THE NOMINALIZING PREFIX *gV- IN TIBETO-BURMAN

by

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Nominalization and its various functions is a topic of considerable current interest in Tibeto-Burman (TB) studies and has both typological and historical implications. This thesis documents and discusses data of nominalizing velar prefixes in the different branches of the TB language family. Based on the reconstruction of a Proto-Tibeto-Burman (PTB) 'adjectival prefix' **gV-* suggested by TB wide-scale comparativists such as Wolfenden, Shafer, Benedict, and Matisoff, this study incorporates extensive data on velar prefixes covering other functions that are, just like deriving adjectival modifiers, typically associated with nominalization in TB. The various pieces of evidence thus suggest that the existence of a PTB **gV-* nominalizer is the best explanation for the distribution of forms and functions of the respective prefixes in TB languages.

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For Roswitha, Arthur, Arne, and Sascha

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CHAPTER I

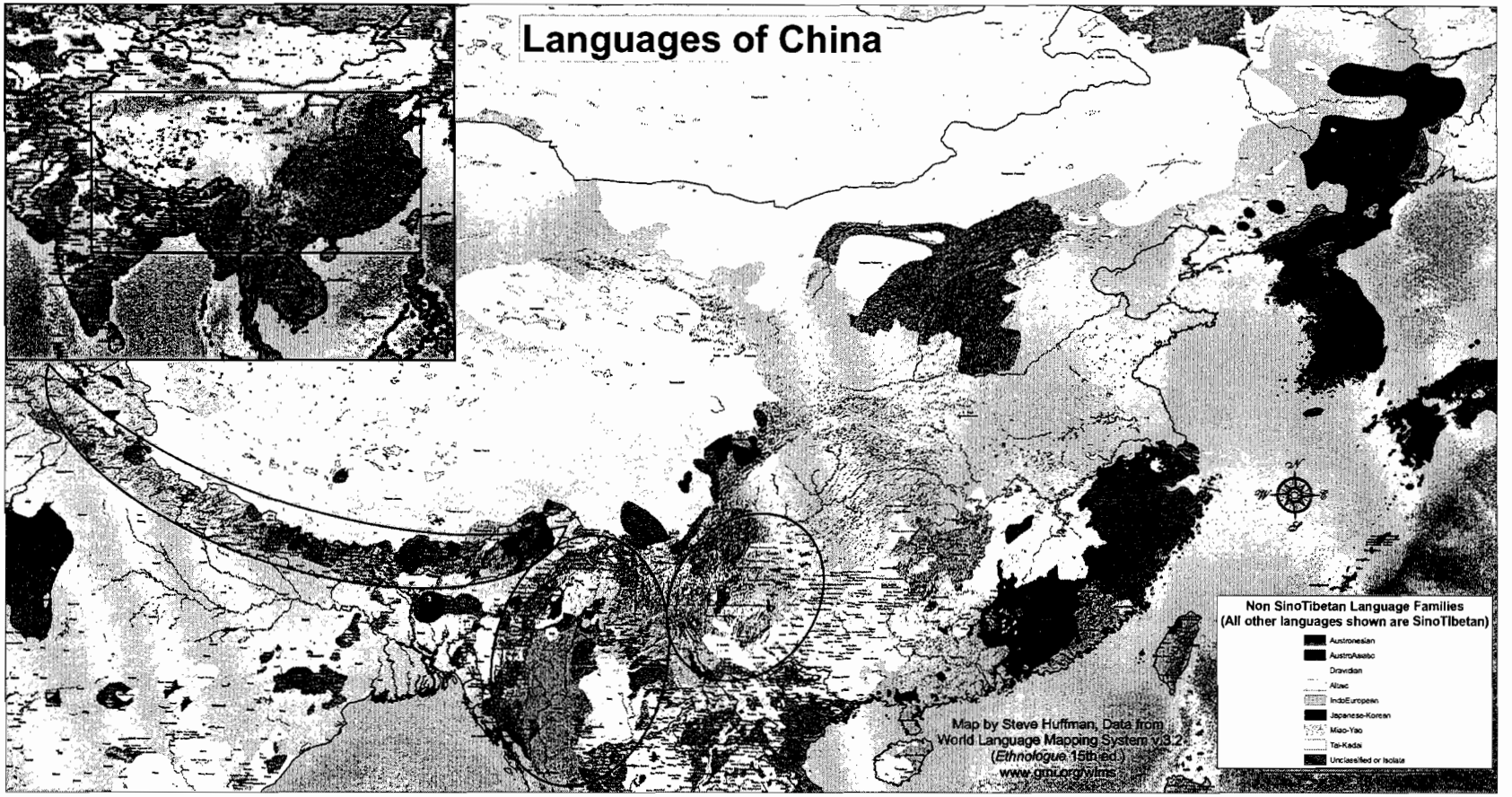
INTRODUCTION

The Tibeto-Burman (TB) language family is a branch of Sino-Tibetan spoken in South and Southeast Asia in an area illustrated in Figure 1, stretching in the northwest from the Himalayan regions of northern India, Tibet, Nepal, and Bhutan to Burma, Thailand, and Vietnam in the South, and to the southern China provinces of Yunnan and Sichuan in the east. The number of TB languages is estimated at 389 by the Ethnologue (Gordon, 2005).

The typological profile of the TB family is quite diverse, including languages with highly complex morphological structure especially in the verb in the western Himalayan languages, as well as prototypical isolating languages in the southeastern Lolo-Burmese branch. Tibeto-Burman is typically verb-final, although there are languages spoken in the south (i.e., Karen languages) that feature SVO order.

This thesis represents a comparative study of a nominalizing velar prefix in the Tibeto-Burman language family. Starting from a reconstructed Proto-Tibeto-Burman (PTB) 'adjectival prefix' **gV-* suggested by TB wide-scale comparativists such as Wolfenden (1925), Shafer (1966), Benedict (1972) and Matisoff (2003 inter alia), further data suggest that the derivation of adjectival modifiers is only one function that can be more generally ascribed to a **gV-* nominalizer in PTB. This chapter introduces the literature on velar prefixes reconstructed for PTB in §1.1, as well as defines aim and scope of this thesis outlining the approach in §1.2.

Figure 1 – Geographic distribution of western, central, and eastern TB languages[1]



[1] Maps are reproduced with permission from "Languages of China" and "The Eurasiatic Language Phylum" maps by Dr. Steve Huffman, retrieved from http://www.gmi.org/wlms/users/huffman/ on June 19th 2009, selection frames added.

1.1. Literature on Velar Prefixes in Tibeto-Burman

Reconstructions of velar prefixes for PTB can be found in the early comparative TB literature by Wolfenden (1929), to be put forth later on by Shafer (1966) and Benedict (1972), and finally Matisoff (2003 inter alia). Summarized by Matisoff (2003, pp. 134-8), there are various velar prefixes that can be reconstructed back to PTB, both nominal and verbal prefixes.

First looking at the prefixes that do not seem to have a connection to the proposed **gV-* nominalizer, we can summarize the following reconstructed prefixes: Besides individual nouns and verbs reconstructed for PTB with a velar prefix, morphological nominal prefixes include a velar prefix in animal names more generally as well as a prefix in Lolo-Burmese animal names, and velar prefixes for the reconstructions of numbers 'two' **g-nis* and 'three' **g-sum*. Regarding morphological verbal prefixes, there are the *g-* prefix in Classical Tibetan verbal morphology (present and future forms, see Appendix A), and a directive marker, or 'highly transitive' marker (Wolfenden, 1929, pp. 40-3). It also seems that a recurrent velar prefix in Tibeto-Burman, assumedly unrelated to the proposed nominalizer, is an interrogative marker, which, however, is not mentioned by Matisoff (2003, pp. 134-8).

The relevant prefix for this study is an 'adjectival prefix', i.e. a velar prefix that occurs on stative verbs or adjectives according to Wolfenden (1929), which is also discussed in different subgroups by Shafer (1966), and by Benedict (1972, p. 113), who documents it in not only Sal languages (Central Tibeto-Burman) but also in rGyalrong (Northeastern Tibeto-Burman), also calling it the 'verbal-noun prefix'.

Wolfenden (1929, p. 73) traces this 'adjectival prefix' back to a third person pronominal velar prefix, which also can be reconstructed for PTB. Benedict (1972, p. 113) agrees with Wolfenden, and furthermore suggests a relationship with prefixes occurring with Jinghpaw kinship terms and Kuki-Chin body part terms. Those and especially the latter relationships are not very transparent, and will remain a matter for future research.

Matisoff (2003, pp. 134-8) contributes further data on the 'adjectival prefix' in various languages of the family. These data are critically evaluated: Based on isolated pieces of data, there are cases where the velar prefix might as well be interpreted as, for example, a verbal prefix. In those cases, future research will have to provide conclusive evidence that the prefix in question is in fact the 'adjectival prefix'.

Note also that LaPolla (2003a) mentions "intransitivizing (and nominalizing) prefixes in PTB", among which there are "possibly **b-* and/or **g-*, e.g. T'rung … *la* 'to throw (down)' : *glà* 'to fall (down)'" (p. 24).

1.2. Aim and Scope

This study is based on the reconstructed 'adjectival prefix' **gV-* noted by Wolfenden (1929), Shafer (1966-73), Benedict (1972), and Matisoff (2003) as discussed above (§1.1). The connection between the marking of adjectives and nominalization becomes clear as 'adjectives' tend not to be a separate lexical category in TB, but a subset of verbs, which need to be nominalized in order to function as nominal modifiers. Thus, adjective derivation (rather than 'marking') is a common function of nominalizers in TB languages, one of a cluster of functions typically associated with nominalization in this family.

The approach taken in this thesis to document velar prefix nominalizers is summarized in Chapter II. After describing the classification model that this study follows and the data sources, the criteria for deciding about potential **gV-* reflexes are explained, discussing the requirements regarding form and function of the candidate morphemes. Lastly, Chapter II also introduces two constructions featuring an additional affix that **gV-* reflexes recur in, *a-gV-* and *gV-...-pa*.

Chapters III to VI present the data. Starting with the most diversified (and actually genetically probably not unified) Central Tibeto-Burman branch in Chapter III, data from the Western branch are discussed in Chapter IV, followed by data from the Northeastern branch in Chapter V, and Chapter VI presents some data from the Southeastern branch

that cannot be transparently linked to the **gV-* nominalizer but remain a matter for future research in a branch that otherwise lost most of its old PTB morphology having become mostly isolating.

Chapter VII summarizes and discusses the evidence presented in Chapters III to VI. Two brief case studies are included that offer directions for future research, as postverbal velar nominalizers as well as palatal onset reflexes might be possible to connect to our **gV-* nominalizer.

The conclusion to this thesis is drawn in Chapter VIII.

CHAPTER II

APPROACH

This chapter lays out the approach taken in this study to document the distribution of velar prefixes associated with functions of nominalization. In §2.1, the model of Tibeto-Burman classification followed in this study is introduced, which is a slightly modified version of Bradley's (2002) family tree; §2.2 informs about sources of the data presented in this study. The determination and limitation of the range of variation in form and function of putative **gV-* reflexes is explained in §2.3 and §2.4. Lastly, §2.5 introduces two constructions that the velar prefixes recur in: *a-gV-* and *gV-...-pa.*

2.1. On Tibeto-Burman Classification

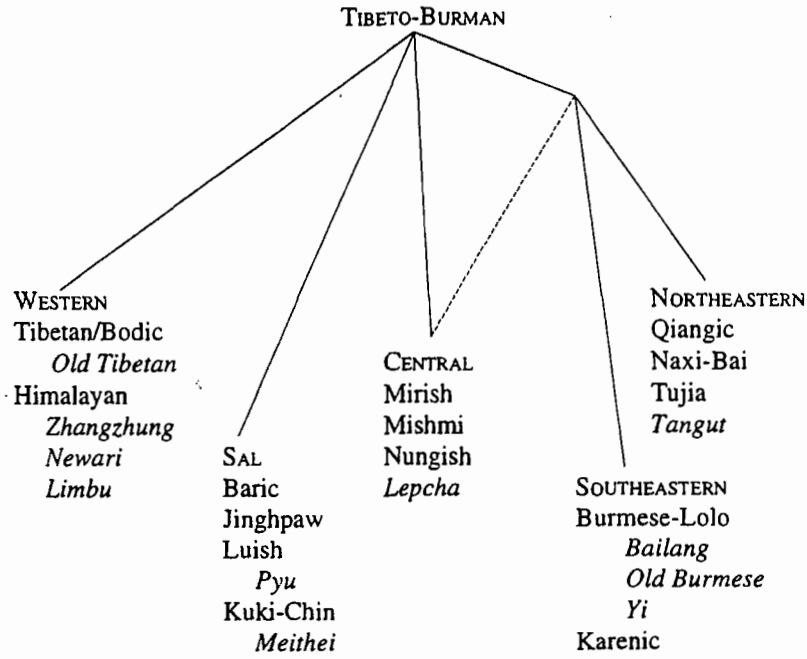
The problem of how to classify Tibeto-Burman (TB) languages is reflected in an on-going controversial dialogue between TB comparativists. The increasing amount of contributions to the field including grammatical sketches as well as detailed grammars has been feeding into new classification models, but especially the 'Central group' of languages spoken mostly in Northeast India and Northern Burma remains difficult and controversial for subgrouping purposes.

The earliest classification model is provided in the framework of the Linguistic Survey of India by Grierson and Konow (1903-28). Based on their work, Shafer (1966-73) and Benedict (1972, 1976) developed their own models. Shafer (1974) proposes four main branches: Bodic, Baric, Burmic and Karenic; Benedict first conceives of eight genetic groups and one 'other' group, and later on reduces those to three main branches (see Bradley, 2002, p. 74).

The classification of TB used in this thesis is based on a model proposed by Bradley (2002), with modifications regarding languages of Northeast India and his Central Tibeto-Burman group, for which Burling (2003) and Scott DeLancey (personal communication, May 2009) are consulted.

Bradley's family tree divides Tibeto-Burman into five main groups, two or three of which form a subgroup, as we can see in Figure 2: a Western group, a Sal group including most languages of Northeast India, a Central group, which might or might not go in the subgroup consisting otherwise of a Northeastern and a Southeastern group.

Figure 2 – Bradley (2002) Tibeto-Burman Classification Model



This thesis follows Bradley's model regarding the Western, Northeastern, and Southeastern groups. Concerning the Sal and Central groups, which include languages with the most robust but also most diverse evidence for the reconstruction of a PTB **gV-* nominalizer, those two are combined in a unified Central Tibeto-Burman branch. This

branch should be conceived of as a residual category for 13 subgroups whose genetic relationships remain a matter for future research.

The 13 subgroups include 12 of the 14 subgroups of Northeast India Burling (2003) recognizes (excluding the two geographically Northeast Indian Tshangla-Takpa and the Sherdukpen-Bugun/Khoa-Sulung-Lishpa groups, which appear to genetically belong to the Western Tibeto-Burman Bodish branch) as well as Rawang/Nungish from Bradley's (2002) Central group. Thus, the 13 Central TB subgroups referred to in this thesis are: Karbi, Tenyidie (Angami Naga), Tangkhul, Mizo-Kuki-Chin, Sal, Sema Naga, Miju, Meithei, Ao Naga, Hrusish, Tani, Idu-Digaru, and Rawang/Nungish.

The Western Tibeto-Burman group comprises two main branches, Mahakiranti (also called Himalayan) on the one side, and on the other side a branch splitting into four subbranches: West Himalayish/Kanauri, Gurung/Tamang, Tshangla, and Bodish.

The Northeastern or Qiang Tibeto-Burman group is divided into core Qiangic and other Qiang group languages, such as Naxi, Bai, and Tujia, by Bradley (2002).

Finally, the Southeastern Tibeto-Burman group branches off into Lolo-Burmese and Karen. Lolo-Burmese consists of Burmish and Loloish languages, as well as the single language branches Gong and Mru.

2.2. Data Sources

Data presented in this thesis almost exclusively stem from published articles, books, and dissertations/theses. The only non-published data are field notes graciously provided by Scott DeLancey (personal communication, May 2009) on Bodo (§3.5) and by Amos Teo (personal communication, February 2009) on Sumi/Sema Naga (§3.6).

Examples are reproduced from the original sources, and are not modified unless stated, with two exceptions: First, in order to restrict the number of and minimize the potential confusion caused by similar gloss abbreviations, different abbreviations for the same marker were unified. Second, glosses of the prefix in question, the language-specific descendant of Proto-Tibeto-Burman *gV-, were substituted by '***gV-**' in bold print to facilitate reading the examples and recognizing the protagonist.

In some cases, glosses are added if they were not provided by the author, up to an extent of detail permitted by reading about the context that the example comes from. If glosses are added, it is indicated along with the source.

Information regarding language names and alternate names is taken from the Ethnologue (Gordon, 2005) unless otherwise indicated.

2.3. **gV-* Form Variation

In the search for **gV-* reflexes in Tibeto-Burman languages, only prefixes with velar initials are considered, that is the voiced, voiceless, and aspirated stops /g,k,k^h/, with the exception of the epiglottal stop [ʔ] in the prefix spelled as *k-* in Daai Chin (Mizo-Kuki-Chin, see §3.4). This epiglottal stop is included since the very closely related Mro language has /k/ for overlapping functions, which is taken as evidence that the proto language of Daai Chin and Mro had /k/, which got debuccalized to the epiglottal stop in Daai Chin.

Palatal initials are not included in favor of a more conservative approach, even though velar palatalization before front vowels is a typologically very common sound change and might have occurred in a few languages. In particular, the Central and Southern languages Lisu and Akha of Southeastern TB discussed in §6.1.1 have nominalizing prefixes with palatal onsets that future research might be able to link to our velar prefix. Another case of a prefix with a palatal initial associated with similar functions is the *tɕV-* prefix in the Qiangic/Northeastern TB language Qiang (§7.3).

As we will see, most common for the vowel in the prefix are a copy vowel (which completely assimilates to the first vowel following it, i.e., the first vowel in the root) or a schwa, which is expected considering typical ways of phonological reduction in highly frequent grammatical morphemes. However, data are not automatically excluded if the respective prefix contains a full, independent vowel.

Finally, a condition for considering a certain form a reflex of **gV-* is that it precedes the verb root, and that it phonologically attaches to it rather than being a

phonologically more independent particle, in other words, that it is a prefix. There is one case of a preverbal particle *ʔko* in the Pei-shan variety of Nosu (§6.1.2), which seems rather problematic to count as a **gV-* reflex (although not only for the reason that we are dealing with a preverbal particle instead of a prefix, but also because of the functions associated with it).

There also are cases of velar elements that are not considered **gV-* reflexes because they occur postverbally, which are discussed in §7.2: The velar suffixes *-kai* in Rabha (B-K, Sal) and *-gip-a* in Garo (B-K, Sal) as well as the postverbal particle *kew* in Sema Naga.

2.4. Functions of **gV-*

Looking for data that reflect evidence of our velar prefix a decision had to be made as to which functions should be considered within or close enough to the cluster of functions that can be argued to have developed from an original general function of nominalization.

There are essentially two arguments. The first argument is a typological one: Functions that have recurrently been associated with nominalizations in the literature are considered to be within the typical cluster of functions attested for TB languages. TB scholars have been devoting recently increasing research efforts to report and discuss this typical cluster of functions of nominalization, among them Matisoff (1972), DeLancey (1989, 1994, 2005, in press), Noonan (1997, 2008), Bickel (1999), Lahaussois (2003), Watters (2008), LaPolla (2008), Doornenbal (2008), Genetti et al. (2008).

Specifically, functions that recur with our **gV-* nominalizer, which have been recognized as being tightly linked with nominalization, are 1. verb citation marking (e.g., Matisoff, 1972; Noonan, 1997), 2. adjectival modification (e.g., Noonan, 1997; LaPolla, 2008), 3. relative clause marking (e.g., DeLancey, 1989, 2005; Noonan, 1997; Genetti et al., 2008), 4. complement clause marking (e.g., Noonan, 1997, 2008; Genetti et al.,

2008), 5. adverbial clause marking (e.g., Noonan, 1997, 2008; LaPolla, 2008), and 6. marking of main clause constructions (e.g., Noonan, 1997, 2008; DeLancey, in press).

Thus, the typological argument justifies relating the above six functions to our original **gV-* nominalizer. In fact, if we imagine the original functional range covered by this **gV-* marker in Proto-Tibeto-Burman, it is highly likely that not only simple derivational nominalization yielding syntactically independent nouns was originally associated with it, such as action/event and participation nominalization, but that already at the stage of PTB, it occurred as a nominal modifier as well (which actually might have given rise to participant nominalization in the first place through a nominal modification construction involving a semantically empty head noun).

