jumni* ‘tomorrow.’ Its usage may resemble Sunwar *adisā* in terms of indexing the general future rather than a temporally specific ‘tomorrow’ (Borchers 2008: 90). In Dhimal, the scope of years resembles the structure noted above for days. And, in the same manner that all day-related terms contain the final element <-i>, so too do all year-related words contain <-bare>.

Dhimal	<i>anhebare</i>	<i>nanibare</i>	<i>donabare</i>	<i>koinabare</i>
English	last year	this year	next year	in two years

Table 5 – Past, Present, and Future Years in Dhimal (King 2009: 488, 513, 544, 565)

The form *nanibare* ‘this year’ is transparently constructed from *nani* ‘today’ and *bare*, the latter of which may be borrowed from Nepali *bār* meaning ‘day of the week, time, turn, occasion.’ The term *anhebare* ‘last year’ bears some resemblance to *anji* ‘yesterday,’ which may be related through the potential prefix <an-> (King 2009: 488).

5	<i>jumni</i>	<i>hiso</i>	<i>han-a-niŋ?</i>
	tomorrow	whither	go-FUT-2.dual

‘Where are you (two people) going tomorrow?’ (King 2009: 121)

Dhimal speakers do not appear to use Indigenous Dhimal terms for the concepts ‘week’ or ‘month.’ ‘Week’ is borrowed from the Indo-Aryan *eʔ-athar* and manifests in Dhimal as *a'thar* (King 2009: 489, 528). Dhimal speakers can specify at what time of day an event occurs in their language through the use of *rhi'ma* ‘in the morning,’ *dilidili* ‘around the evening,’ and *nhisiŋ* ‘night’ (King 2009: 512, 568, 582). If Dhimal speakers wish to be less specific but still reference a given time period within a frame, they can use *koko* ‘same time period’ (King 2009: 544). In a number of these terms, reduplication is attested, another common feature of Tibeto-Burman languages (Abbi 1990).

Wambule and Jero

Reduplication is a characteristic also observed in Wambule and Jero. Both spoken in eastern Nepal, these two Kiranti languages are very closely related to one another. For this reason, our current analysis is constructed to facilitate their lexical comparison. Nouns of time in both Wambule and Jero are Nepali loans, while adverbs are Indigenous (Opgenort 2005). This further underscores our observation that in Tibeto-Burman languages, the Indigenous concepts, categories and classifications of time are usually encoded in the grammar in adverbial form, whereas the influential Indo-Aryan languages of the region use nominal morphology to convey time. Other languages in which this tendency is observed include Darma and Thangmi.

The Indigenous temporal terminologies of Wambule and Jero are complex and fuse with Indo-Aryan loans to create unique local forms. For example, in Wambule, *byala ~ byal* ‘time’ from Nepali can co-exist in forms with the Indigenous demonstratives *<-im>* ‘that’ and *<-yas>* ‘this’ to mean ‘then, that time, at that moment’ and ‘now, this time, at this moment’ respectively (Opgenort 2004). However, the majority of time adverbs are indisputably Wambule in origin and conveys relative and general time, not specific increments. Incremental time is generally conveyed using Nepali terms.

Wambule	English	Wambule	English
<i>saitthaccum</i>	some days ago	<i>tyan̄so ~ tyaso ~ tyas</i>	today
<i>tha:thaccum</i>	three days ago	<i>diskana ~ diskana ~ disna</i>	tomorrow
<i>sa:sad̄</i>	two or more days ago	<i>nusso ~ nusswam</i>	day after tomorrow
<i>thaccum</i>	two days ago	<i>sugbu</i>	three days from now
<i>sad̄i ~ sad̄</i>	two days ago	<i>plyakku</i>	four days from now
<i>saiso</i>	yesterday		

Table 6 – Indigenous Time Adverbs in Wambule (Opgenort 2004: 242)

Wambule	English	Wambule	English
<i>mumunthoḍ</i>	three years ago	<i>nathoce ~ nathoḍ</i>	next year
<i>munthoḍ</i>	two years ago	<i>nussothoce ~ nathoḍ</i>	two years from now
<i>numthoce ~ numthoḍ</i>	one year ago	<i>sugbuthoce ~ sugbuthoḍ</i>	three years from now
<i>tyan̄thoce ~ tyan̄thoḍ</i> ~ <i>tyathoce ~ tyathoḍ</i>	this year	<i>plyakkuthoce ~ plyakkuthoḍ</i>	four years from now

Table 7 – Indigenous Annual Time Constructs in Wambule (Opgenort 2004: 242)

The Āmboṭe dialect of Jero attests the suffix <-so>, which resembles the identical Wambule suffix that signifies ‘day’ (Opgenort 2005: 82). Likewise, <-ni> of the Āmboṭe dialect of Jero is cognate with Wambule <-ḍi>, also signifying ‘day,’ and Khaling <-ne> as evidenced in *aathaasne* ‘day before yesterday’ (Opgenort 2005: 82). This morpheme appears to be a reflex of PTB **ney*, which has been reconstructed to signify either ‘day’ or ‘sun’ (Opgenort 2005: 82).

Jero	English	Jero	English
<i>nunusso</i> or <i>sukmul</i> (Āmboṭe dialect)	three days from now	<i>satni</i> (Āmboṭe dialect)	yesterday
<i>nusso</i> (Āmboṭe dialect) <i>nuso</i> (Mohantāre dialect)	day after tomorrow	<i>sa?ni</i> (Mohantāre dialect)	two days ago
<i>sa:satni</i> (Āmboṭe dialect)	two days ago	<i>saiso</i> (Mohantāre dialect)	yesterday

Table 8 – ‘Day’ Suffixes in Jero (Opgenort 2005: 82-83)

Many Wambule and Jero adverbs of time are identical or near identical, specifically in the southern Mohantāre dialect of Jero. For example, *tha:thaccum* ‘three days ago’ is the same in both Wambule and Jero (Opgenort 2005: 122; Opgenort 2004: 242).

6	<i>lapph</i>	<i>dalse</i>	<i>lɔ-ŋ-mai</i>	<i>saiso=se=m</i>	<i>mɔ-ŋ-ma.</i>
	before	dalse	go-1s-FCT	yesterday=SIM=RES	sense-1sr-AFF

‘It seems like yesterday that I went to Dalse’ (Opgenort 2005: 123)

Wambule and Jero also share terms for ‘two days ago’ and ‘yesterday,’ *thaccum* and *saiso* respectively.

Jero	English
<i>ninibbɔn</i> (Āmboṭe dialect)	three days ago
<i>nibbɔn</i> ~ <i>sa:satni</i> (Āmboṭe dialect)	two days ago
<i>tɛmbar</i> (Āmboṭe & Mohanṭāre dialects)	today
<i>phɔpma</i> (Āmboṭe & Mohanṭāre dialects)	tomorrow
<i>sukul</i> (Mohanṭāre dialect)	three days from now
<i>pyakmul</i> (Āmboṭe dialect)	four days from now

Table 9 – Additional ‘Day’ Terms in Jero (Opgenort 2005: 122)

Regarding annual increments, the Āmboṭe dialect of Jero makes use of both the suffix <-*thoce*> and the prefix <*tho-*> to mean ‘year,’ while in the Mohanṭāre dialect, only the suffixal form is attested (Opgenort 2005: 122). If one compares this morpheme and its variants with the terms in Table 7 (Indigenous Annual Time Constructs in Wambule), it is evident that these constructs arise through compounding with a cognate suffix in Wambule. For example, *tyanṭhoce* ~ *tyanṭhoq* ~ *tyathoce* ~ *tyathoq* ‘this year’ is likely prefixed with the attested *tyaṅo* ~ *tyaṅ* ‘now, from now on’ to signify ‘this year’ or more literally, the year from now on (Opgenort 2007: 240).

Jero	English
<i>thɔmbar</i> ~ <i>thoni</i> (Āmboṭe dialect)	two years ago
<i>thoni</i> (Āmboṭe dialect)	one year ago
<i>numthoce</i> (Mohanṭāre dialect)	
<i>tɛṅthoce</i> (Āmboṭe dialect)	this year
<i>na:thot</i> (Āmboṭe dialect)	next year

Table 10 – The ‘Year’ Suffix and Prefix in Jero (Opgenort 2005: 122)

Notwithstanding phonetic alterations across dialects, Tibeto-Burman tendencies clearly surface in both Wambule and Jero in the form of compounding and in the reduplication of temporal lexicon.