Besides the above six functions and the two derivational functions of action/event and participant nominalization, the occurrence of a potential **gV-* prefix is found in two other syntactic contexts: on numerals and on indefinite quantifiers such as 'many', 'some', etc. The argument connecting those occurrences of the prefix with the recurrently documented set of functions makes the link between those occurrences and specifically the function of deriving adjectival modifiers: If the nominalizer at some point used to productively derive (or still derives) deverbal adjectives, then the use of the prefix can be reinterpreted as a general marker of nominal modifiers and get extended to other nominal modifiers, such as numerals and indefinite quantifiers.

There is also one instance, in the Mizo-Kuki-Chin language Lamkang (§3.4), where it looks like the **gV-* descendant prefix might function to derive adverbs from verbs aside several other functions. Data on this will be presented, since this function could be related to deverbal adjective derivation, as in both cases, the derived form acts as a modifier, in one case modifying a noun, in the other a verb.

Besides those eleven functions that are recurrently associated with reflexes of the **gV-* nominalizer, there is a number of functions that are considered not related to those eleven functions that are marked by velar prefixes in languages examined in this study. These functions include: exhortative marking, causative marking, reflexive and reciprocal marking, verbalization, negative imperative marking, benefactive marking, passive marking, tense/aspect marking, and the functioning as a copula.

A list of all these functions, along with examples from all languages where they are found, is provided in Appendix A. For one or the other of those functions, future research might suggest historical syntactic pathways that allow to link them to the nominalization cluster of functions. However, there are functions, for which this seems highly implausible such as reflexive and reciprocal marking or the negative imperative marking. Therefore, we can assume that we are dealing with several velar prefixes that, in some languages, became homophonous, for example in Mro, where we get *ka-son* 'a guard' from *son* 'to watch' (So-Hartmann, 2008, p. 2) since *ka-* functions as the agent nominalizer, but also *ka-ho* 'speak with each other' from *ho* 'speak' (Hartmann, 2001a, p. 137) since a different *ka-* prefix functions as the reciprocal marker in the language.

Other functions not considered in this study involve functions associated with other velar prefixes that have been reconstructed for Proto-Tibeto-Burman (see §1.1) such as directive marking, velar prefixes for numbers 'two' and 'three'. Another domain where velar prefixes are found across Tibeto-Burman is interrogatives, which is also excluded in this study as being unrelated to nominalization. [2]

2.5. Constructions involving **gV-*

There are two constructions that are recurrently found in Tibeto-Burman that involve the **gV-* prefix. One is a double prefixation strategy with the additional prefix being *a-*. This *a-* is the first prefix in the sequence yielding what I will refer to as the *a-gV-* construction. It stems from the PTB **a-* prefix (cf. Matisoff, 2003, pp. 87 ff.), whose reflexes are nominalizers across Tibeto-Burman languages (Matisoff, 2003, p. 106).

The other construction will be referred to as the *gV-...-pa* construction, where a new circumfix is created with the *-pa* suffix, which just like the *a-* prefix also appears to

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[2] It is peculiar that the widely attested TB *-pa* nominalizer seemingly also marks interrogatives in at least the Central TB language (group) Ao Naga and the Eastern Kiranti language Limbu (LaPolla, 2008, p. 52, footnote 8).

have deep roots in Tibeto-Burman and is found as a nominalizer in various languages of different branches (see LaPolla, 2008, p. 52, footnote 8).

As will be shown in the following chapters, these two constructions are found in languages of different branches, and are likely to be reconstructible to Proto-Tibeto-Burman.

CHAPTER III

CENTRAL TIBETO-BURMAN

The Central Tibeto-Burman (TB) group as referred to in this thesis is a residual category with some internal grouping but missing links between those groups. It comprises 14 subgroups of languages spoken mostly in Northeast India (NEI) as classified by Burling (2003) as well as the remaining languages of Bradley's (2002) Central TB group, which form the Rawang/Nungish group of languages spoken in northern Burma and on the other side of the border in China.

Burling's (2003) classification of NEI languages gives us the following 14 subgroups: Karbi, Tenyidie (Angami Naga), Tangkhul, Mizo-Kuki-Chin, Sal, Sema Naga, Miju, Meithei, Ao Naga, Tshangla-Takpa, Sherdukpen-Bugun/Khoa-Sulung-Lishpa, Hrusish, Tani, and Idu-Digaru. According to Burling, "the subgroups are not meant to be coordinate branches of a languages family, but simply the largest groups that can now be reasonably proposed" (Burling, 2003, p. 174).

Regarding Bradley's (2002) classification model, the Central TB group used here lumps together Bradley's Sal and Central groups. His Sal group is subsumed under the more detailed grouping of NEI languages by Burling (2003). His Central group, about which he states that "[it] may actually be a residual category, as the internal differences are very large" (p. 76), also includes a Mirish or Adi-Mising-Nishi and a Mishmi group along with the Rawang/Nungish group. The former two are here subsumed under the Tani and Idu-Digaru plus Miju groups of Burling's classification.

Thus, we deal with 15 subgroups, Burling's 14 plus Rawang/Nungish from Bradley's Central group. According to Bradley (2002), another two languages that may as well be put in the Central TB branch are Lepcha and Miji (Dhammai), the latter seemingly belonging to a group with Hruso (Aka) and Bangru (Levai) (Burling, 2003, p.

180). Neither the grammatical sketch of Lepcha by Plaisir (2003), nor the one of Miji by Simon (1979) provide evidence of the velar prefix in these languages.

Of these 15 subgroups, we find evidence of our prefix in seven, each of which will be discussed in a separate section in this chapter. There also are some interesting data from the Rawang/Nungish subgroup to be presented in a separate section, and we should also mention at this point a statement by Chelliah (2003) on Meithei (a separate subgroup in Burling's classification) commenting on what could potentially be remnants of our prefix in the form of indefinite quantifiers.

> Most quantifiers in Meithei are lexicalized forms consisting of the unproductive prefix ***kh*V-** [emphasis added] (where the vowel can be *ə*, *i* or *u*).These are ***khərə*** [emphasis added] 'some' which indicates and indeterminate amount; ***khitə́ŋ*** [emphasis added] 'ever so little', 'a particle' (composed of *khit* 'a little' and *tə́ŋ* 'exclusive') of some tangible material; and ***khəjiktə*** [emphasis added] which indicates a short amount of time. (p. 432)

The outline of this chapter is as follows: The documentation of **gV-* is divided into §§ 3.1 to 3.8 dealing with evidence from seven of the subgroups respectively. Sections §§ 3.1 to 3.4 are devoted to Karbi, Tenyidie, Tangkhul and Mizo-Kuki-Chin (most importantly the Northern Kuki-Chin language Lamkang), where the prefix covers the widest ranges of functions. §§ 3.5 to 3.7 present data from the Sal languages, Sema Naga and Miju, where we also clearly find the prefix, but in more restricted sets of functions. §3.8 offers data on Dulong and Anong (Nung) of the Rawang/Nungish subgroup, which look interesting without qualifying to be treated as evidence of our velar prefix. Finally, the results are summarized in two tables in §3.9.

3.1. Karbi

In Karbi, the descendant of **gV-* is what I will refer to as *kV-*. The vowel is either /e/ or /a/, the exact conditioning for the alternation remaining unclear in Grüßner (1978). The prefix synchronically still functions as a nominalizer in the original sense of deriving nouns from verb roots, but also covers other functions, typically associated with nominalization in TB. Also, during initial fieldwork on Karbi from January-March 2009 mostly devoted to simple elicitation, I noted a tendency for using the prefix for verb citation, even though just saying the bare roots was possible, too.

Looking at strictly derivational functions first, we see *dúk* '(to) suffer' being nominalized by *ke-* yielding *kedúk* 'poverty' in (1).

(1) *là-bàng-sō* *a-ke-dúk*[3]
DEM-CLF:G-DIM ATTR-***gV**-suffer
'this poverty' [Grüßner, 1978, p. 96]

Clear evidence that this has to be a noun comes from the fact that there is a demonstrative preceding it. Furthermore, we see an *a-* prefix, which is glossed as the attributive. This is a marker that generally indicates a relationship between the noun and some other modifier to this noun in Karbi. This *a-* prefix is very frequent, occurring on the head noun in adjective constructions as well as on the head noun of relative clauses as we will see later on.

(2) is another instance of event nominalization, here the S argument of a nominal predicate clause, where the copula is missing.

[3] Glosses of the Karbi examples (all from Grüßner, 1978) are mostly my own, since Grüßner himself did not consistently gloss the examples but only translated and referred to single words or morphemes.

(2) *ka-cho + béy-kè*[4] *páp*
NMLZ-lie-EMPH sin
'lying is a sin' [Grüßner, 1978, p. 96]

The data in (3) and (4) are examples of agent nominalization. This construction includes the indefinite pronominal classifier *bàng*, here with the attributive *a-*, to signal the resulting NP as an agent noun. The verb may be nominalized by *kV-* as in (3), but does not have to be, as in (4).

(3) *lō* *ke-thán* *a-bàng*
book ***gV**-teach ATTR-CLF:G
'somebody who teaches / teacher' [Grüßner, 1978, p. 78]

(4) *cho-nghū* *a-bàng*
MID-steal ATTR-CLF:G
'somebody who steals / thief' [Grüßner, 1978, p. 78]

Grüßner (1978) describes Karbi as having two different adjective constructions (ACs): definite and indefinite ACs.

Table 1 – Definite and Indefinite ACs in Karbi (Grüßner, 1978, pp. 123/4)

	Formal Difference	Functional Difference
Definite AC	**Both *a-* 'ATTR'** and ***kV-* 'NMLZ'** **obligatory** on adjectival verb	**Adjectival verb** is the head
Indefinite AC	**No *a-* 'ATTR'** and only **optional *kV-* 'NMLZ'** on adjectival verb	**Modified noun** is the head

Functionally, the difference is that in definite ACs, the emphasis is on the adjective, which is interpreted as the "center of the construction" (Grüßner, 1978, p.123)

[4] I use '+' as opposed to '-' between what used to be a morpheme boundary, but has become more of a lexicalized unit (specifically, *cho-* is an otherwise productive middle marker, but *béy* cannot stand by itself).

– the adjective is marked and interpreted as the head (semantically and syntactically). In indefinite ACs, on the other hand, the emphasis is rather on the noun. Table 1 summarizes these observations.

(5) and (6) are examples of definite ACs. The adjectival verb is obligatorily prefixed by the attributive marker *a-* and by the nominalizer *kV-*. Since the *a-* prefix otherwise goes on head nouns or possessed elements, thus indicating that it is being modified, it morphologically marks the adjectival element as the head of the construction. According to Grüßner, *èr* 'be.red' and *bī* 'be.small' are emphasized[5] in (5) and (6). Also note that the nouns may or may not be marked attributive[6].

(5) *chám a-ke-èr*
color ATTR-***gV**-be.red
'red color' (Grüßner, 1978, p. 124)

(6) *a-plāng a-ke-bī-nèy ēn-sí*
ATTR-bread ATTR-***gV**-be.small-SPLT take-EMPH
'She took the smallest bread.' (Grüßner, 1978, p. 123)

(7) and (8) are instances of the indefinite AC. The adjectival verb may be nominalized as in (7), but does not have to be as in (8) – in any case, it cannot be marked attributive by *a-*. And, again, note that the nouns may or may not be marked attributive, just as in the definite AC.

(7) *pé ke-lòk*
cloth ***gV**-be.white
'white cloth' [Grüßner, 1978, p. 124]

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[5] Unfortunately, (contextualized) data to determine whether 'emphasized' here means (or could mean) something like 'contrastive focus' are not available.

[6] Grüßner does not note a functional difference here – the use of the attributive, thus, might be a subtle pragmatic distinction.

(8) *ingnàr-kè* *a-só* *dīng+lèn* *dō*
elephant-TOP ATTR-tooth be.long exist
'The elephant has long teeth.' [Grüßner, 1978, p. 124]

What should also be noted here is that both ACs have a fixed order, where the noun precedes the adjectival verb. The same order in adjectival attribution is found in a lot of languages in this study.

Interestingly, as we will see below, Dimasa appears to have the same construction pair for adjectival modifiers based, however, on the simple **gV-* nominalization for the indefinite versus *gV-...-pa* for the definite adjective construction.

The structurally same *a-gV-* construction that marks the definite AC is also associated with the derivation of abstract nouns in Karbi (according to Grüßner, 1978) as the data in (9) shows.

(9) *a-ka-nghōn* *a-ke-lét*
ATTR-***gV-**love ATTR-***gV-**make.mistake
'love (noun)' 'mistake' [Grüßner, 1978, p. 52]

The following examples show that Karbi *kV-* also gets used to mark verbs in subordinate clauses. The first examples in (10) and (11) represent relative clauses.

(10) *thē* *ke-cho* *a-monít*
fruit ***gV-**eat ATTR-man
'the man who is eating the fruit' [Grüßner, 1978, p. 96]

(11) *kám* *ke-klém-ráp* *thèk-thē* *a-tūm*
work ***gV-**do-together know-NEG ATTR-people
'those who cannot work together' [Grüßner, 1978, p. 96]

We again see the attributive marker on the head noun, and notice that relative clauses precede the head noun, whereas adjectival modifiers follow it as shown above. An interesting observation about (11) is that the nominalizer prefixes onto the first verb,

the light verb *klém* 'do', and not the second verb in this complex predicate. Typically in verb-final languages such as TB, it is the last verb in a complex predicate which receives marking for tense/aspect/mood (TAM) or other relevant information such as subordinate marking. A possible explanation could be that *klém* 'do' is nominalized because it figures inside a complement clause, and so we do not get a second nominalizer within the same predicate.

In (12), an example of *kV-* marking the verb of a complement clause is provided, and in (13), we recognize the nominalizer on the verb of an adverbial clause.

(12) *arwè* *ke-jáng-jí* *pa+ngchèng-ló*
rain ***gV-**fall-FUT start-PAST
'it started raining' [Grüßner, 1978, p. 125]

(13) *àn* *ke-chō-jí* *a-phān*
rice ***gV-**eat-FUT ATTR-GOAL
'in order to eat rice' [Grüßner, 1978, p. 80]

Note that the complement and adverbial clause examples show that in these constructions, the nominalized verb may take tense/aspect markers, here the future marker *-jí* in both cases.

Examples (14) and (15) provide data on *kV-* in main clauses. According to Grüßner (1978), this main clause construction marks the progressive aspect.

(14) *nè* *ka-chi+rú-ló*
1:SG ***gV-**cry-PAST
'I was crying' [Grüßner, 1978, p. 95]

(15) *konát-sí* *nàng-lì* *ke-dàm-jí*
where-DIR 2:SG-HON ***gV-**go-INTENT
'where do you want to go?' [Grüßner, 1978, p. 95]

3.2. Tenyidie (Angami Naga)

Tenyidie, also known as Angami Naga, is classified within an Angami-Pochuri group by Shafer (1974), in which we find a number of languages with the 'adjectival prefix' as Table 2 shows. The last language in this table, Zumomi, belongs, as far as I know, to the Sema Naga group, which will be discussed later on in §3.6.

Table 2 – Derivation of Adjectival Modifiers in Angami-Pochuri Languages (Shafer, 1974, p. 268)

Language name	Alternate name(s)[7]	Form of prefix
Tenyidie	Angami Naga	*kê-*
Rengma		*ke-*
Imemai	Mao Naga	*ka-*
Kezama	Khezha Naga	*ke-*
Zumomi	Dayang, Sumi Naga	*ki-*

Like Karbi, Tenyidie makes use of the nominalizer in a wide variety of functions. Its form varies according to the scholars who have worked on the language: Herring (1991) writes *kə̀-*, in a grammar by Kuolie (2006), we find it as *kê-*, and Kevichüsa & Subbarao (1998, 1999) represent it as *ke-*.[8] Example (16) below shows an example of an agent nominalization, which here includes an O argument.

(16) *nhásĭ* *kê-zē-ù* *vĭlìè*
fruit ***g**V-*sell-DEF:M PN
'Vilie, the fruit seller' [Kuolie, 2006, p.168; glosses modified]

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[7] Alternate names are taken from the Ethnologue (Gordon, 2005).

[8] I will use the representation of the prefix according to the source that the respective examples are taken from.

Note that agent nominalizations require a suffix indicating definiteness and gender in a portmanteau fashion. In (16), there is *-ù*, which is the masculine definite article. Instead of *-ù*, we could also have *-mìè*,[9] which would be gender-neutral.

Even though in my primary source on Tenyidie, a grammar by Kuolie, I found an example *kê-mêhō* 'the act of visiting' (Kuolie, 2006, p. 62), which looks like an instance of an action/event nominalization, the *kê-* here functions as a reciprocal marker according to Mimi Kevichüsa Ezung (personal communication, January 16, 2009).

However, there are a lot of nouns in Tenyidie that have a *kê-* first syllable and look like they could have been derived by means of our prefix, as examples in (17) show. Some of these are no doubt formed from synchronically related verb stems, e.g. *kêpú* 'word' from *pú* 'speak' (Kuolie, 2006, p. 130).

(17)	*kêpú*	'word' (163)	*kêlō*	'yarn' (78)	
	kêhŭ	'meeting' (169)	*kêthō*	'truth' (78)	
	kêró	'rope' (174)	*kêthuō*	'bracelet' (78)	
	kêhûkí	'church' (155)	*kêdī*	'kingship' (78)	
	kêcà	'valley' (44)	*kêtsiē*	'stone' (43)	[Kuolie, 2006]

In (18), two examples are provided that have the same morphemic material with the exception of the example on the right involving our prefix.

(18)	*lêSădà hâû*	*vĭ*		*hâû*	*lêSădà kê-vĭ*	
	book	DEM	be.good	DEM[10]	book	***gV*-be.good**
	'this book is good'			'this is a good book'		
	[Kuolie, 2006, p. 116, glosses modified]					

[9] *-mìè* is related to *thê-mìè* 'man' and probably comes from PTB **mi*.

[10] According to Mimi Kevichüsa Ezung (personal communication, January 16, 2009), it would be more natural for the demonstrative here to follow the NP instead of preceding it.

Structurally, the clause on the left side 'this book is good' consists of the NP *lêSədà hâû* 'this book' and a verb *vǐ* 'be good'. The clause on the right, however, consists of the demonstrative *hâû* 'this' and the NP *lêSədà kê-vǐ* 'a good book', and is interpreted as a nominal predicate construction. This sentence pair shows that adjectival or stative verbs get nominalized when functioning as nominal attributes, but remain without *kê-* if they form the predicate of a clause.

Our prefix also marks verbs in subordinate clauses. An example of a relative clause is presented in (19).

(19) *[kí-nù* *kə̀-bá]* *tèpfə̂* *ù* ...
house-LOC ***gV-**VM dog the
'The dog that is in the house ...' [Herring, 1991, p. 58]

The adjectival modifier construction in (18) contrasts with the relative clause construction in (19). Structurally, the only difference is the relative ordering of head noun and modifier. While in the adjective construction in (18), the head noun precedes the modifier, it follows it in (19), the relative clause construction. Functionally, the difference is that the adjective construction is used if the modifier is considered to describe a quality inherent to the head noun and/or rather time-stable. On the other hand, the relative construction is used if the modifier is considered to add information that is only temporarily the case (Herring, 1991, p. 58). In our examples (18) and (19), it is (18) which involves the more time-stable quality 'good' and, thus, occurs in the adjective construction, whereas in (19), 'being in the house' as a momentary attribute requires the relative clause construction.

Note also that the prefix in (19) attaches to a copular element that has grammaticalized from and is still homophonous with a lexical verb 'to sit' (cf. Giridhar, 1991, p. 8), but seemingly also occurs either as an auxiliary or a light verb with *mərə* 'hope' in (20), which is an example of a complement clause.

(20) *[puo̲ tio̲ kà-tio̲]* *ā* *məre* *bá*
3SG go ***gV**-VM 1SG hope VM
'I hope [that she will go].' [Herring, 1991, p. 58]

What is interesting to note here is that in complex predicates, where lexical verbs are followed by grammaticalized auxiliary-type verbs, what gets nominalized is the second, grammaticalized verb. Finally, (21) and (22) provide us with examples of adverbial clauses, whose verbs are marked with our prefix.

(21) *[kuo khrə̀ kà-tio̲]* *lá* *ā* *asiezāpfə̃* *kàtsē* *sə̀* *té*
fish buy ***gV**-VM RE 1SG younger.sister send VM VM
'I sent my sister [to buy fish].' [Herring, 1991, p. 59]

(22) *puô* *kêwhírâ* *kê-vó* *kí* *phîkù* *khrə̌*
3SG PN ***gV**-go PP shoe buy
'S/he bought shoes when he visited Kohima.'
[Kuolie, 2006, p. 112, glosses modified]

We see that in both sentences, the adverbial clause is followed by some element. Herring refers to *lá* in (21) as the reason complementizer. In (22), we know that *kí* is a postposition, which is a clear indicator the preceding clause functions as an NP.

Since we also want to keep track of indefinite quantifiers that carry the prefix, we should note that this is the case for Tenyidie *kê-tsá* 'few' and *kê-krā* 'many' (Kuolie, 2006, p. 113).

There is some evidence for a homophonous but distinct prefix in the language as exemplified by the forms in (23) (see Appendix A).

(23)

kêtsò	'ask' (164)	*kêtsé*	'send' (167)
kênó	'choke' (12)	*kêtò*	'drink' (12)
kêtà	'shorten' (18)	*kêchò*	'dress' (12)
kêcə̌	'pester' (19)	*kêkhé*	'spill' (42)
kêthuó	'fry' (42)	*kêthŭ*	'hit' (42)

[Kuolie, 2006]

3.3. Tangkhul

Tangkhul is the third language group that together with Karbi, Tenyidie, and the Northern Kuki-Chin language Lamkang has given our prefix a priority role in the core of its grammar.

According to Burling (2003, p. 187), Tangkhul and Maring (Naga) form the Tangkhul group. Tangkhul itself includes different dialects, some which do not appear to be mutually intelligible. For Maring (Naga), Shafer (1966-73, p. 30) reports a velar prefix *k'V-* even though in another table, the adjectival prefix is not listed for Maring (p. 268).

In the Ukrul variant of Tangkhul, there are two allomorphs, *kə-* and *khə-*. The non-aspirated form occurs with a stem-initial obstruent and the aspirated form elsewhere (Arokianathan, 1987, p. 36).We can see this alternation in (24), which offers two examples of action/event nominalization in Tangkhul by means of our prefix; these forms also serve as the citation forms of the verbs.[11]

(24) *kə-khop* 'to sew / sewing'
khə-ŋəsəm 'to run / running' [Arokianathan, 1987, p. 38]

(25) shows that in the case of light verb constructions, the action nominalization consists of a noun stem followed by the *kə-* nominalized light verb *sa* 'to do'.

(25) *cakway-kə-sa* *la-kə-sa*
dance-***gV**-do song-***gV**-do
'dancing' 'singing' [Arokianathan, 1987, pp. 148/9]

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[11] More examples of the allomorphic variation are:

(a)	*kə-pəm*	‚to sit'	*khə-məŋ*	'to drink'
	kə-təm	‚to read'	*khə-ləy*	'to be'
	kə-cuy	‚to be tall'	*khə-rá*	'to come'
	kə-sá	‚to do'	*khə-yəŋ*	'to see'
	kə-hək	‚to be big'	*khə-wa*	'to walk' [Arokianathan 1987, p. 64]

There is another nominalization construction involving *khə-* together with a *-t* suffix, which derives abstract nouns, functionally possibly similar to the *a-gV-* construction in Karbi (see (9) above). Two examples are offered in (26).

(26) *khə-mənu-t* *khə-ŋəyo-t*
***gV-**laugh-ABST ***gV-**look-ABST
'laughter' 'look' [Arokianathan, 1987, p. 148]

Data in (27) show that our prefix is involved in the derivation of agent nouns. Like Tenyidie, suffixes mark gender, and in the masculine forms given here, we recognize the TB cognate **-pa* suffix, as this is our *gV-...-pa* construction.

(27) *kə-khop* 'to sew / sewing' *khə-ŋəsəm* 'to run / running'
kə-khop-pə 'sewer (mas.)' *khə-ŋəsəm-mə* 'runner (mas.)'
kə-khop-wu 'sewer (fem.)' *khə-ŋəsəm-wu* 'runner (fem.)'
[Arokianathan, 1987, p. 38]

As we move on to (28), we see examples of deverbal modifiers.

(28) *khə-ʃilew* *luŋkuy* 'rolling stone'[12]
kə-pí *ari* 'sleeping tablets'
kə-piŋ-ŋə *mi* 'brave man'
kə-cuy-yə *thinroŋ* 'tall tree' [Arokianathan, 1987, p. 134]

In the first two examples, the structure of *kə-pí* and *khə-ʃilew* is NMLZ-V.root, whereas in the second two examples, there is another suffix, whose underlying form is *-ə*. This suffix is called the 'relative participial marker' by Arokianathan, and is – not

[12] According to Arokianathan's explanation of the allomorphy in the prefix, we would expect the non-aspirated version here since the following segment is an obstruent, so I assume this is just a typo.

surprisingly then – the same suffix that appears on relative clause verbs as we will see below.

Deverbal modifiers do not only precede their head nouns but may also follow them as in *naw khə-matha* 'beautiful child' (Arokianathan, 1987, p. 145). Thus concerning adjectival modification, we have two variables, the presence/absence of the RCM suffix and relative ordering, and thus four potential constructions, one of which (head noun preceding modifier and modifier with RCM suffix) could not be attested. What the exact semanto-pragmatic functions of the different constructions are is a matter for future research.

An example of a relative clause is presented in (29), where the verb takes the above mentioned structure of NMLZ-V.root-RCM.

(29) *i* *kə-təm-mə* *ləyrik* *ci* *hili* *ləy*
I ***gV-**read-RCM book DEM here COP
'(the) book which I read is here' [Arokianathan, 1987, p. 136; glosses modified]

As far as adverbial clauses (AdvCs) in Tangkhul are concerned, some semantic types require a nominalized verb in the adverbial clause, and some do not. It seems, however, that in the majority of adverbial clause types, we recognize our velar prefix on the AdvC verb.

In temporal AdvCs, the verb is nominalized by *kə- ~ khə-*. The example in (30) shows a simultaneous punctual relationship, translated into English with the conjunction 'when'. (Note that for the following examples of AdvCs – (30-34) – only word-level glosses are provided. In AdvC predicates, the velar prefixes are separated by hyphens.)

(30) *nə* *ŋəsəm-khə-lewtə* *i* *pəmrə*
you when.rise I would.have.almost.sat
'when you rise up (from the seat), I would have almost sat'
[Arokianathan, 1987, p. 112]

The AdvC predicate in (30) consists of the verb stem plus *khəlewtə*, which is the nominalized verb root *lew* 'be immediate' with what Arokianathan calls the 'verbal participial marker' *-tə*. So this is a very transparent construction that has not undergone any grammaticalization processes. Likewise, the temporal relation of English 'as long as' goes with this construction:

(31) *nə hili ləylə-khə-eynətəŋtə i riŋphay*
you here be.as.long.as I be.happy
'I am happy as long as you are here' [Arokianathan, 1987, p. 112]

In the posterior ('after') and simultaneous durative ('while') relationships, the subordinate markers are suffixes, as we can see in (32) and (33). They are not verbs, since we get the nominalizer at the beginning of the word directly nominalizing the AdvC verb root.

(32) *phəsa kə-həywuythili athum ŋəreway*
food after.taking they played
'they played after taking food' [Arokianathan, 1987, p. 115]

(33) *nə ləyrik kə-pacithəranli a pìhəyrə*
you book while.reading he had.slept
'he had slept while you are reading (the) book' [Arokianathan, 1987, p. 117]

In (34), we have an example of a causal AdvC. As in (32) and (33), the subordinate marker appears as a grammaticalized suffix and the nominalizer is prefixed to the verb root occurring at the beginning of the word.

(34) *inə taŋkhul tuy kə-təmwuywaŋ ukrul káhəyrə*
I Tangkhul language because.study Ukrul have.gone
'because I study Tangkhul, (I) have gone to Ukrul' [Arokianathan, 1987, p. 123]

AdvC types with non-nominalized predicates (or at least not nominalized with the velar prefix) include the semantics of concession ('although') and condition ('if') (Arokianathan, 1987, pp. 120,123).

After having discussed relative clauses and adverbial clauses, it would be in place to address complement clauses (CCs). The only information I could gather is that in Pettigrew (1918/1979, pp. 64/5), (unglossed) sentences like '(He) says you are to come', and 'I know that a thief has been here' do not contain a word with the prefix. So it appears that at least the semantic types of cognition and utterance CCs do not feature a *kə- ~ khə-* nominalized predicate.

Moving on from subordinate to main clause marking, we have two constructions to discuss. First, in (35), the polite imperative.

(35) *kə-sá-lu*
***gV**-do-IMP
'do (please)!' [Arokianathan, 1987, p. 64; glosses added]

The more direct or non-polite form is just *sá-lu* 'do!' (Arokianathan, 1987, p. 95), so the suffix is the same, and only the nominalizer adds the politeness. In fact, there are imperatives of different degrees of politeness with the nominalized forms being the most polite ones. There is a straightforward functional motivation for this construction: As nominalized forms generally lack specification for person, the addressee – the person who is supposed to do something – is not mentioned. Trying to imitate the politeness effect of de-personalizing an imperative, we could make a comparison in English between 'do it!' and 'may it be done!'

The other main verb construction that is built on nominalization is a construction translating into English 'not only...but also'. (Again, note that for the following examples (36-38) – only word-level glosses are provided. Easily recognizable morpheme boundaries are indicated by hyphens.)

(36) *anə* *asa* ***kə-pəŋ-maŋ*** *məniŋlə* *akho* ***kə-cuy-lə*** *cuy*
he shape be.fat not.only.but.also height be.tall be.tall
'he is not only fat, but also tall' [Arokianathan, 1987, p. 107; glosses added]

As we can see in (36), this construction consists of a nominalized verb in the first clause and in the second clause, the first clause being followed by the conjunction. The nominalized verb in the first clause has a suffix *–maŋ*. The predicate in the second clause features a peculiar reduplication construction, where the verb occurs first with nominalizer and *-lə* suffix and then again in a bare stem form. Actually, it does not seem to be the bare stem form, but an inflected, non-nominalized form as the comparison with (37) below shows.

(37) *nə* ***khə-mətuy-maŋ*** *məniŋlə* ***kə-zət-lə*** *zət-rə*
you speak not.only.but.also walk will.walk
'you will not only speak, but also walk'
[Arokianathan, 1987, p. 107; glosses added]

This is confirmed by (38), where we get a different inflection for present progressive on the reduplicated verb.

(38) *inə* ***kə-kəpí-maŋ*** *məcilə* ***ka-palə***[13] *pa-tələy*
I write not.only.but.also read reading
'I am not only writing but also reading'
[Arokianathan, 1987, p. 107; glosses added]

(39) shows that a different reduplication construction occurs with the nominalizer to form headless relative clauses (a cross-linguistically more common function).

[13] The /a/ instead of the schwa in *ka-palə* appears to be a typo. In (60), we have the nominalized form *kə-pa-cithəranli* with the schwa for 'while reading'.

(39) *i* *kə-they-they* *ci* *khuy-rə*
I ***gV**-see-RDPL DEM take-FUT
'I will take whatever I see.' [Arokianathan, 1987, p. 137; glosses added]

Finally, we also find our prefix consistently on ordinal numbers in Tangkhul as we see in (40).

(40)	*khə-ra*	'first'	*kə-thuruk*	'sixth'
	kə-khən-e	'second'	*kə-ʃine*	'seventh'
	kə-thum-mə	'third'	*kə-ciʃət*	'eighth'
	kə-məti	'fourth'	*kə-ciko*	'ninth'
	kə-phəŋa	'fifth	*kə-thəra*	'tenth' [Arokianathan, 1987, p. 59]

There also are three indefinite quantifiers, provided in (41), that look like they could contain the prefix

(41) *khu* *kətoŋkə* *təru* *kəcuŋkə* *luŋkuy kəykə*
village whole water more stone some
'whole village' 'more water' 'some stones'
[Arokianathan, 1987, pp. 134/5]

3.4. Mizo-Kuki-Chin

In the Mizo-Kuki-Chin group, Lamkang, Kom Rem/Kolhreng, and Tiddim Chin from Northern Kuki-Chin (NK-C), as well as Daai Chin and Mro from Southern Kuki-Chin[14] (SK-C) have retained the prefix for different functions. In all languages, the prefix has a /k/ onset[15] with either a copy vowel or a schwa.[16]

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[14] Shafer (1966-73, 30, 206) notes a *ka-* prefix as the adjectival prefix for Khumi (Khimi, Khami), another SK-C language.

[15] In Daai Chin, the cognate prefix is spelled as *k-* in the writing system, but is actually pronounced as [ʔ]. Hartmann (2001b, p. 129) says that the writing system is a "practical orthography". Thus, that this spelling looks like it preserves the putative older form of the prefix might just be coincidence.

A related velar prefix was not found in the Central Kuki-Chin languages Mizo (see Chhangte, 1993) or Lai Chin (see Peterson, 2003; Lehman, 1996; and contributions to the *Linguistics of the Tibeto-Burman Area* issues 20.2 and 21.1 devoted to Lai Chin). In the NK-C languages Thadou and Siyin Chin, there are also velar prefixes whose functional range, however, is considered unrelated to the functional cluster associated with nominalization (see Appendix A).

In Lamkang, we recognize our prefix in nominalized forms given in (42) and (43), where additional suffixes may occur as well.

(42)

kudúŋŋi	*kučúyyi*	*kudóp*
kV-dúŋ-i	kV-čúy-Ni	kV-dóp
***gV**-hard-CVB.ST	***gV**-shield-AGT/INST	***gV**-soft
'being hard'	'spearing'	'being soft'

(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, pp. 30/1]

(43)

kisen	*kəŋáw*
kV-sen	kV-ŋáw
***gV**-red	***gV**-strange
'being red'	'being abnormal'

(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, pp. 30/1]

The roots in (42) and (43) are translated as adjectives or verbs, but they actually are not adjective roots as the authors indirectly confirm elsewhere, "adjectives are a small closed class in Lamkang – we have only one clear example of an adjective: 'rich' [...]" and furthermore, "instead, noun modification is carried out through internally and externally headed relative clauses [...]" (Thounaojam & Chelliah, 2007, p. 70). So the reason why the forms in (42) and (43) are translated as deverbal nouns is because adjectival modifiers are analyzed as essentially being relative clauses. However, we will see that the ordering

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[16] In Lamkang, the vowel of the prefix may be deleted if the verb stem has an initial approximant: *ka-lā ~ klā* 'which is far' [Thounaojam & Chelliah 2007: 36]

of head noun and modifier might systematically differentiate between adjectival modification and relative clauses.

There also is an example in (44) below, where the prefix occurs on *yiŋ* 'pretend' deriving 'pretense', which I interpret to mean that we also get action/event nominalization marked by our prefix.

(44) *kiyiŋ*
kV-yiŋ
***gV**-pretend
'pretense' (Lamkang; NK-C) [Thounaojam & Chelliah, 2007, pp. 30/1]

It would also be interesting to know, whether the roots in (42) and (43) occur without the prefix, meaning that the prefix has a derivational function, or not, then meaning that the prefix just marks but not derives the nominal forms; we can examine (45) below.

(45) (a)

rəywa kəthrá	
rəy-wa	kV-thrá
flower-DEM	***gV**-good
the flower	which is best
'the flower is beautiful'	

(b)

ləikhəm	*kəthrákəmə*
ləikhəm	kV-thrá + kV-máŋ
PN	***gV**-good+**gV**-not
Leikham	is not good
'Leikham is bad'	

[Thounaojam & Chelliah, 2007, pp. 72/3]

Example (a) shows that the putative verb root *thrá* is not inflected as a verb but instead occurs with the prefix in a nominal predicate construction.[17] Furthermore, in example (b), where 'bad' is formed by negating *thrá* 'good', we notice that another negative auxiliary is needed. This is a peculiar construction not otherwise used in Lamkang, where verb stems are usually negated by suffixing *-mə* (Thounaojam & Chelliah, 2007, p. 46). So (44) does not provide any evidence that *thrá* is a verb root and

[17] This construction works with or without an overt copula.

can be used as such without the prefix. Another example that seems to provide further evidence on this issue is (45), where we do see *thrá* without the prefix.

(46) *[...]* *thrálikəmə* *[...]*
thrá-lin + kV-máŋ
good-big+gV-not
'wicked' [Thounaojam & Chelliah, 2007, p. 99]

However, the fact that we do not get the prefix in front of *thrá* here might rather be explained with respect to the influence of prosody on morphology in TB, meaning that for prosodic reasons, there appears to be a bias to forming disyllabic compounds in these languages (Scott DeLancey, pc). If we still had the prefix on *thrá* in (46), it would end up being a trisyllabic stem, **kəthráli*.

So we actually cannot answer our second question, as we will have to leave it for future research whether adjectival verb roots can occur by themselves without the *kV-* prefix in Lamkang or not. This ties into the question of how productive the prefix is synchronically, and whether, for example, adjectival borrowings would receive the velar prefix.

Data in (47) show that Lamkang *kV-* also gets used with agent nouns.

(47) *lila-kə-yaw* *kə-thíl-ča*
drama-***gV**-present ***gV**-request-eat
'actor' 'beggar'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 38]

Analogous to the examples in (47), all forms of agent nominalizations provided by Thounaojam and Chelliah consist of either an incorporated O argument or a verbal complement in addition to the nominalized verb. This might be the only construction types in which we get participant nominalizations with **gV-* in Lamkang. We find the same pattern in Daai Chin as we take a look at (48).

(48) *kshum-k-shu* *tui:-k-la*
paddy-***gV**-pound water-***gV**-fetch
'paddy-pounder' 'water-fetcher'
(Daai Chin; SK-C) [So-Hartmann, 2008, p. 3]

In Daai Chin, the same structure may also be used to derive patient nouns with an incorporated A argument as the example in (49) shows.

(49) *mei* *k'-uui*
fire ***gV**-burn
'the one burned with fire'
(Daai Chin; SK-C) [Hartmann, 2001b, p. 131]

In (50), we have data from Mro, another SK-C language closely related to Daai Chin. In Mro, agent nouns are simply derived by prefixing *ka-*, which is one of seemingly two descendants of **gV-*, the other one being *k-*.[18]

(50) *bau* 'to lie' *ka-bau* 'lier' [*sic*]
son 'to watch' *ka-son* 'a guard'
tkhoen 'to look' *ka-tkhoen* 'overseer'
(Mro; SK-C) [So-Hartmann, 2008, p. 2]

Deriving adjectival modifiers by means of **gV-* is found in both NK-C and SK-C in parallel ways. Looking at SK-C first, we find adjectival modifiers following their head nouns in Daai Chin in (51) as well as in Mro in (52).

(51) *do* 'be.good' *kkhyaang k-do* 'good man'
däm 'be.big' *nga k-däm* 'big fish'
(Daai Chin; SK-C) [Hartmann, 2001b, p. 130]

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[18] There seem to be two velar prefixes with cognate functions in Mro, *k-* and *ka-*, with the phonetic values of [k^{ə}] and [ka]~[kʌ], respectively (Hartmann 2001b: 136/7).

(52) *shi* 'be.bad' *khimi k-shi* 'bad man'
hoi 'be.good' *tui k'-hoi* 'good water'
hoe 'be.big' *mui k'-hoe* 'big fish'
(Mro; SK-C) [Hartmann, 2001b, p. 130]

Note that in Mro, the prefix here is *k-* and not *ka-* as in (31). According to So-Hartmann (2008, p. 5)[19], younger generations of speakers tend to leave out the prefix so that the bare stem can function as a verb and an adjectival modifier. Some verbs, however, consistently retain the prefix in order to function as a modifier, like *hoi* 'be.good' above. Without the prefix, *hoi* is unambiguously verbal. An example of *hoi* without the prefix functioning as the predicate of a clause is (53) below.

(53) *ing* *tne* *la* *hoi* *vi* *de*
house DEM SUBJ be.good EMPH CL.FIN
'this house is indeed good' [So-Hartmann, 2008, p. 4]

In Lamkang, we find the same construction of deverbal modification based on **gV-*.

(54) *si-nū* *ka-thā* *khat*
woman good one
'a good woman'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 152, glosses added]

For Kom Rem/Kolhreng, Matisoff (2003) provides evidence of the **gV-* prefix associated with adjectival verbs, which is reproduced here as (55).

(55) *kənə* 'be sick' *kəkhui* 'wrinkled'
kəsip 'full' *kəčəp* 'weep'
kəkhop 'satiated'
(Kom Rem/Kolhreng; NK-C) [Matisoff, 2003, p.29]

[19] Hartmann and So-Hartmann is the same author.

Note that for *kənə* 'be sick' and for *kəčəp* 'weep', we can reconstruct the roots back to PTB **na-n/t* 'ill, suffer hurt, evil spirit' (Matisoff, 2003, p. 603) and PTB **krap* 'weep' (Matisoff, 2003, p. 596), which tells us that the first syllable is added in Kom Rem/ Kolhreng.

In (56), we see an example of Lamkang *kV-* deriving an adverb. This function is not specifically addressed by Thounaojam and Chelliah, and it would be interesting to see how productive the prefix is in this construction.