Kham

Kham is spoken in the Rukum and Rolpā districts of Nepal. Kham’s base temporal adverbial inventory is relatively restricted, with about twenty specific time terms and approximately twenty relative time terms (Watters 2002). Like Lepcha, after a certain point, Kham uses a specific set of compounded terms to express days (e.g. ‘hence’) with a prefix serving as the element of a lexical item that alters meaning.

Kham <-*chyā*> and <-*chim*>, which occur frequently in temporal constructs, both signify ‘day,’ and are likely related to one other. Moreover, in isolation, *chyam* signifies ‘day’ (e.g. *ho: chyam* ‘that day’) (Watters 2002: 144) with *achim* functioning as a combination of the proximate locative element <*a-*> and the word for ‘day’ to signify ‘today’ (Watters 2002: 129, 144). This locative prefix also appears in *achya* ‘earlier today.’ It is worth noting that the two terms for ‘day’ can combine with the same prefix to produce different meanings, making them semantically distinctive.

Kham	English	Kham	English
<i>tala</i>	the day before yesterday	<i>nihmchyā</i>	day after tomorrow
<i>ahjyo</i>	yesterday	<i>tipchyā</i>	two days after tomorrow, two days hence
<i>achim</i>	today	<i>kolchyā</i>	three days after tomorrow, three days hence
<i>pəhra:ti</i>	tomorrow	<i>dohlchyā</i>	four days after tomorrow, four days hence

Table 11 – Specific Time Terms in Kham (Watters 2002: 144)

While Watters verifies that the prefix <*nihm-*> is derived from ‘two’ in Kham (<*neh-*>) and also appears in *nihmni* ‘year after next,’ the internal etymology of other particles that appear on ‘three days after’ and so on are less transparent.

Kham	English
<i>ahrhani</i>	last year
<i>aīhsi</i>	this year
<i>phərni</i>	next year
<i>nihmni</i>	year after next
<i>achya</i>	earlier today
<i>pəte</i>	later today
<i>rihm-kə</i>	at dusk
<i>ahjya</i>	earlier this year

Table 12 – Additional Time Terminology (Watters 2002: 145)

Although <-*ni*> is a commonly occurring morpheme in Kham, it does not appear to be related to reflexes in Wambule, Jero, or Khaling that signify ‘day.’ Instead, in Kham, <-*ni*> is likely derived from the PTB **s-niŋ* ‘year’ (Watters 2002: 145). In fact, *aīhsi* is a clear derivative of the PTB **asnij*

‘this year,’ which manifests as *asni* in the Maikot dialect and as *ahij* in the Gamale dialect of Kham (Watters 2002: 145).

In common with other Tibeto-Burman languages, Kham adverbs can be compounded to create new forms. For example, *achya* ‘earlier today’ can combine with *chakalnya* to mean ‘this morning’ (*achya chakalnya*), *ahjya* ‘earlier this year’ combines with *uhbyali* means ‘last summer’ (*ahjya uhbyali*), *pəte* ‘later today’ combines with *re:-lə* to create ‘tonight’ (*pəte re:-lə*), and *pəte* combines with *rihm-kə* ‘at dusk’ to form ‘this evening’ (*pəte rihm-kə*) (Watters 2002: 145).

7 *tə-cha te bəl-e la: tubu, dā: tubu, yu:h tubu, mi: tubu o-ra-bəgəi-hu-zya-o di²*

‘One day the current came sweeping a leopard, a serpent, a monkey, and man’ (Watters 2002: 355-358)³

The Kham numeral classifier <*tə-*> can also combine with specific time lexemes to introduce a sense of vagueness, as in *tə-rim-kə* ‘a few years ago’ (Watters 2002: 145). This construction is particularly useful in narratives, as shown in example 7 above, where *tə-cha* ‘one day’ conveys an unspecified temporal period.

8	<i>ahjya</i>	<i>uhbyali-kə</i>	<i>phagun</i>	<i>dəs</i>	<i>barə</i>	<i>gəte</i>	<i>wa:h-kə</i>
	earlier	spring-LOC	Phalgun (Nep.)	ten	twelve	date	about-LOC
	<i>nahm-ni</i>	<i>ge-hu-zya-o.</i>					
	lowland-ABL	1P-come-CONT-NML					

‘Earlier this spring, on about the 10th or 12th of Phalgun, we were coming from the lowlands’ (Watters 2002: 418)

It is noteworthy that the storyteller refers to the Nepali month *phalgun*, part of the Hindu calendar, in the same sentence as using the Kham construction *ahjya uhbyali-kə* ‘in earlier spring.’ This example further illustrates the mixing of time terminologies from genetically distinct language families among speakers of Himalayan languages.

9	<i>phəri</i>	<i>ho:</i>	<i>bənəi</i>	<i>ŋa-joro</i>	<i>u-hu-zya-o</i>	<i>sal-lə</i>	<i>taki tərə,</i>	<i>ŋa-nəī</i>
	again	that	very	1S-illness	3S-come-CONT-NML	<i>year-in</i>	move over	1S-friend(m)
	<i>ŋa-mē-rə,</i>	<i>ŋa:</i>	<i>te</i>	<i>ŋa-joro-e</i>	<i>te</i>	<i>ekdəm</i>	<i>si-wa</i>	<i>si-wa</i>
	1S-friend(f)	1	FOC	1S-ill-AGT	FOC	complete	die-APPRX	die-APPRX
							<i>ta-də</i>	<i>ŋa-le.</i>
							be-NF	S-be:IMPFV

‘Again, in that year when I kept getting ill, moreover, my friends and comrades, I was about to die from my illness’ (Watters 2002: 425)

In addition, in example 9, we note that in Kham, *sal* appears as another word for ‘year,’ loaned from Hindi and Nepali (*saal* or *sāl*, respectively) and therefore likely not a reflex of PTB **s-niŋ* or a form of *rim* as indicated by Watters (Watters 2002: 449). In Kham, as in all languages, there is variation in both frequency and preference of using loaned time terms over Indigenous ones.

Dolakha Newar

Dolakha Newar, a conservative dialect of Newar, has numeral classifiers for a range of noun types that include time constructs. The variation between dialects of Newar can be observed in the term for ‘this year,’ which is *thāpre* in the Dolakha dialect and *thapāle* in the Kathmandu variant, showcasing epenthesis and a different liquid consonant in the latter (Genetti 2009: 39).

Within the wide range of Dolakha Newar numeral classifiers, *nu* is used for counting days, *lā* correlates with months, and *da* to years (Genetti 2009: 69). It is plausible that *nu* is a reflex of PTB **ney* as attested in related forms attested in Jero, Wambule, and Khaling (Opgenort 2005: 82). Additionally, common time constructs in Dolakha Newar do not only exist as classifiers, but can also function adverbially, as in *kesi* ‘tomorrow’ (Genetti 2009: 202).

While the terms outlined above function as numeral classifiers, specific lexemes also exist in Dolakha Newar to express time constructs beyond simple enumeration and counting.

10	<i>ta-en</i>	<i>li</i>	<i>āle</i>	<i>lita</i>	<i>khunu=ŋ</i>	<i>sikār</i>	<i>methar-a</i>	<i>on-a.</i>
	put-PART	after	then	next	day=EMPH	hunt	play-IP	gos-3sPST

‘Then after they put it there, then the next day they went to go hunting.’ (Genetti 2009: 201-211, 225)

11	<i>nis-nu</i>	<i>jur-a.</i>
	two-day	be-3sPST

‘Two days passed.’ (Genetti 2009: 211, 225)

12	<i>libi</i>	<i>ām</i>	<i>situgās</i>	<i>wā</i>	<i>pe-nu</i>	<i>da-i</i>	<i>ho</i>	<i>sit-a.</i>
	later	that	Situ.grass	TOP	four-day	have-INF	when	die-3sPST

‘Later, the Situ grass, when it was four days later, died.’ (Genetti 2009: 203, 223)

Examples 11 and 12 illustrate differences in the use of various forms of the term ‘day.’ While *nu* aligns with *nis-* and *pe-* to generate the constructions ‘two days’ and ‘four days’ respectively, *khunu* is modified by *-ŋ*, an emphasiser, together with the adjective, *lita* ‘next.’ Regarding relative time constructs, it is also noteworthy that Dolakha Newar *libi* ‘later’ carries the same gloss in Thangmi.