(56)

əbuŋŋi	*thopa*	*kudúŋréni*
əbuŋ-Ni	thopa	kV-dúŋ-rén-i
Abung-AGT	Thopa	***gV-**hard-EXCESS-CVB.ST

ə-bun-nə
ə-bun-ə
3.AGR-beat-GNM
'Abung beats Thopa hard.'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 53]

We also find **gV-* marking verbs of subordinate clauses in Mizo-Kuki-Chin. One example is (57) from Lamkang below, where the head noun *mi* 'man' is preceded by a relative clause whose verb is a nominalized copula.

(57)

ma-māng	*laipāk*	*awā-thā*
mə-maŋ	laypak	ə-wā-thə
3-3	country	DIST-dem-LOC

ka-am	*mi [...]*
kV-əm	mí
***gV-**be	man

'[...] (a) man who lives in this country'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 95]

As noted above, adjectival modifiers make use of basically the same construction as relative clauses in Lamkang. Note that the ordering here is [modifier] – [head noun], whereas in the adjectival example (54) above, the ordering was [head noun] – [modifier]. Based on the comparative data gathered, we may hypothesize that this is a general distinction between RC and adjectival modifiers in Lamkang, but we need more data to prove it.

In (58), we find an example that looks like it has our prefix marking a relative clause, but this is not confirmed, and Henderson actually calls the *ki-* prefix the passive marker (see Appendix A). So more data on this are needed to ensure this *ki-* is our prefix and marks the relative clause here.

(58) *lopa a ki-kho + khia sa te*
grass 3 ***gV?-**weed.out:IND already NMLZ
'the grass which had already been weeded out'
(Tiddim Chin) [Henderson, 1965, p. 97]

Lamkang is the only language where we can find **gV-* clearly marking verbs of relative clauses, and in this language, our prefix also marks adverbial clauses, an example of which is provided in (59).

(59) *thəmthi kərhelča əwəthuŋŋi nəy*
thəmti kV-r-hel-čə ə-wa + thuŋ-ŋi nəy
PN ***gV-**R-return-MID DIST-DEM+at-AGN 1

kí.ípdok
kí-íp-dok
1-sleep-COMPL.EVNT
'Thamthi came back and then I slept.'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 91]

Even though the translation makes two conjoined main clauses out of the Lamkang sentence, we see that our prefix occurs on the first verb *kərhelča* which by itself

could translate into 'returning' (as Thounaojam and Chelliah suggest who provide word glosses in their examples) or 'having returned' imitating the nominalized form by using the English deverbal noun.

As mentioned in the introduction, Lamkang is one of the four languages, in which our prefix has evolved to acquire a core role in the grammar as we find it in a variety of constructions. Example (60) below presents evidence that we even get a main clause construction with *kV-*. Its predicate consists of the nominalized stative copula *əm* 'be' in order to arrive at the semantics of existential/locative clauses of the type 'there is X' and 'X is at Y'.

(60)	*han-thū-dēm-pang*	*machā-pā*	*ka-wērr*	*laū-thā*	*ka-am*
	han + thuŋ-them-pən	mə-čá-pá	kV-wer	law-thə	kV-əm
	up+at-divide-back	3-small-male	*gV-old	field-LOC	***gV**-be

'At that time the man's elder son was in the field.'
(Lamkang; NK-C) [Thounaojam & Chelliah, 2007, p. 73]

Finally, since we want to keep track of the construction types that our prefix occurs in, mention should be made of the *a-gV-* construction with adjectival verbs in the SK-C languages Mro and Daai Chin. As our **gV-* prefix derives adjectival modifiers in these languages, the *a-* prefix adds another level of nominalization deriving nouns from derived adjectives. Thus, *k'-* derives the adjective *k'-hoi* 'good' from the verb *hoi* 'be good', and *a-* derives the noun *a-k'-hoi* 'something good' from the deverbal adjective *k'-hoi* in example (61), and likewise we get adjectival nouns in Daai Chin in (62).

(61)	*a-k'-hoi*	*sha*	*ha*	*mnui*	*ja*
	NMLZ-***gV**-be.good	do	NF	show	POL.IMP

'do something good and show (your good intention)'
(Mro; SK-C) [So-Hartmann, 2008, p. 5]

(62)	*theem*	'be.wise'	*a-k-theem*	'wise man'
	vaai	'shine'	*a-k-vaai*	'the/a light'

(Daai Chin; SK-C) [Hartmann, 2001b, p. 131]

3.5. Sal

Burling (2003) divides the Sal branch into three subbranches: Bodo-Koch (B-K), Konyak, and Jinghpaw (JP). Data from three of the four B-K subgroups (Bodo, Garo, Deuri, excluding Koch) and from Jinghpaw show that the reconstruction of our prefix for this branch is robust.

In the Konyak subbranch of Sal, data on three languages were examined without finding evidence of our prefix. For the Konyak language Chang Naga, no evidence of our prefix could be found (see Imlong, 1956; Hutton, 1929/1987). For Nocte, Das Gupta (1971) was examined; there only appears to be a velar prefix that marks exhortatives (see Appendix A). I could not find our prefix in the Tangsa description by Das Gupta (1980) either. The only morpheme of potential interest is a velar prefix that marks causatives (see Appendix A). Likewise, a description of Moklum (Naga, Tase) by Ngemu (1977) does not provide evidence for the prefix.

However, Matisoff (2003, p. 137) lists Tangsa Moshang as one of the languages that have the velar adjective prefix. Unfortunately, he only gives two examples reproduced here in (63):

(63) *kathot* 'go out'
katen 'rise' (Tangsa Moshang) [Matisoff, 2003, p. 137]

These examples do not seem fully convincing though since the semantics of the verbs ('go out' and 'rise') rather suggest to connect the velar initial here with directional velar prefixes to be found in various languages throughout TB.

Moving on to the Bodo-Koch and Jinghpaw groups, we find plenty of evidence of our prefix. Let's first look at the different Bodo-Koch languages. Generally for B-K, Burling and Joseph (2006, p. 114) reconstruct the 'adjective prefix' **Gɯ-*, for which evidence will be presented here from Bodo, Dimasa, Garo, and Deuri. As we will see, none of these languages utilizes the prefix entirely productively, but all have some

fossilized form(s) of it. In (64), we see that adjectives in Bodo,[20] which are clearly nominals according to their distribution (DeLancey, personal communication, May 2009), feature the prefix, which in some cases contains a copy vowel and in other cases /ɯ/.[21]

(64) *ga-ham* 'good' *gɯ-zwu* 'tall'
gi-zi 'old' *gɯ-lau* 'long'
gu-suŋ 'short' *gɯ-kha* 'bitter'
(Bodo; B-K) [DeLancey fieldnotes, May 2009]

A number of these adjectives are clearly derived from verb roots that can otherwise function predicatively as in (65).

(65) *be* *gotho-a* *gw-swm/swm-bai*
this boy-SUBJ dark/darken-PERF
'this boy is dark/got dark (in complexion)'
(Bodo; B-K) [DeLancey fieldnotes, May 2009]

However, there are also instances where the corresponding verb roots and adjective forms have different although related semantics. This is the case with *gwthaŋ* 'green' and *thaŋ*, which means 'to survive replanting' as we see in example (66).

(66) *biphaŋ-a* *thaŋ-bai*
plant-SUBJ green-PERF
'the plant has survived'(Bodo; B-K) [DeLancey fieldnotes, May 2009]

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[20] The Bodo data presented here are field notes graciously provided by Scott DeLancey, who is currently conducting research on Bodo in order to produce a grammar.

[21] However, DeLancey (personal communication, May 2009) also reports forms where the prefix has its own vowel such as *gu-war* 'wide' and *ga-zri* 'bad'.

In Dimasa, closely related to Bodo, the prefix derives participant nouns from intransitive verbs in (67). Similar to Bodo, the prefix in Dimasa appears to sometimes contain a schwa as in (67) and sometimes a copy vowel as in (68).

(67) *gə-ti-ni* *kusi* *gə-taŋ-ni* *kusi*
***gV**-die-GEN duty ***gV**-be.alive-GEN duty
'the duty for the dead' 'the duty for the living'
(Dimasa; B-K) [Jacquesson, 2008, p. 35]

The data we have here in (68) represent the two adjective constructions of Dimasa, which have been analysed by Jacquesson analogously to Grüßner's interpretation of the two adjective constructions in Karbi (see §3.1).

(68) *ri* *gi-sim* *ri* *gi-sim-ba*
cloth ***gV**-black cloth ***gV**-black-VNC
'black cloth' 'a black cloth'
(Dimasa; B-K) [Jacquesson, 2008, p. 36]

The NP on the left, 'black cloth', is an example of the 'indefinite construction', which is used, "if there is a closer relationship between modifier and modified" (Jacquesson, 2008, p. 36). The NP on the right exemplifies the 'definite construction'. In Jacquesson's terms, the difference between minimal pairs like the two above can be made more explicit by translating the definite construction as, "[...] something more like [...] 'a cloth which is black' than 'a black cloth'" (Jacquesson, 2008, p. 36). It seems to me that Jacquesson implies a non-restrictive reading here: 'a cloth, which happens to be black' ('definite construction') as opposed to 'one item of the black cloth category' ('indefinite construction'). The 'definite construction' could then also be understood as having originated from an appositive structure 'a cloth, a black one' (see DeLancey, 1994); note also that we recognize the *gV-...-pa* construction here.

Another interesting fact about Dimasa is that the language has developed two constructions for the predicative use of adjectival verbs. Example (69) shows that

adjectival verbs may carry the *gV-* prefix even if they function as the predicate.[22] Jacquesson (2008, p.35) calls this the 'nominal construction' (a more literal translation of (69) would be 'this bird is a black one') of the adjectival predicate, which contrasts with the 'verbal construction' without the prefix.

(69) *ebo* *dao* *gi-sim*
this bird ***gV**-black
'this bird is black' [Jacquesson, 2008, p. 35]

An example of the 'verbal construction' is provided in (70), and its nominal counterpart in (71). Both (70) and (71) may translate into English as 'This flower is not red'. However, (70) with the 'verbal construction' implies degrees of 'red-ness' and can mean that the color of the flower is not as intense as expected. On the other hand, (71) with the 'nominal construction' can only be uttered if the flower actually is blue or yellow and not red at all. So while the 'verbal construction' allows speakers to characterize a quality in gradual terms of 'more or less (something)', the 'nominal construction' makes it an absolute 'all or nothing': 'either (something) or not (something)'.

(70) *ebo* *kim* *de* *žao-ja*
this flower TOP be.red-NEG
'this flower is not (so) red' [Jacquesson, 2008, p. 35]

(71) *ebo* *kim* *de* *gə-žao* *ni-ja*
this flower TOP ***gV**-be.red AUX-NEG
'this flower is not red (but some other colour)' [Jacquesson, 2008, p. 35]

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[22] It seems like (69) is ambiguous and could also be interpreted as 'this black bird' since the word order doesn't seem to be any different if the derived adjective functions as a modifier:

(b) *bo* *kim* *gə-žao-ke* *nu-du ?*
this flower ***gV**-red-ACC see-APT
'do you see this red flower ?' [Jacquesson, 2008, 36]

Morphosyntactically, the difference is as follows: In (70), the verbal negation suffix *-ja* attaches directly to *žao* 'be red', whereas in (71), an auxiliary verb (or copular element) *ni* is needed; *-ja* cannot go on *gəžao* because *gəžao* is not a verb stem anymore, but a nominal stem instead.

Moving on to another Bodo language of the B-K branch, we can look at more examples of adjectives with our prefix in Kokborok in (72). Even though Kokborok is closely related to Bodo and Dimasa, where we saw the voiced onset, the prefix here features the voiceless velar stop.[23]

(72)	*ki-si*	'wet'	*ku-thu*	'deep'
	kɔ-lɔk	'tall'	*kɔ-tɔr*	'big'
	ku-thuy	'dead' (Kokborok; B-K) [Pai, 1976, p. 79]		

According to Pai, "the derived adjectives are derived from verbs by prefixing the pronominal prefix *kV-* to the verbs [...]" (Pai, 1976, p. 79), so we can assume that *si* as a verb root still exists in the language and means 'be wet', as well as *thu* 'be deep', etc.[24]

In the B-K language Garo, there is a list of seven adjectival verbs that prefix a fossilized descendant of **gV-* involving the allomorphs *gi-~gip-~git-* provided in (73).

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[23] More examples of Kokborok adjectives are provided by Matisoff (2003), as reproduced in (c).

(c)	*kəphu*	'white'	*kəbər*	'crazy'
	kəkha	'bitter'	*kələʔ*	'drown'
	kəšəŋ	'black'	*kəcal*	'far'
	kəta	'new'	*kərmu*	'yellow'
	kəbəŋ	'be blown away'	*kəba*	'vomit'
	kəcaŋ	'cold'		[Matisoff, 2003, p. 137]

[24] Looking through the grammar, I found evidence for at least *tɔr* 'be big' functioning as a verb root in the verb form *tɔr-khay-lɛ* 'be.big-if-EMPH'.

(73)	(a)	*gip-bok*	'be white'	(b)	*git-chak*	'be red'
		gi-sim	'be black'		*git-dal*	'be new'
		git-tang	'be living, fresh'		*git-ting*	'be raw, unripe'
		git-cham	'be old'	(Garo; B-K) [Burling, 2004, p. 273]		

We note that the set of verbs in (73) shares the semantics of what may be called 'property-concept terms', i.e. the semantics usually associated with adjectives in languages that have them. And in fact, on a morphosyntactic level, what sets these forms in (73) apart from the rest of the verb stems in Mandi is the idiosyncratic property that they can be used as adjectival modifiers without further nominalization (as required with all other verb stems).

An example of *gip-bok* 'be white' in predicative use is (74).

(74) *ba·-ra* ***gip-bok****-jok-ma?* 'did the cloth get white?'
(Garo; B-K) [Burling, 2004, p. 273]

And examples of adjectival usage are provided in (75).

(75)	*nok gi-sim*	'black house'	
	man-de git-dal	'new man (often implying 'new son-in-law')'	
	bi-te git-ting	'unripe fruit'	(Garo; B-K) [Burling, 2004, p. 273]

The ability of the verb stems in (73) to function as adjectival modifiers without further modification contrasts with the otherwise required nominalization with the suffix *-a* (reconstructed as **-a* for Proto-Bodo-Garo and back to the PTB nominalizer **-pa* by Wood, 2008, pp. 81/2), shown with *dal·* 'be big' in (76).

(76) *ang-a ma·-su dal·**-a**-ko* *nik-a*
I-NOM cow be.big-**NMLZ**-ACC see-NEUT
'I see the big cow' (Garo; B-K) [Burling, 2004, p. 135]

We can summarize that we are finding evidence of our velar prefix in Garo. There is no better or more plausible explanation of the existence of this synchronically irregular subset of verbs than to relate the first syllable of the stems to the velar prefix in Bodo (and other TB languages) deriving adjectival modifiers from verbs there. Proto-Bodo-Garo had the prefix as a more productive element to derive adjectival modifiers from verb stems.

The reason for saying that the prefix is partially fossilized is that we can actually split the verbs in (73) into two subgroups labeled (a) and (b) above. The (b) set contains the verbs with the fossilized prefix, i.e. the verbs where the first syllable has to be considered an inseparable part of the root, whereas the verbs in (a) can occur without the first syllable. For the verbs in (a), the presence or absence of */gi-/ ~ /gip-/ ~ /git-/* makes a difference in morphosyntactic behaviour: The monosyllabic stem behaves in the exact same way as other Mandi intransitive verbs and needs a nominalizer like *-a* in (76) to function as an adjectival modifier. The disyllabic stem has the morphosyntactic properties described above, i.e. it can function as a regular verb stem as well as an adjective without additional marking. This is exemplified in (77) where all forms translate into English as 'white' except for the last form, which is ungrammatical because it has neither the synchronically productive *-a* nominalizer nor the *gip-* prefix – which evidences the former derivational force of this prefix.

(77) *gip-bok* 'white'
gip-bok-a
bok-a
**bok* (Garo; B-K) [Burling, 2004, p. 273]

Note here that the second form *gip-bok-a* actually appears to parallel the Dimasa form *gi-sim-ba* in (68) above, as we recognize our *gV-...-pa* construction. There is no

difference reported between the monosyllabic and the disyllabic form if used as a verb stem. Example (74) from above is repeated below together with its *gip*-less counterpart:

(78) *ba·-ra* ***gip-bok****-jok-ma?* 'did the cloth get white?'
ba·-ra ***bok****-jok-ma?* (Garo; B-K) [Burling, 2004, p. 273]

For Deuri, another B-K language, Jacquesson suggests that there might be traces left of this prefix in a group of adjectives including the ones in (79).

(79) *gira* 'old'
gija 'thick, deep'
gujuŋ 'pointed, pungent, sour'
giri 'thin' (Deuri; B-K) [Jacquesson, 2005, p. 113]

Lastly, there is evidence of the prefix in Jinghpaw, spoken in Kachin State, Northern Burma, which is not a B-K language but rather forms its own subbranch within Sal.

As Matisoff (2003, p. 136) notes, the dictionary of Jinghpaw by Hanson (1906/1954, pp. 178-88, 243-78) includes about 46 pages of verbs that have the prefix in the forms *gə-* ~ *kə-* in free variation, both also used with the same root interchangeably. According to the dictionary entry, Hanson (1906/1954, p. 178) relates the prefix to *gin* or *gum*, "a preformative indicating fullness, sufficiency or comprehensiveness" (p. 161). However, looking at the actual list of words, the hypothesis that *gə-* ~ *kə-* is just a hypoarticulated version of *gin/gum* has to be refuted: The majority of verbs lack the semantics of 'fullness, sufficiency or comprehensiveness', for example the following in (80).

(80) *gəmai* 'to strike, hit, with the back of a sword'
gəran~kəran 'to divide'
gəru 'to shout'
kəchyau 'to catch, as anything falling or flying'
kədawn 'to stumble; to stop abruptly, suddenly, as when scared'
(Jinghpaw; JP) [Hanson, 1917]

There also is a grammatical description of Jinghpaw by the same author, Hanson (1917). Here, we find reference to the so-called 'adjective preformatives' *gə-* and *kə-* among other ones in the language: *chyə-*, *lə-*, *mə-*, and others (Hanson, 1917, p. 13). However, looking through the dictionary, I only found the five forms in (81) clearly labeled as adjectives with reference to the verb they are derived from. All of these forms are listed with the initial voiceless stop in the dictionary.

(81) *kə-man* 'empty' (*man* 'to be empty')
kə-ba 'big, great' (*ba* 'to be first')
kə-ji 'small' (*ji* 'to be small')
kə-dàn 'visible' (*dan* 'to be in view')
kə-dìk 'sticky, adhesive (*dìk* 'to be close') (Jinghpaw; JP) [Hanson, 1917]

So synchronically, we have (at least) five adjectives that have the prefix, where we can assume that the prefix derives the adjectives from a verb root. Additionally, we have a large number of forms with *gə-* ~ *kə-* in the dictionary that are verbs. This group splits into two subgroups. In one subgroup, the majority of these verbs, the stem is unanalyzable. Synchronically, the velar first syllable has to be considered part of the root (see (80) above, where all forms belong to this subgroup).

In the other subgroup, which still has a considerable number of members, we can separate the prefix from the root. The meaning of the root and the meaning of the prefix derived stem are very similar, for example the verbs in (82).

(82) *kə-ja* 'to be well, good, proper' (*ja* 'to be hard')
kə-wawn 'to be roomy' (w*awn* 'to be spacious')
kə-jawm 'to surround' (*jawm* 'to act unitedly')
kə-pat 'to close, shut off' (*pat* 'to be obstructed')
(Jinghpaw; JP) [Hanson, 1917]

Note that in the group of unanalyzable verb stems in (80) as well as in the group of the analyzable ones in (82), we have examples of intransitive/stative stems and transitive stems. This suggests that the velar prefix at some point might have functioned to derive nominal elements more generally, not only adjectival modifiers. But there does not seem to be supporting evidence for this elsewhere in the language, and some questions need to be answered first. For example, we need to understand why we have the *gə-* ~ *kə-* alternation. Are we dealing with only one morpheme or maybe two? Note that this allomorphic alternation only exists in purely verbal stems. All of the derived adjectives in (81) only have *kə-*.

Independent from that, however, there clearly is a velar prefix that is cognate with the prefix seen in Bodo-Garo and that, likewise, used to be involved in the derivation of adjectival modifiers. This appears to be *kə-*. However, as in Garo, there are only traces left of this prefix. In Garo, we saw that there are seven intransitive verb stems that have the prefix and that can be used as adjectival modifiers as well as verb stems, and four out of the seven can function as verb stems without the prefix. In Jinghpaw on the other hand, we know of (at least) five adjectives derived from verb roots by *kə-*. Unlike the seven forms in Garo, they are only adjectives in Jinghpaw (and not verb stems as well) if they have the velar prefix. In addition to these five adjectives, Jinghpaw has a number of verb stems with *gə-* ~ *kə-*, some of which occur as stems without the prefix with closely related semantics, some of which do not. The connection of this latter group of verb stems to the cognate prefix is not clear, and will not be discussed further.

3.6. Sema Naga

Shafer (1974) lists data on the adjectival prefix in Zeme languages, which are reproduced here in Table 3.

Table 3 – Derivation of Adjectival Modifiers in Zeme Languages
(Shafer, 1966-73, p. 268)

Language name	Alternate name(s)[25]	Form of prefix
Koireng	Kwoireng, Liangmai	*ka-*
Khoirao	Naga Thangal	*ka-*
Empeo		*kə-*

In the Sema Naga grammar by Sreedhar (1980), no reference is made to our prefix, but we find adjectives that appear to feature our prefix as in the data in (83).

(83) *kize* 'big' *kúsuo* 'tall' (tree)
kiwi 'good' *azukiwi* 'beautiful'
kuγunu 'small' *kicmi* 'old'
[Sreedhar, 1980, pp. 74,144/5]

Also, indefinite quantifiers start out with a velar that suggests that the first syllable is likely to be our prefix, the data of which are offered in (84).

(84) *kɨmsɨ* 'all' *kɨtla* 'some'
kɨpha 'more' *kutomo* 'many'
[Sreedhar, 1980, pp. 88,97]

Some further data provided in (85) gives us evidence for the existence of the *a-gV-* construction in Sema along with the simple **gV-* prefixation, as we can compare *a-*

[25] Alternate names are taken from the Ethnologue (Gordon, 2005).

ki-zé-u 'big' from (85) with *ki-ze* 'big' from (82) above, and perhaps also the two forms *ki-wi* 'good' and *a-zu-ki-wi* 'beautiful' in (83).

(85) *apu-ye* *akipici* *aci* *akizéu*
boy-FOC be.lazy dog big
'the boy is lazy' 'big dog'
[Sreedhar, 1980, pp. 75,144, glosses added]

Furthermore, fieldwork data from Amos Teo (personal communication, February 15, 2009) suggest that there is a productive *a-kV-* prefix sequence that nominalizes monosyllabic verb roots as in *a-ki-thi* 'death' from *thi* 'to die'. Simple *kV-* prefixation still occurs synchronically as, for example, in nominalizations of predicates with incorporated O argument such as *ame-ki-gha* 'discussion of bride price' from *àmè* 'bride price' and *gha* 'talk'.[26]

3.7. Miju

Evidence of our velar prefix in Miju[27] languages has already been documented by Shafer (1966, pp. 179/80). Hongkai (1999b) provides data on Miju reproduced in (86), where we find translations of 'good' and 'big' into Dza and Geman. Both languages have identical forms for the two words which share the familiar-looking first syllable *kɯ*^{31}-.[28]

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[26] I am grateful to Amos Teo (personal communication, February 15, 2009) for providing me with these data.

[27] As far as I understand it, the term 'Miju' refers to a language with different dialects, some of which could be not mutually intelligible. The term 'Miju' appears to be used synonymously with the term 'Miju Mishmi', 'Kaman', 'Keman', and 'Geman Deng' (Das Gupta, 1977; Bradley, 2002, p. 93).

[28] It should also be mentioned that the form of the existential copula is *kam*^{35} or *ka*^{55} in Geman and *ka*^{55} or *ka*^{55}*mu*^{31} in Dza, so there might be more recent grammaticalization processes at work as well.

(86) *kur*^{31}*sut*^{55} 'good'
kur^{31}*tar*^{53} 'big' [Hongkai, 1999b, p. 65]

Hongkai (1999b, p.68) also notes the use of the cognate particles *ka*^{35} in Dza and *kur*^{55} in Geman for agent and instrumental (non-vessel) markers;[29] however, it is not clear whether these particles precede or follow the verb stem.

More extensive data on Miju have been documented by Das Gupta (1977). First, agent nouns are derived by *kV-* with the vowel consistently assimilating to the vowel of the verb stem according to Das Gupta. Examples are offered in (87).

(87)	*sat*	'murder'	*ka-sat*	'murderer'
	ngong	'see'	*ko-ngong*	'one who sees'
	kat	'do'	*ka-kat*	'worker'
	ngit	'know'	*ki-ngit*	'wise'
	kucut	'cook'	*ku-kucut*	'cook (n.)' [Das Gupta, 1977, p. 14]

Data in (88) show that a velar first syllable recurs on adjectival modifiers, but is not entirely productive. Note that these examples feature the typical order of N-Modifier.

(88)	*sa*	*mophan*	'bad boy'	
	gôl	*kayum*	'black coat'	
	laung	*kalang*	'heavy stone'	
	ti	*lam*	'warm water'	
	blong	*katai*	'wide road'	
	sang	*kenang*	'old tree'	
	bei	*taung*	'old house'	
	bang	*kowal*	'dry cloth'	
	sang	*kasal*	'dry fuel'	
	kam	*kurung*	'difficult work'	[Das Gupta, 1977, pp. 17/8]

[29] Hongkai (1999b) does not specify whether these are case markers or derivational morphemes. As further data from Das Gupta (1977: 14) shows, there is a *kV-* agentive nominalizer in Miju.

These examples show that not all adjectival modifiers feature the prefix, such as *mophan* 'bad', *lam* 'warm', and *taung* 'old'. The ones with the prefix appear to have the velar unaspirated stop with a vowel that assimilates completely with the vowel of the verb stem. But there are exceptions, too, as in *kayum* 'black' and *kowal* 'dry'. Das Gupta does not parse the bisyllabic forms into a prefix and a stem, so further data are needed to see whether the prefix might be synchronically productive.

In a few cases, the modifier precedes the noun in an adjective construction, an example of which is (89).

(89) *kiset sa* 'good boy' [Das Gupta, 1977, p. 17]

Even though we do not know how productive (if at all) a potential derivational process by means of *kV-* as in examples in (88) is, we do have evidence of *kan-~ka-~ke-* deriving adjectival modifiers from verbs with active semantics. This appears to be a synchronically productive process. Examples are offered in (90)-(93).

(90) *ki wa* ***kan-****jae* *kumo* *ngong+mang*
I bird **kan**-sing one see
'I see a singing bird.' [Das Gupta, 1977, p. 21; glosses added]

(91) ***kan-****ngi* *sa*
kan-sleep child
'sleeping child' [Das Gupta, 1977, p. 21; glosses added]

(92) *kui* ***ka-****rak* *gonghi ai* *tai*
dog **ka**-bark near NEG.IMP go
'Don't go to a barking dog!' [Das Gupta, 1977, p. 21; glosses added]

(93) ***ke-****krin sa* 'laughing boy'
bei ***ke-****thauk* 'burnt house' [Das Gupta, 1977, p. 21]

In (90)-(91), the prefix has the form *kan-*, in (92), it has the form *ka-* and in the two examples of (93), it is *ke-*. The conditioning environments for the different allomorphs are not stated by Das Gupta. Especially the environment for the *kan-* allomorph would be important to know, since (117a) shows that it is not just nasal assimilation as we might have guessed based on (117b). So the question is whether the *kan-* form might reflect a historical sequence of two prefixes.

This construction in (90)-(93) is not exactly the typical 'adjectival prefix' construction, since the verbal semantics are not at all adjectival, but active. Still, based on the results from this study, we might assume that the 'active verb modifier construction' in (90)-(93) and the above 'adjectival verb modifier construction' in (88) originate in the same nominalization construction. However, we also saw that there might be a number of basic, i.e. non-derived, adjectives, and we actually do not know whether there actually is a synchronically productive process to derive adjectival modifiers from adjectival verbs. Thus, more research needs to be conducted on the nature of adjectival modification in Miju before any conclusive statements can be made.

Finally, the numbers from one to six also have velar initials in Miju suggesting that those are remnants from our prefix.

(94)	1	*kumo*	6	*katam*	
	2	*kinin*	7	*nin*	
	3	*ksam*	8	*grin*	
	4	*kambran*	9	*natmo*	
	5	*klin*	10	*kyap-mo*	[Das Gupta, 1977, p. 19]

3.8. Rawang/Nungish

Within Rawang/Nungish, there are some interesting data, where further research may draw a connection to our velar prefix. First, Dulong (see LaPolla, 2001, 2003c), nominalizes 'adjectives' by the prefix *ǎŋ-* ~ *ǎk-*. This prefix is optional if the adjectival

modifier follows the head, or if another modifier, like a demonstrative, is present. An example is (95).

(95) *zə̌ɟɛ̀ (ə̌k)-sə̄r* *ə̌k-sə̄r* *zə̌ɟɛ̀*
book *ə̌k*-be.new *ə̌k*-be.new book
'new book' 'id.' [LaPolla, 2003c, p. 676; glosses added]

This prefix also appears to be a nominalizer otherwise that occurs on 'many nouns' according to LaPolla (2003c, p. 675), see the examples in (96).

(96) *ə̌k-sa?* 'breath'
ə̌ŋ-ɟəù 'seed(s)' [LaPolla, 2003c, p. 675]

Unfortunately, it is not clear what phonological environments trigger the allophonic variation. But if we can interpret the /k/ to be the underlying form and the /ŋ/ a conditioned change, then we could classify this construction in Dulong as the *a-gV-* construction that we have been finding in other languages before.

Second, in Anong (Nung), there is a number of nominalizing[30] prefixes, three of which have the form *kɯ31, khɯ31, gɯ31* (Hongkai, 1988, p. 38). However, these three belong to a group of ten infrequently occurring prefixes that are listed by the author in addition to nine frequently used prefix. So those velar prefixes do not have a special status in this language, and it seems rather doubtful that we are in fact dealing with our velar prefix here.

3.9. Summary

A summary of the forms and functions of the **gV-* descendants in the different languages as discussed for Central Tibeto-Burman is provided in Tables 4 and 5.

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[30] Hongkai (1988) calls these prefixes derivational, without specifying, however, what part of speech the roots are that the prefixes attach to.

Table 4 – Summary: **gV-* in 7 of the 15 Central TB Subgroups

CENTRAL TIBETO-BURMAN SUBGROUPS	**Form of the prefix**	**Productivity**	**Citation form**	**NMLZ (action/event)**	**NMLZ (participant)**	**Adjectival modifiers**	**Relative clauses**	**Complement clauses**	**Adverbial clauses**	**Adverbs**	**Main verb construction**	**Numerals**	**Quantifiers**	***a-gV-***	***gV-...-pa***
Karbi	*kV-*	+	?	+	+	+!	+	+/-	+/-		+			+(ADJ)	
Tenyidie/Angami Naga	*kê-/kə̀-*	+		?	+	+	+	+	+				+		
Tangkhul	*kə-/khə-*	+	+	+!	+	+	+	?	+		+	+ (ordinal)	+		+ (pNMLZ)
Sema Naga	*kV-*	?				+							+		
Mizo-Kuki-Chin		+		(+)	+	+	+		(+)	(+)	(+)			+ (aNMLZ)	
Sal		+/-			(+)	+									(+) (ADJ)
Miju	*kV-*	+			+	+						+ (1-6)			

Explanations:

+	'yes/existent'
+/-	'not for all'
(+)	'only in one language within a TB subgroup'
?	'not positive'
!	'two separate nominalization constructions'
pNMLZ	'participant nominalization'
ADJ	'adjective construction'
aNMLZ	'deverbal adjective nominalization'

Table 5 – Language-by-Language Summary for Mizo-Kuki-Chin and Sal

CENTRAL TIBETO-BURMAN SUBGROUPS: MIZO-KUKI-CHIN / SAL		**Language Name**		**Form of the prefix**	**Productivity**	**Citation form**	**NMLZ (action/event)**	**NMLZ (participant)**	**Adjectival modifiers**	**Relative clauses**	**Complement clauses**	**Adverbial clauses**	**Adverbs**	**Main verb construction**	**Numerals**	**Quantifiers**	***a-gV-***	***gV-...-pa***
Mizo-Kuki-Chin	Northern K-C	Tiddim Chin		*ki-(?)*	+					?								
		Kom Rem		*kə-*	+				+									
		Lamkang		*kV-*	+		+	+	+	+		+	+	+				
	Southern K-C	Mro		*1) [kˀ]*	+				+								+	
				2) [ka]~[kʌ]	+			+										
		Daai Chin		*k- (=[ʔ])*	+			+	+								+	
Sal	Bodo-Koch	Bodo	Bodo	*gV-*	?				+					+				
			Dimasa	*gə-*	+			+	+!									+ (ADJ)
			Kokborok	*kV-*	?				+									
		Garo	Mandi Garo	*gi(C)-*	-				+									
		Deuri	Deuri	*gV-*	-				+									
	Jinghpaw		Jinghpaw	*kV-*	?				+									

Explanations: (see Table 4)

Looking at Table 4, we can first focus on the columns to see which functions are most prominently represented in the Central Tibeto-Burman subgroups. The one function that the descendants of **gV-* in all subgroups share is the derivation of adjectival modifiers. The derivation of participant nouns is the second most common one, only missing in Sema Naga, as well as not being robust in the Sal languages. Besides these two functions, we find action/event nominalization as well as marking of the different subordinate clause types in about half of the subgroups, with relative clause marking being more robust among these functions.

Only Tangkhul employs the prefix to mark the citation form of verbs, and only in Lamkang (Mizo-Kuki-Chin), the prefix might be used to derive adverbs. Finally, we find the prefix on numerals in Tangkhul and Miju, and find it associated with indefinite quantifiers in Tenyidie, Tangkhul, and Sema Naga (as well as possibly Meithei, see introduction).

The two constructions that our prefix recurs in, the *a-gV-* construction and the *gV-...-pa* construction, are found in Karbi and Mizo-Kuki-Chin, as well as in Tangkhul and Sal. In Karbi, the *a-gV-* construction marks the definite adjective construction (where the adjective figures as the syntactic and semantic head of the adjective construction, see examples (5), (6) above), and derives abstract nouns, see (9) above. In the Southern Kuki-Chin languages Mro and Daai Chin, the *a-gV-* construction is synchronically still analyzable into its two components: our velar prefix derives adjectival modifiers, from which, in turn, the *a-* prefix derives adjectival nouns, such as 'something good' from 'good' from 'be.good'.

The *gV-...-pa* construction derives participant nouns in Tangkhul, and marks, just like *a-gV-* in Karbi, a so-called definite adjective construction in Dimasa (B-K, Sal), which, in Dimasa, looks like it has evolved from an appositive construction (e.g., 'a cloth, a black one', see §3.5).

Looking at the rows of Table 4, I want to address some observations regarding relationships between functions of **gV-*.

First, as expected, we see the occurrence of **gV-* on numerals and indefinite quantifiers in languages, where the velar prefix more generally occurs on deverbal adjectives. This is presumably because the velar prefix got reinterpreted as marking nominal modifiers more generally, and so got extended to other classes of nominal modifiers including numerals and quantifiers. However, in the introduction, it was also mentioned that Meithei may have remnants of our prefix on a set of quantifiers but nowhere else in the language. As a consequence, we have to hypothesize that if those initial velars are reflexes of our prefix, there has to be evidence of a productive velar prefix deriving adjectival modifiers in the language. This hypothesis should even be testable since Meithei has a literary tradition.

Concerning the relationship between the derivation of adjectival modifiers and relative clause marking, which are essentially both functions that derive nominal modifiers, we see that every language that uses a **gV-* descendant prefix to mark relative clauses also uses this prefix to derive 'adjectives' but not the other way around.

We also note that in every language, in which the velar prefix marks (some types of) complement or adverbial clauses, the prefix also marks relative clauses but not the other way around.

Furthermore, we see that verb citation marking is not a very common function. According to Matisoff (1972), it is typically "the most important nominalizer of a language" (p. 248) that marks verb citation. Thus, it is not surprising that only Tangkhul and possibly Karbi use the prefix in verb citation, since the prefix covers such a wide range of functions in these languages.

Similarly, it looks like only languages, in which the prefix covers a wide range of functions and thus figures in the very core of their grammars, have developed a main clause construction with the prefix.

Lastly, I want to point out that of the four instances of two of each of the *a-gV-* construction and the *gV-...-pa* construction, three are associated with the derivation of adjectival modifiers, the most common function among Central TB subgroups, and one is associated with the derivation of participant nouns, the second most common function among these subgroups.

CHAPTER IV

WESTERN TIBETO-BURMAN

In Western Tibeto-Burman, we only find robust evidence of our velar prefix in the Mahakiranti branch, and more specifically, in the Eastern Kiranti sub-branch. It is found in languages like Limbu, Athpare, Camling, and Belhare, where the double affixation strategy *gV-...-pa* is employed to nominalize verb roots, mostly to derive agentive nouns.[31]

Evidence of the velar prefix in the other branch of Western Tibeto-Burman splitting up into West Himalayish and Bodish[32] could not be obtained. Matisoff (2003) lists the West Himalayish language Pattani as having the 'adjectival prefix' and offers the following examples.

(97) *kəʈeg* 'bitter'
kəca 'raw' [Matisoff, 2003, p. 136][33]

However, with only these two examples and considering that the PTB form for bitter has been reconstructed as **ka* (Matisoff, 2003, p. 641), I will not count this as evidence for the existence of the velar prefix as an 'adjective prefix' in Pattani.

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[31] The only Eastern Kiranti language where evidence for the double affixation strategy could not be found is Kulung, described in Tolsma (1997). Further research might be able to locate the prefix in this language as well.

[32] This classification of Western Tibeto-Burman dividing it into Mahakiranti on the one hand, and the subgroup of West Himalayish and Bodish on the other hand was used following Scott DeLancey (personal communication, November 2008).

[33] The source for data from Pattani (Manchad) in Matisoff (2003) appears to be Sharma (1997), who is listed elsewhere as the source for Pattani data. This specific 1997 article is a study of the phonology of the language.

No candidates for the velar prefix have been found among other West Himalayish languages, only one interesting observation should be mentioned: Tinani (Sharma, 1989, p. 150) might have a *ku-* prefix that occurs on adjectives, but more data on this are needed. If this prefix can be verified, possible connections with the Limbu color circumfix *ku-...-la* (see p. ...) should be kept in mind.

With respect to the Bodish branch, a look at Classical Tibetan is important, as it has preserved old forms through the writing system. However, there is no clear evidence for our prefix in Classical Tibetan, but only a *g-* prefix that marks future tense (see Appendix A).

4.1. Eastern Kiranti

4.1.1. Limbu

The major nominalizer in Limbu is a descendant of the PTB **-pa* suffix. However, our velar prefix also exists in Limbu featuring in the *gV-...-pa* construction. The function of this construction is to derive deverbal agentive nouns. It takes the form of *kɛ*-ROOT-*pa~-ma*, with *-pa~-ma* differentiating between masculine and feminine (van Driem, 1987, pp. 199ff.).[34] According to van Driem, who calls this the Active Participle form, intransitive as well as transitive verb roots can occur in this construction. An example with a transitive verb root is (98).

(98) *pi?l* *kɛ-gɔm-bɛ-n* *a·tto·?*
bull ***gV**-graze-AP-ABS where
'where's the guy grazing the cattle?' [van Driem, 1987, p. 200]

[34] The general nominalizer *-pa* also shows this alternation with *-ma* in order to agree with female referents, but only if suffixed to verb stems, not if suffixed to adverbs (van Driem, 1987, p. 195).

If an intransitive verb root figures in this construction, the meaning differs according to whether the event involves a participant high in agentivity or not. A more agentive S argument will be understood as the semantic agent, whereas a less agentive S argument will be understood as the semantic patient that already has undergone the event denoted by the verb. An example of an agentive S argument is given with *ʔiː* 'wander' in (99).

(99) *kɛ-ʔiː-ba* *teː!*
gV-wander-AP come:PT
'The wanderer (wandering one) has come!' [van Driem, 1987, p. 200]

On the other hand, with *deːŋ* 'tear', we have a semantic patient, so in (100), the clothes have to be interpreted as already having undergone the event. Note that *kɛ-deːŋ-ba* 'torn ones' functions as a nominal modifiers for *teːʔl* 'clothes'.

(100) *kɛ-deːŋ-ba* *teːʔl-in* *thund-u*
gV-tear-AP clothes-ABS mend-3
'He mends torn clothes.' [van Driem, 1987, p. 201]

If a verb stem is polysyllabic – that is, presumably historically polymorphemic – the *kɛ-* breaks the verb stem apart, for example *laŋ-gɛ-gheːk-pa* 'walk-**gV**-walk- AP' (van Driem, 1987, p. 200).[35] Another example of this is (101).

(101) *khɛnɛʔ* *hɛnaŋ* *məneː-kɛ-dhik-pa? [...]*
2.SG why mumble.invectives-**gV**-mumble.invectives-AP
'Why are you mumbling invectives under your breath? [...]'
[van Driem, 1987, p. 200]

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[35] *laŋ* is probably derived from PTB **lam* 'road', which would make this complex verb descend from a noun incorporation structure.