13	<i>ān̄thi</i>	<i>ju-en-i</i>	<i>āle</i>	<i>dina</i>	<i>prati</i>	<i>din</i>	<i>āme</i>	<i>das</i>
	like.that	happen-PART-L	then	day	by	day	(s)he(GEN)	ten
	<i>mās</i>	<i>purā</i>	<i>jur-a.</i>					
	month	complete	happen-3sPST					

‘Then that happened and day by day her ten months became complete.’ (Genetti 2009: 194, 221)

Example 13 is taken from *A Story of Three Children* originally told by Mrs. Kalam Maskey in 1989, and reveals additional terms that Dolakha Newar speakers use in relation to time: *dina prati din* ‘day by day’ and *mās* ‘month’ (Genetti 2009: 227). *Mās* may possibly be an alternate for *lā*, also attested as ‘month,’ while *dina prati din* (e.g. 13) is a direct loan from Nepali. The presence of this borrowed phrase indicates the influence Nepali has had on Dolakha Newar and highlights how such terms become integrated into contemporary discourse alongside Indigenous temporal terminology.

14	<i>bārā</i>	<i>baje</i>	<i>ju-en-i</i>	<i>āle</i>	<i>ji</i>	<i>tātā</i>	<i>yā</i>	<i>jim̄ṅā-pha</i>
	twelve	o’clock	be-PART-L	then	I	e.sister	rice	15-CL
	<i>yā</i>	<i>bu-en</i>	<i>dwālṅā=e</i>	<i>mula=lān</i>	<i>thā̃=ta</i>	<i>yer-gi.</i>		
	rice	bear-PART	dwalnga=GEN	road=ABL	up=DAT	come-1sPST		

‘It became twelve o’clock, then I, taking the fifteen pathis of rice from the elder sister, carrying the rice I came up from the Dwalnga road.’ (Genetti 2009: 229-230, 237)⁴

Example 14 above offers a compelling illustration of the crosslinguistic tendency to utilise Nepali terms to denote specific time, a tendency also noted in Sunwar. Below, we offer further evidence of the incorporation of foreign time frameworks into Indigenous systems in terms of not only specific time measurements, but even the counting of months and years.

Complex Tibeto-Burman Time Terminology in Comparative Perspective

Languages in this section of our analysis include Ersu, Darma, Gyarong, Thangmi, Kulung, and Chepang. Ersu and Gyarong both belong to the Qiangic subdivision of the larger family and feature considerable borrowings from Sinitic languages spoken in their proximity. All languages in this section display divergent and interesting characteristics including distinct Indigenous calendars, extensive sequential systems, and instances of hybridisation with foreign time measures and terminology to create unique linguistic forms for temporal reference.

Ersu

Transitioning to more idiosyncratic temporal systems, Ersu is a Tibeto-Burman language within the Qiangic subgroup of languages spoken in Sichuan, China. Ersu has a complicated system for distinguishing and addressing segmental time, one which is also heavily influenced by national Chinese culture with additional terminology and concepts borrowed from Chinese languages. In essence, the uniqueness of Ersu's temporal system lies in the details of how it combines and draws from its historical superstrate language (Chinese) by incorporating new forms into its existing, Indigenous lexicon.

There are no Indigenous Ersu terms for 'hour,' 'minute,' or 'second,' but locative nominalisers like =*ta* or =*ɕə̀* can be added to specify the precise occurrence or sequence of events (Zhang 2013: 120). Indeed, the smallest units of time in Ersu are *so* 'morning,' *nk^hua* 'night' and related increments (Zhang 2013: 120). These terms can further combine to specify time frames with constructs from Tables 13 and 14 that follow.

Ersu	English	Ersu	English
<i>mè+nts^hu+ma+nts^hu</i>	dawn	<i>mè+nk^hua=ɕə̀</i>	afternoon
<i>nts^ho</i>	morning	<i>ɱze=ɕə̀</i>	evening
<i>miłagù</i>	mid-day	<i>nk^hua /xua/xa/mè+nk^hua</i>	night

Table 13 – Times of Day in Ersu (Zhang 2013: 223)

When modified by *-ma*, the term *ŋo-ma* 'day' is used in a more abstract sense, as in 'the day is good/bad' rather than in a segmental sense to measure amounts of time (Zhang 2013: 221). Regarding this notion of 'day' itself, Ersu is canonically and characteristically Tibeto-Burman rather than Sinitic. The English term 'day' glosses as *ŋo-ma* (which also means 'sun') or *ŋo* in Ersu. This morpheme closely resembles the PTB lexeme for 'day,' **ney*, and various cognates in the family (Opgenort 2005: 82; Borchers 2008: 91). In addition to highlighting the presence of an Indigenous etymology, this example showcases Ersu internal syntax and constituency order, which includes head-initial noun phrases compared to head-final ordering, as would be expected in Mandarin Chinese (Zhang 2013). Ersu speakers still generally adhere to a SOV sentence structure, despite heavy influence from Mandarin Chinese. Nevertheless, in some of following examples, this head-initial directionality is not always followed.

In its shortened form, Ersu *ŋo* 'day' is highly versatile and serves as the primary base for compounds such as 'tomorrow' and 'today.' Most commonly, *ŋo* co-occurs with numerals to count days and acts as a root for temporal references that relate to immediate time frames (Zhang 2013). For example, *ŋo* 'day' cannot be compounded to refer to the distant past or future.

Numeral Compound (<i>ηo</i>)	Numeral Compound with <i>wo</i> (<i>wo-ηo</i>)
<i>tə ηo</i> 'one day'	<i>tə-wo+ηo</i> 'first day (of a half month)'
<i>nə ηo</i> 'two days'	<i>nə-wo+ηo</i> 'second day (of a half month)'
<i>si ηo</i> 'three days'	<i>si-wo+ηo</i> 'third day (of a half month)'

Table 14 – Numeral Day Compounds in Ersu (Zhang 2013: 222)

Ersu	Morpheme	Ersu	Morpheme
<i>soso+ηo</i>	before.RDUP+day	<i>ndzγsu</i> ⁵	
<i>so+ηoηo</i>	before+day.RDUP	<i>misu</i>	
<i>ya+ηo</i>	?+day	<i>mingalalaso</i>	
<i>ta+ηo</i>	?+day	<i>mindzγsu</i>	
<i>su+ηo</i>	?next+day		

Table 15 – Day Compounds in Ersu⁶ (Zhang 2013: 64, 222)

Similar to *tə ηo* 'one day' in Ersu, we note that *tə* is also a numeral classifier in Kham with *tə-cha* carrying the same meaning of 'one day' (Zhang 2013: 222; Watters 2002: 145). Regarding temporal concepts for months, Ersu draws heavily from classical Chinese (Zhang 2013: 218). However, while the Chinese system modifies its numerals with *yuè* 'moon' to render a twelve-month system, Ersu uses *la* while still appearing to mirror the cardinal Chinese structure.

- 15 pinyin: *sānyuè*
Ersu: *suayi+la*
Gloss: 'fifth month (Mandarin Chinese) + month: the 5th Chinese lunar month'

- pinyin: *bāyuè*
Ersu: *payi+la*

Gloss: 'eight month (Mandarin Chinese) + month: the 8th Chinese lunar month' (Zhang 2013: 219)

While there are no discrete seasons in the Ersu language attested by its speakers, a pattern of three-month installations that Zhang observes roughly correlate with the four canonical seasons:

16	<i>ŋo=yi</i>	<i>si</i>	<i>ła</i>
	bud=GEN	three	month
	‘spring’ Lit: bud’s three month		
	Rationale: Flora bud during the spring.		

	<i>ndzà</i>	<i>si</i>	<i>ła</i>
	rice=GEN	three	month
	‘summer’ Lit: rice’s three month		
	Rationale: Rice grows plentifully in the summer in Ersu communities.		

	<i>ko=yi</i>	<i>si</i>	<i>ła</i>
	fall=GEN	three	month
	‘autumn’ Lit: fall’s three month		
	Rationale: Leaves fall down in autumn.		