Moreover, what is interesting about (101) is that we get the 'active participle' form functioning as the predicate. A more literal translation imitating the nominal predicate construction would be 'Why are you an invective-mumbler?' – apparently, a copula is not needed. Generally, however, copulas may be inserted in a nominal predicate construction with the active participle, which, then, typically is used with property concept verbs.

With the choice of either the copula *co·kma?* 'to be' or *po·ŋma?* 'to (transitionally) be', different aspects of the quality ascribed can be emphasized. With *co·kma?* 'to be', the quality gets interpreted as rather accidental or circumstantial, whereas *po·ŋma?* 'to (transitionally) be' describes either the transition from one state to another if used in the preterit, e.g. 'it has become difficult' – or a rather inherent quality in the nonpreterit form, e.g. 'it is (inherently) difficult' (van Driem, 1987, pp. 67/8, 204). In the nonpreterit usage, *po·ŋma?* in the nominal predicate construction is semantically paralleled by the use of the adjectival verb as a verbal predicate inflecting with verbal morphology, which also gets used for attributing inherent qualities. For a better overview, examples of the four predicate constructions featuring *sak* 'be difficult' are compared in (102).

(102)	*kɛ-sak-pa*	*co·k*	'it is (/happens to be) difficult'
	kɛ-sak-pa	*po·kse*	'it has become difficult'
	kɛ-sak-pa	*po·ŋ*	'it is (inherently) difficult'
	sak		'it is (inherently) difficult'

[van Driem, 1987, p. 204]

The nominal predicate construction with the active participle contrasts with the use of the simple nominalized form instead, that is *-pa~-ma* without the velar prefix. In (103), the verb root *nu* '(be) good' is nominalized by the allomorph *-ba* of the *-pa* general nominalizer. In (104), we recognise the active participle form of *nu* '(be) good' involving our velar prefix.

(103) *khɛŋ nu-ba co·k*
3SG good-NMLZ:M/N COP
'he/it is good' [van Driem, 1987, p. 206]

(104) *khɛŋ kɛ-nu-ba co·k*
3SG ***gV-**good-NMLZ:M/N COP
'that/he is definitely/truly good' [van Driem, 1987, p. 206]

The functional difference between the two constructions is a pragmatic one: According to van Driem (1987, p. 206), the active participle construction of (104) is 'far more positive and complimentary' and conveys a more 'absolute meaning' than the *-pa* nominalized construction. Maybe this emphasizing force of the active participle construction can be made sense of by interpreting the *-pa* nominalized construction as more prototypically deriving nominal modifiers, that is 'adjectives', and the active participle construction as more prototypically deriving independent nouns. So imitating this, we could translate (104) as 'he (really) is a good one/person'.

The active participle form is the only construction in Limbu where the *kɛ-* prefix can be found; it does not occur by itself. However, there also is a circumfix *ku-*ROOT*-la* which occurs on color term roots and derives forms functioning as adjectives or nouns.

Examples are provided in (105).

(105) *ku-mak-la* 'black'
ku-bhɔ-ra 'white'
ku-hɛt-la 'red'
ku-hik-la 'green' [van Driem, 1987, p. 23]

The prefix part of this circumfix certainly looks familiar in form and function, but there is no further evidence for how to relate it to our velar prefix. It should also be mentioned that there is a *ku-* prefix in Limbu marking 3SG possessives; maybe there is a relationship, but all this has to be referred to future research.

4.1.2. Athpare

Like Limbu, Athpare employs the *gV-...-pa* construction, which takes the form *ka*-ROOT*(-ba)*. Similarly, Ebert (1997a, p. 79) calls it the 'agentive participle' based on the observation that she has not found an instance of the circumfix occurring on non-agentive verbs and assumes that **ka-si(-ba)* from *si* 'die' would be ungrammatical. Unlike Limbu, however, the suffix *-ba*[36] is optional, and based on the comparative data from other Eastern Kiranti languages, it appears that it has become optional in Athpare. In (102), we see agentive nouns derived from verbs in the *ka*-ROOT*(-ba)* form.

(102) *ka-phu-ba* 'tailor' *ka-thub-ba* 'blacksmith'
ka-thuk-ba 'cook' *ka-khub-ba* 'thief'
ka-pik-ba 'speaker' *ka-lem-ba* 'beater, one who beats'
ripma ka-wat 'thread-bearer (=Brahmin)' [Ebert, 1997, p. 79]

Functionally, the 'agentive participle' form is, in fact, used as an agentive noun, and can stand alone. However, it can also be followed by, and then can be considered as modifying, another noun. The only example Ebert gives of this is reproduced in (106), where the following noun is *yapmi* 'person'. Ebert does not specify whether only semantically empty nouns, like 'person' and maybe also 'thing', etc. can follow the 'agentive participle'.

(106) *ka-lo(-ba)* '(the person) who spoke (to you)'
or: *ka-lo(-ba)* *yapmi* id. [Ebert, 1997a, p. 79]

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[36] Ebert (1997a) says this *-ba* in the agentive participle is "probably a gender marker" (p. 79), but there are no data to prove that we get the alternation with *-ma* for female referents, as in Limbu. However, the gender-based alternation between *-ba~-ma* does exist in Athpare kinship terms and on nouns referring to bigger animals, even though it seems to have lexicalized in some nouns, where one of the two suffixes gets used invariantly (Ebert, 1997a, p. 81).

For the purposes of this study, I do not want to consider *ka-lo(-ba)* in (106) – and, for that matter, all the other forms in (105) – a relative clause either modifying *yapmi* as the head noun, or being headless in the case of lacking *yapmi*.[37] In order to be able to make a meaningful distinction between an agentive/participant noun and a headless relative clause in the TB family (where both constructions are based on the same nominalization strategy), the notion of 'relative clauses' shall be restricted to instances that show some clausal characteristics. Those characteristics may include, for example, the option of TAME marking on the verb, or having (non-incorporated) arguments as required by transitive or ditransitive verb stems inside the relative clause.

In fact, in the case of Athpare, there is other evidence supporting the decision to not consider *ka-lo(-ba) yapmi* in (106) a relative construction with *yapmi* as the head noun. This evidence comes from looking at what happens in the case of pluralization. An example of a pluralized 'agentive participle plus following noun' construction is provided in (107).

(107) *bhot* *ka-thet-ci* *yapmi-ci*
vote ***gV-**put-NS people-NS
'the voters' [Ebert, 1997a, p. 140]

This example shows that the non-singular suffix *-ci* optionally[38] occurs on the 'agentive participle' in addition to getting suffixed onto the following noun. Therefore, the 'agentive participle' is treated as a separate NP receiving its own inflection. The

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[37] Also note that prototypical relative clauses are formed with the general nominalizer *-ba* in Athpare (Ebert, 1997a, p. 144).

[38] Ebert (1997a) provides the following example (d), where *-ci* only occurs on the following noun.

(d) *kristyen* *dharma pracar pracar* *ka-cok* *yapmi-ci*
Christian religion promotion ***gV-**do man-NS
'the people who promote the Christian religion (i.e. the missionaries)' [Ebert, 1997a, p. 140]

constituent in (107) as a whole can be interpreted as an appositive juxtaposition of two NPs.

On the basis of the evidence and arguments provided I want to classify the 'agentive participle' of Athpare as an agentive nominalization, and not a (minimal) relative clause. However, looking at more data shows that this 'agentive participle' can do more than typical agent nominalizations. More specifically, in examples provided in (108), we can see that one can attach prefixes to the 'agentive participle' (here without the suffix) which indicate the object of the action.

(108) (a) *yaŋ-ka-lem*
INDEF-***gV**-beat
'who beats someone'

(b) *yaŋ-ka-pik*
INDEF-***gV**-say
'who says something'

(c) *a-ka-lem*
1SG:POSS-***gV**-beat
'who beats me'

(d) *ka-ka-pik*
2SG:POSS-***gV**-speak
'who speaks to you'
[Ebert, 1997a, pp. 79/80, glosses added]

In the two forms (c) and (d), *a-* and *ka-* are the first and second singular possessive prefixes. In (a) and (b), we have *yaŋ-*, which is the general indefinite object prefix that also occurs in (non-nominalized) verb forms with a third person acting on a first person singular or exclusive (Ebert, 1997a, pp. 31ff.). Moreover, the paradigm of finite verb forms helps us identify an *a-* prefix that gets used with a second person acting on a first person singular or exclusive, and with a third person acting on a first person inclusive. So there could be parallels between the (synchronically) finite verb morphology and these affixes occurring on the 'agentive participle' forms in (108), but they are not just the same paradigm. Thus, the forms in (108) still will not be treated as

evidence for considering the 'agentive participle' form a relative clause construction. But we realize the distinction is not as clear-cut.[39]

Besides the 'agentive participle' form, Athpare has another *ka-* prefix that marks reciprocals in a reduplication construction (see Appendix A).

4.1.3. Camling

Camling is an interesting case with respect to the distribution of our velar prefix. Ebert (2003, p. 533) has found a set of isoglosses, one of which is morphological and concerns the prefix. Divided by the rivers Sapsu and Sun Kosi, the southeastern dialects share the velar prefix occurring in the same basic construction as the Athpare 'agentive participle', whereas the northwestern dialects just use *-pa* exclusively for the same function. A set of examples of the velar prefix in the southeastern dialects is provided in (109).

(109) *ka-dip(-pa)* 'blacksmith (beater)' *ka-khur(-pa)* 'carrier'
ka-sip(-pa) 'tailor' *ka-set(-pa)* 'murderer'
[Ebert, 1997b, p. 40]

According to the above isogloss, the same words in the northwestern dialects have the form *dip-pa, sip-pa,* etc. In Camling, these nominalized forms occur only as heads, never as pre-head modifiers as in Athpare.

Just to be noted here, there also exist two velar suffixes *-kha* and *-ko* in Camling that have nominalizing functions, the latter being 'one of the most frequent morphemes in

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[39] An example of this construction in the context of an utterance is (e). Notice that the adverbial 'down there' is nominalized and occurs in an appositive relationship to *a-ka-ca*; the 'agentive participle' does not have any further clausal characteristics here.

(e) *yo-na-rok* *a-ka-ca* *khan-na* *co-ak!*
below-NMLZ-FOC 1POSS-***g**V*-eat you-OBL eat:3U-OPT
'eat the one down there, the one who eats me!' [Ebert, 1997a, p. 140]

Camling' (Ebert, 2003, p. 545); a connection between those suffixes and our prefix is not clear and remains a matter for future research.

4.1.4. Belhare

Belhare also uses the Eastern Kiranti *gV-...-pa* strategy to form what Bickel – like van Driem for Limbu – calls the 'active participle'. An example is given in (110), where the allomorph *-ba* is derived from the underlying *-pa*. Note that Belhare, just like Limbu, distinguishes between the masculine or unmarked form *-pa* and the marked feminine form *-ma*. Our prefix occurs as *ka-*.

(110) *asenle ka-pikg-a-ba* *maʔi-ŋa* *sʌppe*
earlier ***gV**-fall-go.down-PART person[SG]-ERG all[ABS]

mai-mat-pir-he.
1SG.P-[3SG.A-]narrate-P.BEN-PAST

'the guy who fell down recently told me everything' [Bickel, 2003, p. 558]

As in Camling and Athpare, it is only S/A arguments that can be derived through the *ka*-ROOT-*pa* nominalization. In (110), we notice that the 'active participle' is modified by *asenle*, which, to my understanding, is an adverb. Thus, the Belhare 'active participle' – if being modified by an adverb as opposed to an adjective – certainly appears 'more clausal' than, for example, the Athpare 'agentive participle', which is confirmed by Bickel (2003), who specifically states that, "the active participle allows clausal modification" (p. 558). However an important reason against calling the Belhare construction a relative clause is that, as I understand it, the choice of head noun is limited to a semantically relatively empty noun like *maʔi* 'person' above, or 'zero'.

An example of this 'zero' option is (111).

(111) *caleppa* *ka-khik-pa*
bread[ABS]$_P$ ***gV-**taste.bitter-PART
'one to whom the bread tastes bitter' [Bickel, 2003, p. 565]

Given this very narrow restriction, the Belhare construction certainly is far from a prototypical relative clause construction, but because it requires an adverb and not an adjective, it is not particularly close to a prototypical agentive noun construction either. Since the typical TB relative clause construction is a nominalization construction, it follows that similarities and overlap with other nominalization construction occurs. From what little data have been discussed here, the comparison of the 'active participle' verb forms across Eastern Kiranti as to how close and how far from a prototypical relative clause it gets would be an interesting project to provide more evidence for the functional range and development of the velar prefix in TB.

One last comment on Belhare and the velar prefix concerns the reciprocity construction present in this language that was previously mentioned in the section on Athpare: Belhare also makes use of the same construction to express reciprocity as Athpare, where *ka-* (here considered a homophone of the prefix in *ka*-ROOT-*pa*) occurs in a reduplication construction (see Appendix A).

4.2. Western Kiranti

For the Western Kiranti branch, my resources are limited to the grammar of Dumi by van Driem (1993) as well as a grammatical sketch of Hayu by Michailovsky (2003). As mentioned above, it has been pointed out by Ebert (2003, p. 516) that the 'agentive participle' formation by means of *ka-* (with a required or optional *-pa* or *-ba* suffix) is one of the few characteristics that sets apart Eastern from Western Kiranti.[40]

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[40] Ebert (2003) relates the velar prefix in the Kiranti branch to the velar prefix in Northeast India, noting that "[Southeast] Kiranti features like ... the participle formation with *ka-* are found also further east, e.g. in Naga and Chin languages" (p. 516).

Still we can find traces of the prefix or rather, the *gV-...-pa* strategy in Dumi, although nothing could be found in Hayu.

In Dumi, the 'active participle' is productively formed by suffixing *-kpɨ* (van Driem, 1993, p. 272). However, the two adjectival verbs *nɨnɨ* 'be.good' and *ɨ:nɨ* 'be.bad' have special forms as 'active participles', where instead of *-kpɨ*, the suffix *-kpa* is used optionally with or without the prefix *khə-*. The two examples van Driem (1993) provides are reproduced in (112) and (113).

(112) *Amnɨ* *na:m* *no:.* *Khə-nɨ-kpa* *tsɨkh-a.*
today sun be.good ***gV**-be.good-AP be-23S

Aŋ *ye* *khə-nɨ-kpa* *lo:-t-ə.*
I too ***gV**-be.good- AP be.good- NPT-1S

'The sun's good today. It's pleasant out. I too feel fine.' [van Driem, 1993, p. 274]

(113) *Khələ* *ŋə* *khə-nɨ-kpa,* *ɨm* *ma:tai* *khə-yi:-kpa.*
all EMPH ***gV**-be.good-AP he only ***gV**-be.bad-AP
'Everyone is basically good. He's the only bad one.' [van Driem, 1993, p. 274]

The assumption is that the *khə-* form is our velar prefix, and van Driem specifically mentions the possible relationship between this form and the Limbu active participle form *kɛ-*ROOT*-pa*. However, it is interesting that the only verbs occurring in this form are 'be good' and 'be bad'. It is not clear, thus, whether we should relate this form to the function of the 'active participle' or S/A agentive noun, or maybe rather to the adjectival prefix.

4.3. Summary

The four Eastern Kiranti languages examined, Limbu, Athpare, Belhare, and Camling, feature the prefix in essentially the same way: In all languages, we find the *gV-...-pa* construction associated most prominently with the derivation of participant nouns.

However, there are some differences. Regarding the form of the *gV-...-pa* construction, we notice that in Limbu and Belhare, the *-pa* alternates with *-ma* for the marked feminine form. This does not seem to be the case in Athpare and Camling, and it is these two languages, in which the *-ba* or *-pa* can drop out altogether leaving only the prefix behind.

Regarding functions of the Eastern Kiranti *gV-...-pa* construction, we have seen the derived nominal forms do not only function as (independent) participant nouns, but also as nominal modifiers in at least Limbu (see example (100)), Athpare (example (106)), and Belhare (example (110)). In all three cases, the verbs do not express adjectival or stative semantics (possibly with the exception of Limbu 'torn clothes', example (100)), but there seem to be differences regarding how relative clause-like the construction can get, i.e. whether or not the head noun can be semantically full or just relatively empty ('thing', 'person', etc.), whether the *gV-...-pa* constituent can be modified by an adjective or an adverb, and whether the derived *gV-...-pa* form can be modified by TAME markers. Future research may be able to clarify and document the relationship between participant nominalization and relative clause marking. The conclusion to be drawn from this for the present study is that we are not just dealing with a simple participant nominalization construction, but with a more general or versatile nominalization construction that can take on other functions (to some degree) typically associated with nominalization in TB, such as relative clause marking.

Western Kiranti seems to have lost the *gV-...-pa* construction, but we see relics of it in Dumi. Interestingly, the form *khə-*V*-kpa* is a little different as we note the velar in

the suffix part of the frozen circumfix that only occurs on the verbs for 'be good' and 'be bad'. This velar in *-kpa* still awaits a good explanation.

Table 6 – Summary: **gV-* in the Kiranti Branch of Western TB

WESTERN TIBETO-BURMAN: KIRANTI		**Form of the prefix**	**Productivity**	**Citation form**	**NMLZ (action/event)**	**NMLZ (participant)**	**Adjectival modifiers**	**Relative clauses**	**Complement clauses**	**Adverbial clauses**	**Adverbs**	**Main verb construction**	**Numerals**	**Quantifiers**	***a-gV-***	***gV-...-pa***
Eastern Kiranti	Limbu	*kɛ-V-pa~-ma*	+			+ (AGT, PAT)										+
	Athpare	*ka-V(-ba)*	+			+ (AGT)										+
	Belhare	*ka-V-pa~-ma*	+			+ (AGT)										+
	Camling	*ka-V(-pa)*	+			+ (AGT)										+
Western Kiranti	Dumi	*khə-*V*-kpa*	-			+?										+

Explanations:

+	'yes/existent'
?	'not positive'
AGT	'agent nominalization'
PAT	'patient nominalization'

CHAPTER V

NORTHEASTERN OR QIANG TIBETO-BURMAN

Bradley (2002, pp. 94ff.) distinguishes between core Qiangic and other Qiang group languages within Northeastern Tibeto-Burman. As we will see, the core Qiangic rGyalrong (Rgyarong, Gyarong) languages provide evidence of the velar prefix covering a wide range of functions associated with nominalization.

For another core Qiangic language, Queyu (Zhaba), Matisoff (2003) offers the list of forms reproduced in (114) to suggest that Queyu belongs to the group of languages that have the adjectival velar prefix.

(114)	*kə^{33}dzą^{55}*	'crawl'	
	kəthũ^{55}	'drink'	
	kətɐ^{53}	'eat'	
	kənu^{53}	'listen'	
	kəɕe^{55}	'look'	
	kəzẹ^{55}	'sleep'	[Matisoff, 2003, p. 137]

However, since these forms are not adjectival verb stems, I will not consider them evidence for our velar prefix in Queyu. More data are needed to show the function of this prefix.

Outside of core Qiangic are languages like Naxi, Bai, and Tujia (Bradley, 2002, pp. 94ff.). For this study, a grammatical sketch of Yunnan Bai by Wiersma (2003) has been evaluated; no form matching our velar prefix could be found.

5.1. rGyalrong Languages

Also listed as languages with the adjectival velar prefix in Matisoff (2003, p. 136), rGyalrong is an important group of closely related languages in this study.[41] In rGyalrong, our velar prefix covers a wide range of functions including marking the citation form/infinitive of verbs. The sources on rGyalrong are on two different (of the three) languages, the eastern Cogtse (lCog-rtse) variety (Nagano, 1984, 2003) and the northwestern Caodeng (Sun, 2003) variety. I will discuss the two languages separately, and leave it to future research to show in what ways the two languages actually turn out to have the same or different **gV-* constructions.

5.1.1 Cogtse rGyalrong

In Cogtse, deverbal adjectives as well as numerals consistently feature our velar prefix, which takes the form *kə-*. A few examples of derived adjectives are provided in (115).

(115)	*kə-mbro*	'high'	*kə-pram*	'white'
	kə-mo	'empty'	*kə-čhem*	'small'
	kə-kte	'big'	*kə-skren*	'long'
	kə-mʃor	'beautiful'		[Nagano, 2003, pp. 473/4]

In (116), we see the verb stem *mʃor* from the list provided in (115) functioning as an underived verbal predicate.

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[41] Although sometimes listed as one language with three dialects (e.g., Sun, 2003), by most accounts it now seems that the different varieties of rGyalrong should be counted as distinct languages. They are certainly as distinct from one another as different Mizo-Kuk-Chin languages, or different Bodo-Garo languages (DeLancey personal communication, July 19, 2009).

(116) *ɟi+gyo* *tə-mʃor-Nc*[42]
2DL 2-be.beautiful-DL
'you two are beautiful' [Nagano, 2003, p. 474; glosses added]

The numbers from one to ten mostly prefix *kə-* with the exception of 'eight' and 'ten' as we can see in (117).