	<i>ts^hu=yi</i>	<i>si</i>	<i>ła</i>
	bud=GEN	three	month
	‘summer’ Lit: cold’s three month		
	Rationale: Winter is characteristically cold. (Zhang 2013: 219-220)		

In Ersu, months are generally divided into two categories: *ə^l* ‘white’ (an optional particle) or *nua* ‘black’ (which is obligatory) (Zhang 2013: 221). This distinction relates to whether a speaker is referring to the beginning half of the month when the moon becomes its brightest (hence ‘white’) or the latter half when it appears darkest (hence ‘black’). Zhang notes that this cycle shows that, “in Ersu, there is no number larger than ‘16’ referring to the days of a month [and] ... the notion of ‘month’ is borrowed from Mandarin Chinese judging by this half-month circulation” (2013:220). This bi-monthly lunar sensitivity is likely a Buddhist influence (Erlewine 2012).

17	<i>(la+ əʰ)</i>	<i>tə-wo</i>	<i>ŋo</i>
	moon+white	one-CL:generic	day

‘the first day (of a month)’

18	<i>la+nua</i>	<i>tə-wo</i>	<i>ŋo</i>
	moon+black	one-CL:generic	day

‘the sixteenth day (of a month)’ (Zhang 2013: 220)

The Ersu term for ‘year’ is expressed by three different morphemes indexing various interpretations and meanings. First, *bùts^hə̀*, the most common morpheme, can be preceded by a variety of markers (e.g. numeral, demonstrative, interrogative). Each modification changes the type of ‘year’ one is describing (Zhang 2013: 213). Numeral markers indicate duration, calendrical time, and a person’s age while demonstrative and interrogative markers are used to convey general time.

19	<i>t^həʰ</i>	<i>zò-wo</i>	<i>t^hə̀</i>	<i>bùts^hə̀</i>	<i>ŋu</i>	<i>t^hə̀-mo=á</i>
	3pl.PRT	four-CL:generic,non-stick like	DEM:this	year	do	away-die=PFV

‘The four of them died in this year’ (Zhang 2013: 213)

20	<i>yò=né,</i>	<i>si</i>	<i>bùts^hə̀=kə̀</i>	<i>pa+ la=gə̀</i>
	1sg.OTR=OP	three	year=RLN:in	RLN:place+come:arrive=PROS

‘I will come in three years’ (Zhang 2013: 214)

Second, Ersu *əʰ* also signifies year, but the term only functions in reference to the Chinese zodiac. Ersu *əʰ*, a diminutive in Mandarin Chinese, glosses as ‘year’ and as a free morpheme in Ersu (Zhang 2013: 214). Finally, Ersu *xi* is also attested for ‘year’ and has a more general scope. Ersu *xi* is described by Zhang as a “temporal shifter,” functioning in a deictic manner to reference time similar to *ŋo*, but also including a distant scope as observed in example 21 below (Zhang 2013: 215-216).

21	<i>yəxi</i>	+	<i>soxi</i>
	last year		year before

‘ancient times’ (Zhang 2013: 159)

Darma

Darma is a language spoken in the state of Himachal Pradesh in India as well as the Dārculā district of Nepal. Darma finds itself in a complex place both genetically and geo-politically, under influence from and in interaction with India, Nepal, and China (Willis 2007). Historically, linguists have disagreed on Darma's location within the Tibeto-Burman family, but most now agree that Darma forms part of the western branch of Himalayan languages (Willis 2007).

Like its relatives, Darma generally expresses time through the use of adverbs that are distinguished from other locative adverbs and adverbs of manner (Willis 2007).

Darma	English	Darma	English
<i>thyã/ ðhjã</i>	today	<i>ʔaningxhing/ xhiying/ ʔaninghr'ing</i>	before last year
<i>than ying/ thaying</i>	this year	<i>khay</i>	tomorrow
<i>nimang</i>	yesterday	<i>ningjya</i>	day after tomorrow
<i>hrija/ hrejja</i>	day before yesterday	<i>nangkhwee</i>	next year
<i>ʔaning/ ʔanang</i>	last year		

Table 16 – Adverbs of Incremental Time in Darma (Willis 2007: 33, 459-463, 588)

In Darma, while these adverbs are clause-initial, not all are common in naturally occurring speech with “few [attested] examples from direct elicitation sessions” (Willis 2007: 455). Adverbs of time that deal with the past are infrequently attested in conversational discourse (Willis 2007), an observation which provides further evidence of the process by which Tibeto-Burman languages grammaticalise temporal constructs as adverbial rather than nominal constructions.

22	<i>ʔu</i>	<i>nimang</i>	<i>xile</i>	<i>cilju.</i>
	<i>u</i>	<i>nimang</i>	<i>sile</i>	<i>jil-su.</i>
	3SG	yesterday	turban	wrap-PST

‘He wrapped the turban yesterday.’ (Willis 2007: 455) T0042: Elicited 259

23	<i>than ying</i>	<i>kha</i>	<i>gamu</i>	<i>than,</i>	<i>ne?</i>
	<i>thaying</i>	<i>kha</i>	<i>ga-mu</i>	<i>than,</i>	<i>ne?</i>
	this.year	what	do-INF	now	TAG1

‘This year what shall we do, now then?’ (Willis 2007: 452) T0024: Elicited 019

We note that *than*, which glosses as ‘now’ in Darma, serves as the first element in *than ying*, allowing ‘this year’ to be analysed as a compound of *than* ‘now’ and *ying* ‘year’ (Willis 2007: 588). As compounding is common in Darma in particular and within the Tibeto-Burman family as a whole, such constructions are unsurprising and lead us to understand ‘now’ as a broad dietic reference rather than indicating a narrowly-defined given moment.

There are no terms for days of the week or months in Dharma, and the annual cycles of the speech community reflect their seasonal migrations and subsistence patterns. In Darma, ‘day’ is attested as *jja*, ‘week’ is *həbtq*, and ‘month’ is *la*, which also means ‘moon’ in other Tibeto-Burman languages (Willis 2007: 580).

The word *həbtq* ‘week’ is actually a loan from Nepali. It is therefore of no surprise that when terms like ‘Tuesday’ do appear, they are also borrowed from regionally dominant Indo-Aryan languages (Willis 2007: 422). Indeed, the appearance of Hindi or Nepali is also evident in Darma with *mahinā* ‘the first month of the calendar’ and *sal* ‘year’ (Hindi or possibly Nepali *sāl*) surfacing at times as ‘month’ and ‘year,’ respectively (Willis 2007: 154, 161).

24	<i>tq</i>	<i>həbtq?</i>
	One	week? (Nep.)

‘In one week?’ (Willis 2007: 33)

25	<i>baksa</i>	<i>leenu</i>	<i>nee la</i>	<i>leesu</i>	<i>ya?</i>
	baksa	lee-nu	nisyu la'	lee-su	ya?
	marriage	AUX.EX-NOM	two month	say-PST	TAG1

‘She said she has been married for two months, right?’ (Willis 2007: 496)

Gyarong

Gyarong, also spelled Gyalrong or Jiarong, is a Qiangic language spoken in Sichuan, China. Gyarong exhibits both Tibetan *and* Chinese loans in its lexicon, which—in the case of colour terminology—compound together between and across the substrate language. The data presented in this paper draw on the seminal published work of Marielle Prins and relate to the Jiăomùzú dialects of central Mǎěrkāng County.

Many Chinese loans in Gyarong relate to specific and smaller temporal intervals. For example, *ŋɪŋtʃi* ‘week’ is a direct loan from Chinese and the days of the week further reflect the Chinese system: *ŋɪŋtʃiji* ‘Monday,’ *ŋɪŋtʃitʃan* ‘Sunday,’ and *ŋɪŋtʃiwu* ‘Friday’ (Prins 2016: 732). Prins (2016) attests that

code-switching is common between both Gyarong and Chinese, and that concepts such as days, months, and years are now more typically explained through the use of Chinese numerals. Older speakers, however, may still use Gyarong numerals.

26	<i>arlɪŋlɪŋo</i>	<i>nɪʃian</i>
	2009	year

‘2009’ with Mandarin numerals (pinyin: *èr líng líng jiǔ nián*)

<i>lo</i>	<i>stoŋsto-kəŋes-kəŋu</i>
year	thousand-two-nine

‘2009’ with traditional numerals (Prins 2016: 203)

Gyarong numerals are even used for foreign understandings of timekeeping that have been adopted into the language. Like Ersu, Gyarong speakers divide a month into two parts corresponding to the phases of the moon: *kət^ho* or *t^howa* are used for the first half of the month when the moon is waxing, equivalent to *ə^l* in Ersu. And, *kəmbot* or *ɟowa* in Gyarong, equivalent to *nua* in Ersu, are used for the latter when the moon is waning (Prins 2016: 205). Given that this monthly division is of Chinese origin, one might assume that Chinese lexemes would be used to describe this system. However, and perhaps somewhat surprisingly, native Gyarong numerals are attested in these contexts (Prins 2016).

The other superstrate lexicon, from which Gyarong speakers borrow, is Tibetan. Predictably, Tibetan influence on Gyarong is most evident in aspects of the lexicon that correspond to cultural aspects of Tibetan philosophy, and some divinations and horoscope readings use Tibetan numerals (Prins 2016). However, while the basic Gyarong counting system uses largely unmodified Tibetan terms, the Tibetan-based zodiac system instead makes use of Gyarong lexemes (see table below):

27	<i>zlawa</i>	<i>daŋbo</i>
----	--------------	--------------

‘the first month’ (literary Tibetan: *zla-ba dang-po*) (Prins 2016: 204)

The only exception to this Indigenous influence is the third month that uses *stag* ‘tiger’ in Tibetan, rather than the Gyarong equivalent *k^hoŋ* (Prins 2016: 203).

Gyarong	English	Gyarong	English
<i>pak-lo</i>	Year of the Pig	<i>tarmoʔk-lo</i>	Year of the Dragon
<i>mbroʔ-lo</i>	Year of the Horse	<i>kʰə-lo</i>	Year of the Dog
<i>stag-lo</i>	Year of the Tiger	<i>mbala-lo</i>	Year of the Ox
<i>kəjoʔ-lo</i>	Year of the Sheep	<i>pəju-lo</i>	Year of the Rat
<i>kəzu-lo</i>	Year of the Monkey	<i>kalaʔ-lo</i>	Year of the Rabbit
<i>kʰapriʔ-lo</i>	Year of the Snake	<i>patʃu-lo</i>	Year of the Bird

Table 17 – Twelve Month Cycle in Gyarong (Prins 2016: 203)

While *lo*, a term borrowed from Tibetan, glosses as ‘year,’ *təlo* and *təpa* share the same meaning, also ‘year’ (Prins 2016: 215).⁷ More specifically, *təlo* is used for the zodiac, which may harken back to its Tibetan roots. Also functioning as a classifier, *tsəla* ‘month’ additionally glosses as ‘moon’ (Prins 2016: 727, 754) and the second element <-*la*> is widely attested in other Tibeto-Burman languages meaning ‘moon, month.’ The concept of ‘day’ is rendered either as *təfnu* or *fnu* in Gyarong, terms which are most likely related to one another (Prins 2016: 77). Interestingly, *zakma* is also attested, which carries the additional meaning of ‘time’ (Prins 2016: 745). Furthermore, *fnu* surfaces as a suffix in *pəsur* or *pəsurfnu* ‘yesterday,’ compounded in *fnu pəfnu* ‘today,’ *pəfurtʃə* ‘the other day; a few days ago,’ and *sofnu* or *so* ‘tomorrow’ (Prins 2016: 730, 762). Intriguingly, *sofnu* bears some resemblance to Ersu *su+ŋo* ‘tomorrow,’ which might indicate that <*so*-> functions as a prefix meaning ‘next’ if these two words are indeed cognates.

Gyarong	English
<i>təfnu</i>	day
<i>kəfnu</i>	one day
<i>kəsam fnu</i>	three days
<i>kəsam fnu w-əŋkʰuʔ</i>	after three days

Table 18 – ‘Day’ as a Classifier in Gyarong (Prins 2016: 215)

Gyarong speakers also can specify time to the half hour (thirty minutes) with unmarked morphemes.

28	<i>tətsʰot</i>	<i>ləsam</i>
	hour	three

‘three o’clock’

29	<i>təts^hot</i>	<i>kəpdu</i>	<i>təvek</i>
	hour	four	half

‘[it is] half past four’ (Prins 2016: 264-265)

To describe slightly broader periods, the locative particle <*tfe*> is used to connect time with specific events or to provide emphasis to them within a time frame. The particle <*-j*> is an allomorph of <*tfe*>, but only attested when used for larger temporal concepts like years (Prins 2016: 265). Days, periods in days, days of the week, and months use only <*tfe*>.

30	<i>saksəŋk^huʔ=tfe</i>	<i>təmor=tfe</i>
	noon-after=LOC	evening=LOC

‘in the afternoon’

‘in the evening’ (Prins 2016: 265)

31	<i>loser</i>	<i>w-əʒak=j</i>	<i>ŋa</i>	<i>to-nəja-ŋ</i>
	New.Year	3SG:GEN-time=LOC	I	PRF-go home-1SG

‘I went home at New Year’s’ (Prins 2016: 266)

Gyarong <*-j*> and <*tfe*> can also be used for festivals and seasons, and are usually preceded by *təʒak* ‘time, day’ (Prins 2016: 266). The morphemes *no*, *ro*, and *mo*, ‘at the latest,’ ‘later than,’ and ‘just, recent, just at that time’ respectively, also combine to modify expressions and thus make them more relative (Prins 2016: 268-269).

Thangmi

Thangmi also known as ‘Thami,’ is divided into two major dialects—Dolakhā and Sindhupālcok—both of which have a notable and extensive assortment of temporal adverbs (Turin 2011).

Thangmi	English
<i>bəsinte</i>	morning
<i>unise</i>	daytime
<i>nyoŋi</i>	evening
<i>ʔaye</i>	night

Table 19 – Periods in a Day in Thangmi (Turin 2011: 336)

It should be noted that the exact measurement of what constitutes ‘morning’ compared to ‘afternoon’ is not analogous to Western temporal norms. Rather, within a South Asian context, these terms correlate more closely to meals or one’s daily routine. Thus, 2:00 PM could constitute the ‘evening’ in the correct context (Turin 2011: 336). Like other Tibeto-Burman adverbs, Thangmi morphemes can be further modified with the suffix *ka* ‘throughout,’ as in *unise-ka* meaning ‘all day’ (Turin 2011: 337).

32	<i>nyoŋi,</i>	<i>uma</i>	<i>huca-pali</i>	<i>oste</i>	<i>oste-ko</i>	<i>jet-yiŋ</i>	<i>nem-te</i>	<i>kyel-eŋ-an.</i>
	evening	wife	child-p	self	self-GEN	work-ABL	house-LOC	come-pAS-3S/PT

‘In the evening, [his] wife and children, returning from their own jobs, all came home.’ (Turin 2011: 337)

Thangmi	English
<i>kimityaŋ</i>	four days ago
<i>kityaŋ</i>	three days ago
<i>cityaŋ</i>	the day before yesterday
<i>miryaŋ</i>	yesterday
<i>yaŋ</i>	today
<i>baŋthe</i>	tomorrow
<i>citabas</i>	the day after tomorrow
<i>kinabas</i>	three days from now
<i>kitriŋbas</i>	four days from now

Table 20 – Variations of ‘Day’ in Thangmi (Turin 2011: 344)

Thangmi *beryaŋ* ‘the time at which / at that time’ is likely a derivation of the Nepali *ber* ‘period of time’ and is common feature of temporal expressions in the language and can precede a clause in order to modify it (Turin 2011: 339). Thangmi *beryaŋ* is also used in question forms that seek to ask ‘at what time’ something is occurring:

33	<i>hani</i>	<i>syak-Ø-du</i>	<i>beryaŋ</i>	<i>hen-sa?</i>
	how.much	strike-sAS-NPT	that.time	go-INF

‘At what time will you leave?’ (Turin 2011: 345)

Thangmi	English
<i>amamakaleŋ</i>	a (very) long time ago
<i>amasmakaleŋ</i>	three years ago
<i>asmakaleŋ</i>	two years ago
<i>amakaleŋ</i>	last year
<i>tarul</i>	this year
<i>kalyaŋ</i>	next year
<i>kalijyaŋ</i>	the year after next

Table 21 – Variations of ‘Year’ in Thangmi (Turin 2011: 344)

The recurring presence of *kal* in the above Thangmi forms relating to years raises interesting questions about its semantic meaning and origin. It is possible that *kal* is a reflex of an Indo-Aryan superstrate, since *kāl* can mean ‘time’ or ‘tomorrow’ in Nepali (Turner 1997: 90). The compounded presence of *yaŋ* ‘today’ with *kal* to signify ‘next year,’ as in *kalyaŋ*, further complicates this query (Turner 1997: 341, 345; Turin 2011: 340).