(117)	1	*kə-tek*	6	*kə-ṭok*	
	2	*kə-ɲes*	7	*kə-ʃɲes*	
	3	*kə-sam*	8	*wə-ryat*	
	4	*kə-wdi*	9	*kə-Ngu*	
	5	*kə-mŋo*	10	*sgye*	[Nagano, 2003, p. 486]

Besides the adjectival *kə-*, there is what Nagano (1987, 2003) refers to as the VP signalling prefix *ka-*. This *ka-* is obligatory in a non-final verb form, but is optional in a final verb form. What 'non-final' and 'final' refer to respectively, is shown in Figure 2, the general sentence template, reproduced from Nagano (1987, p. 23).

Figure 2 – Cogtse rGyalrong Sentence Structure (Nagano, 1987, p. 23)

$[(\text{NP}) + \text{VP}_{\text{non-final}}]^{n}$ (Particle) $[(\text{NP}) + \text{VP}_{\text{final}}]$ (AUX)

Unfortunately, there are no explicit examples of this template, but it appears as though this first constituent $[(\text{NP}) + \text{VP}_{\text{non-final}}]^{n}$ is a subordinate clause like a relative,

[42] /N/ is used by Nagano (2003: 470) to indicate 'a phoneme of nasalization, which occurs before the stops and affricates to nasalize them, as well as at the C_f position to nasalize the preceding vowel'.

complement, or adverbial clause. In (118) below, Nagano labeled the *kə-* prefix in *kə-ka-dza* the $VP_{non\text{-}final}$.[43]

(118) *bi+syer* *ka+pri* *kə-ka-dza* *wa-sta* *sik+pa* *nə-Nbop*
yesterday snake ***gV-**PF[44]-eat of-wound very PROG-swell
'The bite-wound which a snake made yesterday has swollen terribly.'
[Nagano, 1984, p. 54, glosses modified]

We notice that we are dealing with *kə-* instead of *ka-*. This alternation has been ascribed to a semanto-pragmatic alternation by scholars of rGyalrong according to Nagano (1987, pp. 25/6), which seems to pertain to all instances of nominalized verb forms, be it nominalized subordinate clauses or the citation form: *ka-* occurs on verbs that denote 'actions that can be controlled by human will', whereas *kə-* occurs on 'those which are uncontrollable', although Nagano himself suggests interpreting the distinction as 'process verbs' with *ka-* versus 'non-process verbs' with *kə-* in Chafe's (1974) sense.

The interpretion of marking controlled versus non-controlled events is consistent with our example (118), where the biting of the snake was certainly uncontrollable. However, Nagano (1987) also says that *ka-* and *kə-*, "seem to belong to a single morpheme" (p. 26). Nagano does not discuss this problem any further, but as we will see further below, Sun (2003) suggests a more comprehensive account of a seemingly parallel alternation between *kɐ-* and *kə-* in Caodeng rGyalrong.

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[43] I am not completely positive that the $[(NP)+VP_{non\text{-}final}]^n$ constituent really represents any type of subordinate clauses. While the *kə-* in (118) does appear to be an instance of a non-final VP in Nagano's terms (as he glosses it as such), we note that there is an additional *ka-* prefix glossed as a perfect marker, which should not be able to occur in a non-final VP, as Nagano (1987) says, "VP_{nf} chooses only *ka-* and root, i.e. none of the optional components [= affix slots on the verb] are realized" (p. 26).

[44] As I understand, the perfect marker is *nə-*, but can be replaced by a direction marker. There is a directional prefix *ka-* denoting an 'upstream' action, so this might be it here (see Nagano 1984, pp. 26/7).

Regarding the question of how to relate these alternations to our prefix, there does not seem to be a clear answer. Both forms fit very well, both appear to nominalize not only verbs, but entire clauses so that they function as NPs on the sentence level. What could be the source of the alternation is an initial allophonic variation that got reanalysed as a semanto-pragmatic distinction. It could also be the case that another prefix was involved in the case of *ka-* since we rather expect the reduced *kə-* than a long full vowel /a/. Future research might be able to provide evidence for the origin of this alternation. For now, however, I will equally consider both forms as our velar prefix.

Also, coming back to our *kə-* adjectival prefix discussed above, it seems like Nagano could agree to equate it with the *ka~kə-* prefix that 'signals the VP'. In a historical study of rGyalrong verb morphology, Nagano (1987) discusses the evidence of the PTB **g-~k-* adjectival prefix in rGyalrong from Benedict (1972, p. 113). Benedict used the example of *kesik* 'new' to show that rGyalrong employs the adjectival velar prefix, but Nagano says, it 'does not particularly mark adjectival but simply signals VP' (Nagano, 1987, p. 154).

In (119), we have another example of a relative clause.

(119) *mi+ʃer* *pheNdzokhaN* *wu-Nguy* *to-ka-nə+ca+ra-ŋ* *wə-tha*
yesterday library of-in PF(up)-***gV-**read-1SG of-book
'the book that I read in the library yesterday' [Nagano, 2003, p. 472]

As in (118) above, we can see that the structure of a relative clause includes a genitive marked head noun, and a verb nominalized through *ka~kə-*. Interestingly, the verb inside the relative clause still takes a couple of inflectional affixes. Note the perfect prefix *to-* as well as the bound pronominal *-ŋ*.

Looking at complement clauses, we find more instances of our velar prefix. First of all, modals take nominalized complements. In (120), the modal *ka-khya* 'to be able,

can' takes a light verb construction consisting of the noun *juɴjak* 'swimming' and the light verb *ka-pa* 'to do' as a complement.

(120) *ŋa* *juɴjak* *ka-pa* *khya-ŋ*
1SG swimming ***g**V-do* can-1SG
'I can swim' [Nagano, 2003, p. 485]

In (121), *kə-ra* 'need' is negated and also takes another light verb construction based on *ka-pa* 'to do' as a complement. Note that the form *kə-* in *kə-ra* (see Nagano, 2003, p. 485) reflects the *ka-~kə-* alternation, and is due to 'needing something' being uncontrollable by humans.

(121) *semḍə ka-pa* *ma* *ra*
worry ***g**V-do* NEG need
'you don't need to worry' [Nagano, 2003, p. 486]

The example in (122) shows that *ka-yok* 'may' is another member of this group of complement-taking modals.

(122) *ŋa* *tə-gyim* *wu-ɴguy* *ka-ɴgo* *mə* *yok*
1SG the-house of-in ***g**V-enter* Q may
'may I enter the house?' [Nagano, 2003, p. 486]

The verb *khut*[45] 'be ready, may' appears to be another modal in this construction, an example is offered in (123).

(123) *tə-gyim* *ka-ɲi* *ma* *nə + khut*
the-house ***g**V-live* NEG ready
'the house is not ready to be lived in' [Nagano, 2003, p. 486]

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[45] This verb *khut* is only mentioned in its root form without the infinitive prefix, but it seems it would be a controllable event and thus should receive the form *ka-*.

Not only modals occur in this complement clause construction with our velar prefix. In (124), the verb *ka-sə + yok* 'to finish' also takes a *ka-* complement as well as *ɴdo* in (125), which is glossed here as 'AUX', possibly meaning something like 'to be the case'.

(124) *nəgyo ka-nə-ɴdza mə tə-sə + yok*
2SG ***gV-**PF-eat Q 2SG-finish
'have you finished eating?' [Nagano, 2003, p. 486]

(125) *nəgyo chamdo-y ka-che mə no-ɴdo-s*
2SG Chamdo-LOC ***gV-**go Q PF-AUX-PF
'have you ever been to Chamdo?' [Nagano, 2003, p. 486]

Finally, in addition to relative clause and complement clause constructions, we also have an example of our velar prefix marking an adverbial clause type, more specifically a purpose clause, in (126).

(126) *ŋa ta + tha kə-ki-y kə-che-ŋ ko*
1SG book ***gV-**buy-LOC 1SG-go-1SG AUX:S
'I go to buy a book' [Nagano, 1984, p. 43]

Note that the verb inside the adverbial clause also carries the locative marker *-y*, which evidences its nominal status. Concerning the *ka-~kə-* alternation, I do not know why we get the *kə-* form here since buying should be a controllable process.

Having seen how versatile the *ka-~kə-* prefix is, we would expect to see it involved in basic derivational nominalization as well, i.e. action/event and participant nominalization. Unfortunately, Nagano does not report much about this function of the prefix in either publication (1984, 2003), although he does mention a productive double-prefixation construction deriving patient nouns that involves our prefix, which is *to-gV-*, an example of which is given in (127).

(127) *to-ka-žu*
?-***gV**-accuse
'accused person'

Nagano also describes another velar prefix, which has a different vowel, *kɐ-*. He calls it a 'tensifier' and its function is to indicate the remote past or remote future, depending on whether it is used with the perfect or imperfect form of the verb. But even though it is analysed to indicate remote time stages, it appears to occur fairly frequently.

It seems like it could in fact be another version of our velar prefix, but since the function does not perfectly match (and since we already have an established prefix with basic nominalizing functions in our *ka-~kə-*), it is not included here (see Appendix A).

5.1.2. Caodeng rGyalrong

Caodeng rGyalrong shares the general infinitive/citation form marking of verbs as well as deriving deverbal adjectives by means of the velar prefix with Cogtse rGyalrong. An example of a deverbal adjective is given in (128).

(128) *paʃi?* *kə-snoj?*
crab.apple ***gV**-be-deliciously.ripe
'deliciously ripe crab apples' [Sun, 2003, pp. 491/2]

When it comes to infinitive marking, it seems like we get an alternation between *kɐ-* and *kə-*, parallel to *ka-~kə-* in Cogtse rGyalrong. Actually, this alternation is ascribed to the marker of 'action nominals' by Sun (2003, p. 493), which I understand to be the infinitive form used for marking subordinate clauses as well as for the general citation form. In Caodeng rGyalrong, the alternating prefixes are analysed to be based on the somewhat parallel (to Cogtse rGyalrong) semanto-pragmatic distinction of 'dynamic/human' (*kɐ-*) versus 'stative/nonhuman' (*kə-*). Analogous to Cogtse rGyalrong, I

will consider both forms as our velar prefix; future research might provide better insight in the origin of the alternation. Examples of the distinction are provided in (129).

(129) (a) *kə-* (stative/nonhuman) (b) *kɐ-* (dynamic/human)

kə-ⁿgu	'to be poor'	*kɐ-ⁿgu*	'to become poor'
kə-xsor?	'to give birth (bovines)'	*kɐ-xsor?*	'to give birth (humans)'

[Sun, 2003b, p. 493]

Unlike Cogtse rGyalrong, we have evidence of our velar prefix deriving participant nominals in Caodeng rGyalrong. Participant nominalization also features the *kə-~kɐ-* alternation, where *kə-* is the S/A or subject nominalizer, and *kɐ-* is the O argument nominalizer. Examples of both types are given in (130).

(130) (a) *kə-* (S/A arguments) (b) *kɐ-* (O arguments)

kə-rⁿgi?	'patient'	*kɐ-ⁿdze*	'food'
kə-tim?	'rich person'	*ɐ-kɐ-rge-rɐ*	'those loved by me; my beloved ones'
kə-mərku	'thief'		

[Sun, 2003b, p. 493]

Note that the S/A nominalizer *kə-* cannot be called an agentive nominalizer, as stative as well as active intransitive verbs can be used in this construction, such as the stative verb *tim?* 'be rich' and the active verb *mərku* 'steal'. Looking at the two examples of nominals derived through *kɐ-*, we see that the second one is actually a fairly complex form. It is not clear to me what the final suffix *-rɐ* is, but the *ɐ-* prefix is the first person possessive marker, parallel to (131/2).

(131) *ɐ-ká-ʃⁿdʒu-cə* *to?*
1SG:POSS:O-***gV**-accuse-INDEF exist
'there is someone who accuses me' [Sun, 2003b, p. 495]

(132) *ɐ-kɐ́-ʃʰdʒu-cə* *to?*
1SG:POSS:A-***gV**-accuse-INDEF exist
'I have someone to accuse' [Sun, 2003b, p. 495]

In these two examples (131/2), we have a minimal pair of the *kə-~kɐ-* alternation. Apparently, depending on whether we are dealing with an A or an O argument nominalization of a transitive verb, a possessive marker gets automatically interpreted as the complementing O or A argument.

This is, to some degree, similar to the agentive noun construction in Athpare (see §4.1.2), where possessive prefixes also can occur on the derived noun. However, in Athpare, only S/A agentive arguments can be derived, and, thus, the possessive prefixes are limited to marking the O argument. So nothing quite like this construction of Caodeng rGyalrong has been found anywhere else in this study.

In (133), our velar prefix occurs in a relative clause construction. Note that the form is *kə-* because the father is the A argument of 'embrace'.[46]

(133) *o-lŋa?* *kə-kə-rqɔ* *tɐ́pe* *nə?*
3SG:POSS-child PFV-***gV**-embrace:PAST father DET
'the father who embraced his child' [Sun, 2003b, p. 501]

We also have an example of our velar prefix in a complement clause construction in (134).

(134) *pa* *ɲɐmgon* *χsəm* *kɐ́-ntʃa* *kɐ-nlɔ?* *cʰɐ*
pig river three ***gV**-swim ***gV**-cross be.able
'pigs are able to swim across three rivers (at a stretch)' [Sun, 2003b, p. 499]

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[46] I assume that the fact that the father is the A argument triggers the *kə-* form (as the father is human, it would receive the *kɐ-* form otherwise). Thus, I assume that the relative clause construction is built upon a participant nominalization construction, whereas both the complement and adverbial clause constructions are built upon an 'action nominalization' construction (see below).

I am not sure why the form of the prefix is *kɐ-* in (134). It seems it should be *kə-*, which denotes 'stative/nonhuman' events, and what we have is a stative predicate ('be able to swim across') and a nonhuman referent ('pigs'). Also note in this example (134) that the word for 'three' is *χsəm*. So it seems as if a sound change happened, where /k/ split off into /k/ and /χ/. What this also means is that at some point in Caodeng the velar prefix on the numerals must have been reanalysed as an idiosyncratic part of the numeral root as opposed to a regular 'adjectival'/nominalizing prefix. It would be interesting to know whether other numerals also lost their velar prefix in Caodeng.

Finally, (135) and (136) are examples of adverbial clause constructions based on the velar prefix nominalization.

(135) *ɐ-kə-q^{h}ro* *ɐ-jɐ-tɐ-wi*
1SG-***gV**-welcome IRR-PFV-2-come
'come and welcome me' [Sun, 2003b, p. 500]

In (135), we have a minimal purpose clause marked by *kə-*. Again, it is not clear to me why it should be classified as a 'stative/nonhuman' event, but there might be more pragmatics than semantics involved so that a clause without context cannot explain the form of the velar prefix. If we compare this example with the Cogtse purpose clause example in (126), we notice that unlike Cogtse, Caodeng apparently does not require a locative marker on the nominalized verb.

Lastly, the example in (136) is a manner adverbial clause. Note that the nominalized adverbial clause verb receives the instrumental/ergative suffix *-kə*.

(136) *kənmɲémsu-kə* *péntjaŋó-ta* *kɐ-mdzu-kə* *nɐ-c^{h}ov*
fat.person-ERG chair 3SG:POSS-top ***gV**-sit-INST PFV-break:PAST
'the fat person broke the chair by sitting on it' [Sun, 2003b, p. 502]

5.2. Summary

Table 7 summarizes the findings of this chapter. At first glance, we realize that both rGyalrong languages make use of the prefix in a wide range of functions just like the most prominent languages in the Central Tibeto-Burman group, Karbi, Tenyidie, Tangkhul and the Mizo-Kuki-Chin language Lamkang.

We also immediately notice, though, that we are dealing with an alternation that we have not seen before, namely *kə-~ka-/kɐ-*. This alternation is not phonological, but is interpreted as marking a semanto-pragmatic distinction. The exact nature of the semantics and/or pragmatics involved is difficult to determine. However, the analyses are similar, as we find the *ka-/kɐ-* (Cogtse/Caodeng) form to be interpreted as involving the semantics of 'controlled actions', 'process verbs', and 'dynamic/human semantics', and the *kə-* form as involving 'non-controlled actions', 'non-process verbs', and 'stative/non-human semantics'. Note, however, that it seems problematic to have the *ka-/kɐ-* form associated with 'controlled actions' as well as referencing the O argument in participant nominalizations and (probably) head nouns in relative clauses, whereas the S/A argument in participant nominalizations and relative clause head nouns gets the same prefix alternant *kə-* as 'non-controlled actions' in other nominalization types. We would rather expect to have a 'S/A or subject plus control' unified category and an 'O or patient plus non-control' unified category.

Regarding the diachronic problem that arises as we have two candidates for the descendant of **gV-*, we first of all notice that both equally qualify, since both cover the same basic functions, though they divide up the semanto-pragmatic space, and, thus, allow for additional specification, regarding some parameter like (human) control. Since we find the alternating prefixes capable to occur in the same syntactic slots covering the same basic functions, a possible explanation is that there used to be an allophonic alternation in rGyalrong that got reinterpreted as a meaningful distinction in the way described above. We have seen velar prefix pairs before in languages like Tenyidie (§3.2)

and Jinghpaw (§3.5), where, however, we could separate the two prefixes by their functions and choose one as the **gV-* descendant, whereas the other one had to be something else.

Since we are dealing with two closely related languages, a large amount of overlap is expected, but there are small differences. For example, in (134) above, we noticed that the velar prefix in the word for 'three', *χ-səm*, has changed to a velar fricative, probably assimilating to the following /s/ in Caodeng, whereas in Cogtse, we still get the more conservative form *kə-sam* with the full velar prefix. However, the *kə-* prefix in Caodeng does not seem to generally reduce and assimilate to a following fricative. Thus, the prefix in numerals has to have been reanalyzed as belonging to the root, and not being the same form occurring on verbs.

Table 7 – Summary: *gV- in rGyalrong (Core Qiangic of Northeastern/Qiang TB)

NORTHEASTERN/ QIANG TIBETO-BURMAN: CORE QIANGIC		**Form of the prefix**	**Productivity**	**Citation form**	**NMLZ (action/event)**	**NMLZ (participant)**	**Adjectival modifiers**	**Relative clauses**	**Complement clauses**	**Adverbial clauses**	**Adverbs**	**Main verb construction**	**Numerals**	**Quantifiers**	***a-gV-***	***gV-...-pa***
rGyalrong	Cogtse rGyalrong	*kə-*	+	+ (NCTRL/ NPRCS)			+	+ (NCTRL/ NPRCS)	+ (NCTRL/ NPRCS)	+ (NCTRL/ NPRCS)			+ (1-7,9)			
		ka-	+	+ (CTRL/ PRCS)		+ (PAT-DC)		+ (CTRL/ PRCS)	+ (CTRL/ PRCS)	+ (CTRL/ PRCS)						
	Caodeng rGyalrong	*kə-*	+	+ (S/NH)	+ (S/NH)	+ (S/A)	+	+ (S/A?)	+ (S/NH)	+ (S/NH)						
		kɐ-	+	+ (D/H)	+ (D/H)	+ (O)		+ (O?)	+ (D/H)	+ (D/H)						

Explanations:

+	'yes/existent'
?	'not positive'
S/NH	'stative/non-human'
D/H	'dynamic/human'
CTRL	'controlled action'
NCTRL	'noncontrolled action'
PRCS	'process verb'
NPRCS	'non-process verb'
PAT-DC	'patient noun in a different construction (i.e. *to-gV-* construction)'

CHAPTER VI

SOUTHEASTERN TIBETO-BURMAN

For Southeastern Tibeto-Burman, no language could be identified that has a prefix which can be readily interpreted as a reflex of **gV-*. However, we generally do not expect to find old affixes in the Southeastern branch as it is notorious for having lost the inherited PTB morphology. Still, there are a few Loloish languages offering interesting data that I would like to present here, even though we will not be able to reconstruct our prefix for this branch.

The Southeastern subgroup of TB is divided into two major branches, Karen and Lolo-Burmese, according to Bradley (2002, pp. 96ff.). The Karen languages share a distinctive trait that no other TB languages have, which is SVO word order in main clauses (Bradley, 2002, p. 107). For this study, data on two Karen languages, Eastern Kayah Li (Solnit, 2003) and Pwo Karen (Kato, 2003), were evaluated; evidence of our velar prefix could not be found.

The Lolo-Burmese branch comprises two main subbranches, Burmish and Loloish, as well as two languages forming subbranches on their own according to Bradley: Gong and Mru. Data on the latter two languages could not be obtained, but for Burmish, information on Burmese was available, as well as information on Northern, Central, and Southern Loloish for the Loloish subbranch.