34	<i>asmakaleŋ</i>	<i>tete</i>	<i>siy-Ø-an,</i>	<i>ni</i>	<i>sakalei</i>	<i>kerep-i-n.</i>
	two.years.ago	elder.sister	die-sAS-3S/PT	we	all	cry-1pPS-PT

‘Elder sister died the year before last, and we all cried.’ (Turin 2011: 344)

Regarding specific time, Thangmi expressions calque from Nepali and appear to have been meta-linguistically influenced by the introduction of the analog clock (Turin 2011). When asking for the time in Thangmi, the question is morphologically structured with the verb ‘to ring, strike, sound’ *syaksa*, as in *hani syak-Ø-an?* ‘What time is it?’ (Turin 2011: 345). Although no Indigenous intervals for quarters exist, the lexeme *bakoŋek* ‘half’ is used for thirty-minute increments (Turin 2011: 345).

35	<i>nis</i>	<i>syak-Ø-du</i>	<i>beryaŋ,</i>	<i>jakcho ara-sa</i>	<i>hen-ko</i>	<i>măi -Ø-du.</i>
	two	strike-sAS-NPT	that.time	cut.with.sickle-INF	go-ADH	must-sAS-NPT

‘At two o’clock, we should go and harvest the wheat.’ (Turin 2011: 346)

Kulung

Kulung, an Eastern Rāi language, has its own calendar system and time-related lexicon.

Kulung	English	Kulung	English
<i>lonamma</i>	January/ February	<i>bul</i>	July/August
<i>lonappa</i>	February/March	<i>git</i>	August/September
<i>hals</i>	March/April	<i>k^handiri</i>	September/October
<i>botongali</i>	April/May	<i>tekri</i>	October/November
<i>lil</i>	May/June	<i>sowl</i>	November/December
<i>sil</i>	June/July	<i>cakcakur</i>	December/January

Table 22 – Kulung Months (Tolsma 2006: 231, 232, 242, 243, 250, 254, 255, 269, 270, 271)

The Kulung system is not analogous to the Gregorian calendar, but does roughly correlate to an evenly distributed twelve months. Tolsma (2006) notes that Kulung *la* translates as ‘moon,’ but does not draw on comparative evidence that shows that *la* also means ‘month’ in related languages (253). While there is no clearly observable pattern in the names for Kulung months, at least *lonamma* does appear to correlate with *lonam* ‘dry season,’ which is discussed below (Tolsma 2006: 255).

The Kulung also have their own set of defined seasons that are sometimes marked at their beginnings and in other instances, simply referred to in their entirety.

Kulung	English	Kulung	English
<i>cunam</i>	cold season	<i>yenam</i>	rainy season, monsoon
<i>cuy^hnam</i>	last part of winter	<i>t^ho:nam</i>	damp season
<i>bu^hnam</i>	beginning of spring	<i>lonam</i>	dry season, first part of winter
<i>holnam</i>	first part of summer (hot season)		

Table 23 – Kulung Seasons (Tolsma 2006: 232, 234, 244, 255, 274, 277)

At least some Kulung seasonal prefixes correlate to attributes for which each period is characteristically known, namely: *bu^h* means ‘flower’ in observation of blooming in the spring, while *cuy^h* means ‘coldness’ as winter is generally cold (Tolsma 2006: 232, 234). The suffix <-nam> is polysemous in meaning, including ‘sky, sun, weather’ and ‘time’ itself (Tolsma 2006: 258).

36	<i>k^hena</i>	<i>desa-yika</i>	<i>t^hoŋ-o:-yo</i>
	well	tomorrow-from	come-1S-NPT-Q

Well, shall I come from tomorrow on?' (Tolsma 2006: 34)

For the description of past, present, and future time increments, and rather like Thangmi, Kulung possesses many single constituent terms to situate events in a timeline.

Kulung	English	Kulung	English
<i>keska</i>	day before yesterday	<i>c^hindi</i>	day after tomorrow
<i>espa</i>	yesterday	<i>dokt^hum</i>	in three days
<i>ese</i>	today	<i>k^hett^hum</i>	in four days
<i>desa</i>	tomorrow	<i>nokt^hum</i>	in six days

Table 24 – Past, Present, and Future Time in Days in Kulung (Tolsma 2006: 236, 238, 239, 240, 247, 250, 260)

Kulung prefixes in *c^hindi*, *dokt^hum*, *k^hett^hum*, *nokt^hum* do not exhibit surface similarities with their numerical equivalents in the language: <nit-> (2), <sup-> (3), <li:-> (4), and <tuk-> (6), respectively (Tolsma 2006: 40). It is also noteworthy that there does not seem to be a term equivalent to 'in five days' attested in the language, although it is possible that such constructions were not documented.

Additionally, Kulung contains phrases that represent relative time references whose bases are actually incremental time terms. In some of these phrases, reduplication is evident. For example, *le:pa le:pa* 'day by day' is a reduplicated form of the noun *le:pa*, which means 'afternoon' (Tolsma 2006: 254). Moreover, *jisna* translates as 'in a minute' despite there being no Kulung word for 'minute.' It is possible that *jijis* 'a very little,' *jis* 'a little,' and *jisna* are all related and variants of *jis*, which would make 'in a minute' the best possible gloss (Tolsma 2006: 264).

Kulung	English
<i>tenbuŋka</i>	last year
<i>ini</i>	this year
<i>nammo</i>	next year
<i>k^hemo</i>	in four years' time

Table 25 – Past, Present, and Future Time in Years in Kulung (Tolsma 2006: 245, 250, 259, 271)

There does not appear to be a discrete pattern in the etymology of Kulung terms for years; and the existence of a four-year interval marker, without any accompanying terms, is also noteworthy. With such a rich array of seemingly unrelated and specific terms, Kulung certainly merits further inquiry into its temporal systems and related lexicon. The apparent lack of many distinguishable cognates with related languages is also a source of sustained interest.

Chepeng

Chepeng, spoken in the Tarai region of Nepal and India, contains an array of specific and diverse lexemes to describe temporal constructs and observations. The dictionary from which this data has been sourced mostly derives its lexicon from the Eastern dialect of Chepeng. However, the dictionary does include additional entries from Northern and Far-Eastern sub-dialects that are noted when relevant to time terminology (Caughley 2000).

In keeping with related languages, Chepeng attests an extensive range of sequential time-keeping through days and years. This system extends eight units into the past and eight into the future: the largest span in our survey. These constructs occur with respective numerals or with other modifiers as affixes.

	Year(s) ago	Day(s) ago	Day(s) hence	Year(s) hence
one	<i>teh</i> as in ‘last year’ <i>ka.lə</i> as in ‘past year’	<i>yoh</i> as in ‘yesterday’	<i>syəŋh</i> as in ‘tomorrow’	<i>nyam.pu?</i> , <i>nyma.phu</i> as in ‘next year’
two	<i>yat.koʔ.teh</i>	<i>cit.nəm</i> , <i>bar.nəm</i> as in ‘day before yesterday’	<i>cit.səy</i> , <i>tis.sə</i>	<i>khak.pu</i>
three	<i>yat.koʔ.chyoh</i>	<i>kyam.nəm</i> , <i>ʔak.nəm</i>	<i>kyam.sə</i> , <i>kyam.səy</i> , <i>lik.nəm</i>	<i>ʔik.pu</i>
four	<i>yat.koʔ.jhyoh</i>	<i>khuk.nəm</i> , <i>gak.nəm</i> , <i>pu.nəm</i>	<i>khuk.(səy)</i> , <i>rik.nəm</i> , <i>pu.sə</i> (Bujheli dialect from Western Chepeng)	<i>khik.pu</i> , <i>bik.phu</i>
five	<i>yat.koʔ.tyoh</i>	<i>ʔik.nəm</i> , <i>ŋhi.nəm</i> , <i>rak.nəm</i>	<i>ʔik.səy</i> , <i>ʔuk.nəm</i> , <i>ŋhi.səy</i>	<i>lik.pu</i>
six	<i>yat.koʔ.syoh</i>	<i>sik.nəm</i> , <i>sip.nəm</i>	<i>sik.səy</i> , <i>cik.səy</i>	<i>sik.pu</i>
seven	<i>yat.koʔ.khoh</i>	<i>khik.nəm</i> , <i>gip.nəm</i> , <i>bik.nəm</i>	<i>khik.səy</i> , <i>bik.səy</i>	<i>gik.pu</i>
eight	<i>yat.koʔ.ryoh</i>	<i>nik.nəm</i> , <i>nip.nəm</i>	<i>nik.səy</i>	<i>nik.pu</i>

Table 26 – Chepeng’s Temporal Spectrum of Days and Years (Ago & Hence) (Caughley 2000: 173, 539, 540)

For the most part, modifiers precede the temporal head of the phrase. Chepang *-nəm* means ‘day’ as a time reference and may derive from the PTB **nəy* of the same meaning (Caughley 2000: 157). Moreover, Chepang *-nəm* is a flexible noun; it can pattern with *syəŋh* to produce the temporal meaning of ‘[on the] following day’ or with other modifiers to provide the general meaning ‘X day’ or ‘the day of X:’

37 a. *pamhnəm din waŋna?*

‘He comes on the burial day.’

b. *syəŋhnəm dinn yoti mu?ə da*

‘On the following day be watching.’ (Caughley 2000: 157)

Nevertheless, the morphemes that precede *-nem* in the paradigm shown in Table 26 are still worthy of scrutiny. The numeric modifiers present in the constructions do not appear to be related to their general, countable forms. For example, while *pləy.(jyo?)*⁸ glosses as ‘four,’ there is little visible connection between this morpheme and the morphemes attested in sequential terminology that relate to ‘four’ (Caughley 2000: 367). Similar lexical discrepancies arise with other sequential terms. In this way, the Chepang paradigm is similar to the Kulung sequential system in that the numerals present in these compounds do not outwardly resemble their typical nominal surface representations. More research is needed to understand these Chepang terms and their own internal construction, in particular the underlying forms of numeric modifiers.

38 *dyah teh syəŋh cit kyam khukko? dinhaŋ?səy khayna?*

‘Now it will suffice for today, tomorrow, the next day – up to four days hence.’ (Caughley 2000: 59)

For phrases meaning ‘≥ 2 year(s) ago,’ numeral modification appears through suffixation rather than through prefixation. The function of the morpheme *<-ko?>*, which precedes the numeral, is unclear. Similarly, the presence of *yat* is intriguing. Chepang *yat* glosses as ‘one,’ a numeral, with alternative forms of *?at* and *<ya(?)>* (Caughley 2000: 217), and it modifies other time terms, as in the compound *yat lah* ‘(one) month’ and *yat.ʔaŋ*, an archaic form for ‘year’ (see Hodgson 1848; as cited in Caughley 2000: 217).

Regarding general lexemes for temporal units, Chepang boasts various Tibeto-Burman cognates as well as many Indo-Aryan loans. While *<-nəm>* is used for ‘day’ in phrases that reference time, *din* glosses as ‘day’ as a period or unit and *ten* as ‘today’ (Caughley 2000: 539-540). While *<-nəm>* is related to other day-related terms such as *nāt* ‘day’ in Sunwar (Borchers 2008: 91) and *ni* and *nani* in Dhimal (King 2009: 89, 566), *din* is indisputably a loan from Nepali. While ‘month’ is

documented as *mə.hi.na* (also a loan from Nepali *mahinā*), *lah.həw* means both ‘month’ and ‘moon’ (Caughley 2000: 217, 240, 539). In isolation, Chepang *lah* carries the meaning of ‘moon,’ and is cognate with other Tibeto-Burman terms that mean ‘month’ like *lā* in Dolakha Newar (Genetti 2009: 69). To generate this meaning, a numeral must precede it:

39 *yat lah muna?*

‘There is one month to go.’ (Caughley 2000: 240)

Chepang *lah* is also used to describe the phases and characteristics of the moon, i.e., *toko.toyh.lah* ‘full moon’ and *si.lah* ‘dark moon’ (Caughley 2000: 240). Chepang uses a twelve-month calendar for the names of months and follows the Hindu system in terms of segmentation. Some loans from Sanskrit, also attested in Nepali, such as *pha.gun* for approximately ‘mid-February to mid-March,’ are found in Chepang (Caughley 2000: 540).

The Chepang term for ‘year’ is *bər.sə* (Caughley 2000: 540), most likely a loan from Nepali *barṣa* ‘year,’ which is also found in Dhimal as *bare*, a suffix for ‘year.’ Additionally, in Chepang, there is also a term for the ‘present year’ *nek* (Caughley 2000: 540). In general, Indo-Aryan loans are well-documented in the temporal lexicon of Chepang and are also found in terms for days of the week. Smaller increments of time, such as ‘morning,’ ‘afternoon,’ and ‘night’ are also documented, and increments of a day may be further subdivided into specific temporal periods.

Chepang	English	Chepang	English
<i>bham.wa.ra.ni</i>	false dawn	<i>puh.wa? go?.?o</i>	cockcrow (first)
<i>pri.ma, yah.la</i>	dawn	<i>həl.phaw.ne</i>	morning (after the sun rises)
<i>thoŋ.khəy?</i>	early dawn	<i>nyma.thoŋ, nyam.loŋ</i>	(early) morning
<i>nyam.syo.paŋ</i>	sunrise (or sunset)	<i>luy?.thyus.nyam</i>	morning (about 8am)
<i>wa? go?.?o</i>	cockcrow (at firstlight)	<i>nik.nyam</i>	morning (the cool part of the day)

Table 27 –Chepang Terms for the First Parts of a Day (Caughley 2000: 173, 539, 540)

There are also extensive Chepang lexemes for elements from dawn through to the morning. The morpheme *nyam* is polysemous, can be glossed as ‘sun, sunlight, storm-cloud, weather’ depending on where it occurs, and is an element that resurfaces in many morning-related terms (Caughley 2000: 164). Kulung <-nam> carries virtually the same meaning.

Chepang terms for other parts of the day also generally discriminate between early and late periods. Chepang *kaʔ.syurh* and *hiʔ.dij* both gloss as ‘early afternoon’ while *yo.ha.re* surfaces as ‘mid-afternoon’ (Caughley 2000: 539). Compared to morning terminology, evening terms in Chepang are less specific, but many still do carry detailed and metaphoric meaning, as shown in Table 28 below.

Chepang	English
<i>yah.ram.dij, ram.hə.(səy)</i>	evening
<i>dyah.meyʔ</i>	(this) evening
<i>waʔ.pok</i>	early evening
<i>yah.dij, rat, yaʔ.dij</i> (partial synonym), <i>yaʔ.dij.ro</i> (?)	night
<i>yah.yam, cik.nyam, cik.yam</i> (partial synonym)	time of darkness (also: specific place in the underworld, where there is no sun)
<i>ram.hə.(səy)</i>	dusk

Table 28 – Evening-related Chepang Terms (Caughley 2000: 219, 539, 540)

The Chepang morpheme *yaʔ* or *yah* relates to darkness or night, albeit in a poetic manner. For example, *yah.ram.dij* carries the additional meaning ‘spirit of the evening’ (Caughley 2000: 219). Chepang <*yah*-> is also an intransitive verb that means ‘climb up (like a vine)’ or also ‘move up ([like] shadows of [a] setting sun)’ (Caughley 2000: 218). Nevertheless, and as acknowledged by Caughley, this sub-genre of terms deserves further research, as some relevant compounds like *yaʔ.dij.ro* have uncertain morphologies.

40	a. <i>yahdij syawʔapəci nay naʔtaŋʔʔaklə</i>
	‘After night comes (the demon) has no clothes.’
	b. <i>yahdiroʔi yahʔataŋʔ</i>
	‘The night comes to me.’
	c. <i>yahramdij syawti wayʔa</i>
	‘The sun set and the (spirit of) evening came.’ (Caughley 2000: 219)

Some Chepang time terminology interacts with locative meanings and by extension, specifies locations related to time periods. Examples include how the sun affects certain terrain, as in *nyam yah* ‘to benight [as in become night], set (sun) on someone, end (day), move up (edge of sun on hillside)’ (Caughley 2000: 218). In such lexemes, the broader interconnectedness between time and space becomes clearer. Such metaphoric and extended meanings move into more complex territory in the example of *yah.yam*: both a time of darkness *and* a location in the underworld (Caughley 2000: 219). In sum, these examples as well as the numerous Chepang temporal increments reveal how time is both measured and understood as something that remains uncountable and is rooted in human imagination and cultural experience.

Discussion

This comparative temporal survey highlights multiple lexical and morphological trends evident in related Tibeto-Burman languages, albeit languages that are oftentimes genetically and geographically distant from one other. In many documented cases, the terms for ‘day’ and even ‘month’ are common across the family and appear to be reflexes of well-attested Tibeto-Burman forms. Most unassimilated Tibeto-Burman words for ‘day’ are reflexes of PTB **nəy*, which also carry the meaning ‘sun.’

Language	Term for ‘Day’
Sunwar	<i>nāt</i>
Dhimal	<i>nani</i> or <i>ni</i>
Jero	<i>-ni</i>
Wambule	<i>-qi</i>
Khaling	<i>-ne</i>
Dolakha Newar	<i>-nu</i>
Ersu	<i>ŋo-ma</i> or <i>ŋo</i>
Chepang	<i>-nəm</i>

Table 29 – Proposed cognates for ‘day’ in Tibeto-Burman languages from PTB **nəy*

This tendency, however, is by no means uniform: Kham in particular attests multiple suffixes for ‘day’ that do not appear to be reflexes of this PTB form. ‘Month’ often manifests as *la* (Darma), *lā* (Dolakha Newar), or in a modified form, as in Gyarong *tsəla*. These terms consistently pattern with the word for ‘moon’ in these languages. In some cases, as in Dhimal, there appears to be no Indigenous terms for ‘month.’ The connection between the moon and the term for ‘month’ is unsurprising given our natural observations of lunar cycles and phases as a tool for analysing the passing of time,

particularly in a region of the world where the lunar calendar remains so culturally important.

By contrast, there does not appear to be a singular term for ‘year’ within the data presented and analysed in this contribution. Wambule, Jero, Dhimal and Dolakha Newar stray quite far from PTB **s-nij* ‘year,’ whereas languages like Ersu and Gyarong incorporate considerable amounts of Chinese lexicon with the result that original, Indigenous terms may have been replaced in the process. Strong cultural and religious influences may account for the presence of Indo-Aryan lexicon such as *sāl* (Nepali or Hindi) ‘year’ in Kham and Darma discourse alongside various Chinese loans in Gyarong and Ersu, respectively.

Despite noted differences, there are still many general similarities between Tibeto-Burman languages in terms of how they lexicalise and grammaticalise time. For example, the presence of temporal constructs to address future and past scopes (e.g. ‘hence’ in English) is common across Lepcha, Jero, Wambule, Ersu, Kulung, Chepang, and Thangmi, to mention but a few. There are variations and apparent gaps between and within some paradigms, and we can only hope that further research will explore these differences and absences, and perhaps shed light on how they may have arisen.

Compounding is another general trend in lexicalisation, as exemplified by terms for ‘this year’ that combine the temporal adverb ‘now’ with the lexeme for ‘year’ in a number of languages under review. Wambule and Jero construct ‘this year’ in such a manner, and this pattern is also attested in Dhimal and Darma using different lexical sources. A modern reflex of PTB **asnij* ‘this year’ is attested in Kham as *aĩhsi* (or related forms depending on the dialect). The existence of such compounding lexicalisation is interesting and represents an extended and deictic usage of scope. ‘Now’ expands to encompass not the specific time referenced (e.g. ‘the here and now’ so to speak, or even ‘the current era’), but rather a clearly segmented period of the present. In such cases, segmental time—our focus—and referential time intersect to generate a new semantic concept that is at once specific and broad, and that can reference both the near-past and near-future (e.g. a full year). Such a handling reminds us of Sunwar *adisā*, a term that simply references an unspecified time in the near-future that is distinct from ‘tomorrow.’

The most salient, unifying observation of note is the general morphological distinction that exists between the distribution of time constructs in Tibeto-Burman and Indo-Aryan languages. Where Indo-Aryan languages tend to nominalise time, Tibeto-Burman languages grammaticalise time through adverbial constructions. Even in smaller temporal inventories such as Kham and Sunwar, time is largely encoded through adverbs, as it is in Thangmi, Darma, Wambule, and Jero. In Chepang, there are sometimes even synonyms or related terms that function in different grammatical environments, as in *din* ‘day (as a period),’ a loan from Nepali, and *<-nəm>* ‘day (as time reference and modifier).’ Other common lexemes of time manifest as classifiers. In a purely analytical sense, the use of classifiers is unsurprising, as time is inherently susceptible to measurement.

We must recognise that Tibeto-Burman temporal adverbs and classifiers and Indo-Aryan nominalisations do not operate independently from one another. There is a great deal of intermingling between Tibeto-Burman and Indo-Aryan words, and the dual usage of both Indigenous and foreign constructs is a promising area for future inquiry for those interested in code-switching and the incorporation of highly specified time constructs (e.g. days of the week, hours, minutes) in everyday speech. With the encroachment of Indo-Aryan time-keeping concepts as a byproduct of industrial expansion and national education, it is possible—indeed even likely—that such forms will over time become ever more frequently observed and further lexicalised in Tibeto-Burman languages, in the manner already noted in the lexicons of Qiangic languages that have undergone extensive cultural assimilation to Chinese.

Given the endangered and precarious state of many of the Indigenous languages covered in this review, we welcome more research to be directed towards the unique and somewhat idiosyncratic calendrical systems attested in the Greater Himalayan region as well as toward documenting time constructions in vernacular use and naturally occurring everyday dialogue.

Conclusion

The documentation of historically-marginalised and increasingly endangered languages of the Greater Himalayan region is one—but only one—step towards their revitalisation and reclamation. Languages that differ in temporal expressions and attest unique monthly and seasonal paradigms—we think here in particular of Kulung, Darma, and to a lesser extent Ersu—can only be studied through respectful and collaborative partnerships with speakers of these languages to better understand the use of temporal concepts, how they function, how they are measured and what they mean for the speakers themselves. Speaking of time, the current moment may be the only opportunity that we have as a scholarly community to work together with speakers of Indigenous languages to collaboratively document, protect, preserve and strengthen these distinct and unique linguistic expressions in support of community goals for sovereignty and self-determination.

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Endnotes

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² The underlining shown here is present in the original transcription and denotes the use of 'state-setting' or episodic topics in storytelling. These elements are actually nominalised verbs.

³ For this example and for a few others, we are not able to provide a three-tiered gloss or transcription (including morphological breakdown). In examples where morphological transcriptions are absent, this is because the authors of the sources we consulted did not provide them, and we do not have the language-specific expertise to introduce them without error.

⁴ Story told to an audience by Sanu Laxmi Joshi in 1989.

⁵ Zhang does not indicate morphological glosses for these terms. Since we are not in a position to offer an informed segmental morphological analysis of these entries, these spaces are left blank.

⁶ The symbol [ɿ] is an apical vowel used in Sinitic linguistics, but not recognised in IPA. It is rendered unchanged in this paper to reflect the original source document from which we have drawn our data for comparative analysis.

⁷ *tə* is a nominal contrast marker in Gyarong that alternates with *ki* (indefiniteness marker) (Prins 2016: 136, 734). Furthermore, only *tə* can co-occur with numerals or demonstratives. Gyarong *tə* also contrasts with *ta*, the latter in this case denoting a nominal that is more distant metaphysically or less frequently present in one's life, while *tə* relates to oneself and indicates closeness (Prins 2016: 142). Both morphemes appear prefixed on temporal (and spatial) noun phrases.

⁸ Chepang *jyo?* is a numeral classifier that appears with other numbers (Caughley 2000: 110).