6.1. Lolo-Burmese

On the Burmish side of Lolo-Burmese, a native speaker of Burmese[47] was consulted; there does not appear to be anything like our velar prefix in Burmese. On the Loloish side, information on three languages each from one of the three different groups was evaluated.

For both Central Loloish and Southern Loloish, represented by Lisu and Akha respectively in this study, no clear evidence of the velar prefix could be found, but it still seems worthwhile looking at some data.[48]

6.1.1. Lisu (Central Loloish) and Akha (Southern Loloish)

For Lisu, Fraser (1922), Roop (1970), and Bradley (2003) were consulted.[49] Whereas in Fraser (1922) no relevant information could be found, there is a potentially interesting *yɨ-* (/y/ being a palatal glide) proclitic documented by Roop (1970) as well as a *jɨ^{55}-* (with a voiced alveopalatal fricative) prefix documented by Bradley (2003) both of which function as nominalizers.

These forms do not meet the criteria for the present reconstruction since the initial consonant in both cases is not velar, and the vowel is too strong instead of the expected reduced or copy vowel. However, we immediately notice that this same vowel could actually help explain the palatals here as following front vowels typically condition the palatalization of velars. We still lack an explanation for how the front vowel got there, and so we are limited to just note some of the following data, and keep them in mind for later studies that could possibly provide an explanation for the vowel.

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[47] I am grateful to Thet Mar Win, a native speaker of Burmese, who worked as a language consultant for a year-long field methods class (2007-8) at the University of Oregon.

[48] The brief Lahu description by Matisoff (2003b) was also examined but without any interesting results.

[49] All three works appear to be based on 'Flowery Lisu', one of the three main dialectal subgroups (all of which are reported to be mutually intelligible (Bradley, 2003, p. 222)), however on different subdialects.

Regarding Roop's *yí-* proclitic – documented from the southernmost variety of Lisu spoken in Tak Province, Thailand, near the border to Burma (1970, p. XVII) – we find data such as (137), where *yí-* derives nouns from agentive verbs.

(137)	*yí-kyǒ*	*yí-fwū*	*yí-swɨ́*	
	yí- scratch	*yí-* lay(.eggs)	*yí-* sow	
	'line, scratch'	'egg'	'seed'	[Roop, 1970, p. 76]

We also find this prefix attaching to adjectival verbs in order to derive nominal forms as in (138).

(138)	*yí-swɨ̀*	*yí-bì*	*yí-phwū-phwū*	*yí-hwā-hwā*
	yí- be.new	*yí-* be.old	*yí-* be.white-RDPL	*yí-* be.striped- RDPL
	'new thing'	'old thing'	'white thing; color white'	'stripes' [Roop, 1970, p. 76]

Interestingly, we find a construction of a nominalizer plus reduplicated adjectival verb root here in *yí-phwū-phwū* 'white thing' and *yí-hwā-hwā* 'stripes', which also exists in Sema Naga; see example (139), where the nominalizing prefix is followed by the reduplicated verb root *ze* 'be big'.

(139) *hipa-qó-ye* *anipa* *kizeze*
DEM-PL-FOC leaves big:EMPH
'these are large leaves' (Sema Naga) [Sreedhar, 1980, p. 150, glosses added]

The nominal forms derived by *yí-* are then ready to modify a noun as we can see in (140) and as we would expect in the TB context. The adjectival verb roots may also be additionally reduplicated just like in (138), or may be only be reduplicated and lack *yí-* (for example, *jīphə̀ swīswɨ̀* 'red liquor' with *swɨ̀* 'be red').

(140) *bīchwɨ́ yí-nyīchwɨ̀* *ābā yí-swɨ̀*
dress *yí-* be.green month *yí-* be.new
'green dress' 'next month' [Roop, 1970, pp. 138/9]

This *yí-* proclitic also attaches to nominal roots that are either bound morphemes as in (141), or free morphemes as in (142), where it is interpreted to mark a particularizing function.

(141) *yí-ngù* *yí-khə̀* *yí-sɨ̀*
yí- language *yí-* side *yí-* fruit
'language' 'outside, side' 'fruit' [Roop, 1970, p. 75]

(142) *yí-wúdwɨ̀* *yí-kúkū* *yí-nyīzà*
yí- head/top *yí-* older.brother *yí-* younger.brother
'top, tip' 'brothers' [Roop, 1970, p. 75]

There also are two *a-* proclitics with different tones that have derivative functions, but Roop states that "in comparison with the other proclitics, /yí-/ is far more common and is, in modern Lisu, a productive form, while the others are not" (Roop, 1970, p. 75).

Quite similar in form and function is the prefix[50] *jɨ̀*[55] documented by Bradley (2003).[51] This prefix is not the main nominalizer of the language, but occurs frequently as "an abstract nominalizer of a stative non-extentive verb", which I understand to be adjectival verbs, and also as a "dummy prefix" rendering bound nominal roots free words (Bradley, 2003, p. 230). Examples of both are taken from Bradley in (143).

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[50] I do not know if there is a phonological reason for why this "prefix" does not carry a hyphen in Bradley's description. Likewise, in the examples in (145), which are copied without any modification from Bradley, no hyphens are used. Bradley does use hyphens in the English glosses for noun plus object marker combinations (the latter still with its individual tone), however, which makes it seem like *jɨ̀*[55] is less tightly attached.

[51] Bradley (2003: 222) mentions that all his examples are "from Flowery Lisu unless otherwise stated", but does not specify where the variety of Flowery Lisu of the examples is spoken.

(143) *jɨ^{55}* *jø^{44}* *jɨ^{55}* *nɛ̲^{44}*
PREF name PREF black
'name' 'blackness, the color black' [Bradley, 2003, p. 230]

Besides this *jɨ^{55}* with its two functions, there also is the homophonous third person animate pronoun *jɨ^{55}* that may function as a possessive pronoun as well as in (144).

(144) *jɨ^{55}* *jø^{44}*
he/she name
'his/her name' [Bradley, 2003, p. 230]

The same homophony occurs in the variety of Flowery Lisu described by Roop, where we find the following analogous example (145).

(145) *yí* *hīn*
he house
'his house' [Roop, 1970, p. 132]

As in the Central Loloish language Lisu, in the Southern Loloish language Akha, described by Hansson (2003), there also is a voiced alveopalatal fricative-initial *jɔ-* prefix that derives adjectives from verbal roots as in (146).

(146) *ŋà-sjhà* *jɔ-né* *phi-di* *jɔ-pjhú*
fish *jɔ-* be.red skirt *jɔ-* be.white
'red fish' 'white skirt' [Hansson, 2003, p. 244]

6.1.2. Nosu/Lolo (Northern Loloish)

From the Northern Loloish subgroup, I present data from Fu (1997), *A descriptive Grammar of Lolo*. This documentation of the Nosu variety includes the discussion of a

preverbal particle *²ko* in the Pei-shan dialect, which occurs with main verbs, and derives adverbs from adjectival verbs.[52] With this range of functions, we are not very close anymore to the recurrent cluster of functions of nominalization. However, we will note resemblances with other languages that were argued to have descendants of the PTB nominalizer, which is why the following data are presented even though the connection to the PTB nominalizer is highly speculative at this point.

The *²ko* main verb construction does not mark a clear semantic function it seems, and might rather contrast with the *²ko*-less construction for pragmatic reasons. Fu (1997) writes, "when a verb is in the predicative position, it is often preceded by the particle *²ko*" (p. 116), or, later on, that one of the functions of preverbal *²ko* is "[...] to mark its being in the predicative position" (p. 121). This is a little odd because it is the default for verbs to function as predicates, at least for agentive verbs. Let's look at some examples, (147) and (148).

(147) *²ts'ŋ* *²a ¹dzŋ ³ko* ***²ko*** *³gɯ*
he there *²ko* play
'He plays there.' [Fu, 1997, p. 122; glosses added]

(148) *²ts'ŋ* *²no ²su* *²bu ²ma* *²bu* ***²ko*** *¹m̥a*
he Nosu (Lolo) character write *²ko* teach
'He teaches the writing of Lolo characters.' [Fu, 1997, p. 122; glosses added]

Both (147) and (148) are in present tense and presumably generalized statements. However, if we have a more complex predicate with a grammaticalized verb at the end functioning as a tense marker, we can also get *²ko* as in (149), where *¹mi* marks future.

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[52] Fu (1997) also mentions a "substantivizing particle" *¹kɯ* in the Ch'a-tsu dialect (p. 115), but doesn't provide any examples.

(149) *²tsʻɲ* *²nɯ* ***²ko*** *¹ndu* *¹mi*
he you *²ko* strike FUT
'He will strike you.' [Fu, 1997, p. 122; glosses added]

In (150), the example sentence is marked for some perfect or perfective aspect. Again, *²ko* appears here in front of the predicate. An interesting observation is that *²ko* precedes the negative marker *³a*.

(150) *²mo ²m̩* ***²ko*** *³a* *³djie* *²o*
sky *²ko* NEG fall PF
'It has stopped raining.' [Fu, 1997, p. 122; glosses added]

According to Fu, *²ko* generally precedes the negative marker, another example is given in (151).

(151) *²ŋa* ***²ko*** *³a* *¹he*
1sg *²ko* NEG stand.up
'I do not stand up' [Fu, 1997, p. 116; glosses added]

²ko is not limited to statements, but may also occur in (yes/no) interrogative sentences as example (152) shows.[53]

(152) ***²ko*** *²tʂɯ* *²tʂɯ*
²ko be.right be.right
'Right?' [Fu, 1997, p. 122; glosses added]

In another section of his grammatical description, Fu discusses three ways of forming imperatives, and states that using *²ko* is the commonest. This is a little confusing, as *²ko* already gets used with statements and interrogatives as we saw above so that it

[53] Forming interrogatives through reduplication of the verb is an established construction in Lolo (Fu, 1997, p. 114).

cannot be **marking** imperatives even if it occurs with them. Examples of imperative sentences are given in (153) and (154).

(153) ***²ko*** *²ɲø* *²a ¹dzɳ ³ko* ***²ko*** *¹he*
²ko sit.down there *²ko* stand
'Sit down.' 'Stand there!' [Fu, 1997, p. 121; glosses added]

(154) *²a ²dzɳ ³ko* ***²ko*** *²ʒ̩* ***²ko*** *³he*
there *²ko* go *²ko* speak
'Go there!' 'Speak!' [Fu, 1997, p. 185; glosses added]

The only difference between an imperative sentence and a statement might be that imperatives do not allow an overt mentioning of the addressee, but that is just a typological speculation. Also, the Southeast Asian context makes it likely that pronouns are often left out in statements as well so that we may hypothesize that intonation could play an important role in distinguishing between imperatives and statements.

It is possibly easier to understand why there would be a particle to mark the predicative use of a verb in the case of adjectival verbs, which tend to occur as attributes rather than predicates. Examples of adjectival predicates with *²ko* are provided in (155) and (156).

(155) *²vɛ ²vɛ* *²tsʰɳ ²gɯ* ***²ko*** *²a ²n̥e*
flower DEM *²ko* be.red
'These flowers are red.' [Fu, 1997, p. 122; glosses added]

(156) *³a ²m̥ ²zɯ* *²tsʰɳ ²ma* ***²ko*** *¹ndz̥a*
girl this *²ko* be.beautiful
'this girl is beautiful' [Fu, 1997, p. 122; glosses added]

However, the reason why we have seen adjectival predicates with our velar prefix in other languages before was assumed to be due to a nominal predicate construction, possibly evolved from a frequent association of the prefix plus adjectival verb root

combination in attributive usage. If we speculate about a connection between *²ko* and our velar prefix, it would not lead us very far to hypothesize that *²ko* started out marking the predicative use of adjectival verbs and then spread to be used with other verb types. Instead, we should rely on pathways in syntactic change documented for other (TB) languages, and, thus, could imagine a scenario where an originally marked, nominalized verb form becomes the default main verb construction, which has been shown to be the case in a number of TB languages by DeLancey (in press), and which is also what we have seen in rGyalrong.

Another function of *²ko* is to derive adverbs from adjectival verb roots. This is shown by examples (157) and (158), where *²ko* precedes the final adjectival verb that functions as an adverb in the sentence.

(157) *²tsʰɲ ²no ²su ³ho ³he* ***²ko*** *³mbo ²dʒɻ ³mbo*
he Nosu (Lolo) language say *²ko* be.very.good
'He speaks Lolo very well.' [Fu, 1997, p. 122; glosses added]

(158) *²vɛ ²vɛ ²tsʰɲ ²ma ²a ²n̥e* ***²ko*** *¹ndzą*
flower this be.red *²ko* be.beautiful
'This flower is beautifully red.' [Fu, 1997, p. 122; glosses added]

Although the function of deriving adverbs from adjectival verbs is not frequently a part of the nominalization cluster typical for TB languages, we have seen this function associated with our velar prefix before in Lamkang (Northern Kuki-Chin/Mizo-Kuki-Chin).

It is worth mentioning that this preverbal *²ko* particle only exists in the Pei-shan variety of Nosu. The Pei-shan sentence (159), where *²ko* again derives an adverb as seen above, is analogous to sentences (160-2) in the Pai-mei, Ta-t'un and Ch'a-tsu varieties respectively (where the subject is 'he' instead of 'the girl').

(159) $^{3}a\ ^{2}m̩\ ^{2}zuɪ$ $^{2}ts'ɳ\ ^{2}ma$ $^{2}ʐ̩$ **^{2}ko** $^{1}ndʐ̩a$
girl this laugh ^{2}ko be.beautiful
'This girl laughs charmingly.' [Fu, 1997, p. 122; glosses added]

(160) $^{2}tɕi$ $^{3}ɣa$ **$^{3}kɛ$** $^{6}ɕio$ (Pai-mei)
he laugh $^{3}kɛ$ be.beautiful [Fu, 1997, p. 122; glosses added]

(161) ^{1}ka $^{4}ɣɛ$ **$^{2}dɔ$** ^{1}pi (Ta-t'un)
he laugh $^{2}dɔ$ be.beautiful [Fu, 1997, p. 122; glosses added]

(162) $^{3}ʐ̩ɔ$ $^{1}vɛ$ **$^{1}ʐ̩$** $^{3}tsɛ$ (Ch'a-tsu)
he laugh $^{1}ʐ̩$ be.beautiful [Fu, 1997, p. 122; glosses added]

We see that only the Pai-mai variety also has a velar initial form here, the other two varieties have alveolar or alveo-palatal forms, so this ^{2}ko particle is not actually consistent in Nosu.

Finally, for the sake of completeness, two more functions of ^{2}ko should be mentioned, although it is not clear at all whether they are related to the preverbal ^{2}ko discussed so far.[54] First, there is a postverbal ^{2}ko that appears to be derived from $^{3}t'uɪ^{2}ko$ 'time' as the latter can still be used instead (Fu, 1997, pp. 177/8). This ^{2}ko marks the verb of a temporal adverbial clause, and occurs after it, as we see in example (163).

(163) $^{2}nuɪ$ $^{2}e\ ^{2}ko\ ^{2}bo$ **^{2}ko** $^{3}ŋo$ $^{2}dʒɳ\ ^{2}ŋgu\ ^{2}ŋgu?$
you have.gone ^{2}ko think each.other
'When you have gone shall we think of each other?'

Second, there seems to be a complementizer ^{2}ko introducing complement clauses as we can see in examples (164) and (165).

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[54] Fu (1997, p. 121) appears to consider all of these functions to be associated with one and the same morpheme.

(164) *²ŋa ³he **²ko** ²ts'ɳ ²gɯ ³a ³mbo*
I say *²ko* these NEG be.good
'I said that these are not good.' [Fu, 1997, p. 175]

(165) *²ŋa ³sɻ **²ko** ²ts'ɳ ¹ɲie ²dʒɻ ²ŋgu*
I know *²ko* these love each.other
'I know that these two love each other.' [Fu, 1997, p. 175]

Neither the *²ko* postverbally marking adverbial clauses, nor the *²ko* complementizer can be accounted for in a straightforward way by connecting them to nominalization functions.

6.2. Summary

I am not arguing that the data discussed in this chapter reflect our **gV-* prefix, because the forms of the morphemes we are dealing with – palatal initials in Lisu (Central Loloish) and Akha (Southern Loloish) and a preverbal particle *²ko* in Nosu (Northern Loloish) – cannot be readily related to the PTB velar prefix. They are included nevertheless, because future research might reveal how those data can be related to **gV-*.

Regarding the functions associated with the forms presented, we found Lisu *yí-/jɨ⁵⁵-* marking action/event nominalization and derivation of adjectival modifiers (which may also function as independent nouns, such as 'green thing' or 'blackness'), which is homophonous with a third person pronominal/possessive prefix. Similarly, Akha *jɔ-* derives adjectival modifiers from verbs.

Finally, data on the *²ko* particle in the Pei-shan variety of Nosu were presented. This particle seems to consistently precede the predicate of a sentence as if it was a verb

or predicate marker, and derives deverbal adverbs.[55] If this *ʔko* turned out to be related to our velar prefix, it would probably be through a stage of having become the default main verb construction.

[55] In the case of adverbial modification with adverbs derived from verbs, the main verb was shown to precede the deverbal adverb with the *ʔko* going inbetween the main verb and the derived adverb.

CHAPTER VII

CHARACTERISTICS AND DISTRIBUTION OF **gV-* REFLEXES: FORMS, FUNCTIONS, CONSTRUCTIONS

The first part of this chapter is devoted to the summary of the evidence, which is divided into a discussion of the distribution and characteristics of formal reflexes of **gV-* in §7.1.1, a discussion of the distribution of functions in §7.1.2, and a report on the distribution of the *a-gV-* and the *gV-...-pa* constructions in §7.1.3.

The second and third parts of this chapter briefly discuss two case studies concerning form types that are argued to have the potential of getting linked to the **gV-* nominalizer in the course of future research:

First, two velar suffixes and one postverbal velar particle, where the potential connection to **gV-* still lacks the explanation of how these forms can be in the 'wrong' syntactic slot in §7.2. And second, prefixes with a palatal onset, where a palatalization process would have to be hypothesized in §7.3.

7.1. Summary and Discussion of the Evidence

7.1.1. Characteristics and Distribution of Form Variation

In the majority of Tibeto-Burman languages that have a prefix descending from **gV-*, the reflex of /*g/ is the voiceless unaspirated stop /k/. Within the Central TB Sal group, the Bodo-Koch subgroup includes languages that have a /g/ reflex, although /k/ is also represented in this subgroup (§3.5). There also is a /k~k^{h}/ alternation in Tangkhul (Central TB, see §3.3), as well as a /k^{h}/ onset in the fossilized circumfix form *khə-...-kpa*

in the Western Kiranti language Dumi (§4.2). Lastly, there is the exception of the epiglottal stop [ʔ] in Daai Chin (Mizo-Kuki-Chin, see §3.4), which is considered a reflex of /*g/ in our prefix as the closely related Mro language has a velar initial prefix comparable in distribution to the Daai Chin prefix, and the prefixes of both languages are closely associated with the typical nominalization cluster of functions. We can assume that debuccalization moved the velar to an epiglottal stop.

I suggest to reconstruct the voiced /g/ for our **gV-* prefix based on Matisoff's (2003, pp. 134 ff.) reconstruction of the adjectival prefix with a /g/ onset. Future research will hopefully make evidence from individual languages available showing that PTB /g/ systematically changed to the specific reflex in a certain language.

Vowels in the prefix are typically copy vowels of the following vowel in the first syllable of the root, or reduced vowels, mostly schwa. But there are also other vowels represented in the prefix, which cannot be readily accounted for, such as /e~a/ in Karbi (§3.1), /i/ in Garo (Sal, see §3.5) and possibly Tiddim Chin (Northern Kuki-Chin, see §3.4), /ɛ/ in the Eastern Kiranti language Limbu (§4.1.1), and /a/ in other Eastern Kiranti languages (§4.1.2-4). There do not seem to exist patterns in the distribution of prefix vowels.

Besides the overall inventory of onset and vowel reflexes, an interesting issue to discuss in this summary is the case of form alternations within a prefix of a certain language, which occur both in vowels and consonants.

The only language that is listed with an onset alternation in the summary tables provided in Appendix B is Tangkhul with /k~k^{h}/. This aspiration alternation is a purely phonological one in Tangkhul, which is conditioned by obstruent-initial (triggering unaspirated /k/) versus non-obstruent-initial (triggering unaspirated /k^{h}/) verb roots. However, we have also seen the case of the Jinghpaw (Sal, see §3.5) *gə-* ~ *kə-* alternation that was found to sort out in a meaningful way, as only the *kə-* prefix turned out to be a reflex of **gV-* as determined by syntactic distributions.

There is another consonantal alternation that occurs in Garo, the only language where an apparent reflex of the prefix has a coda consonant, but this can be ascribed to an assimilation process to the verb root onset.

Vowel alternations in the reflexes include cases based on phonology as well as on semantics/pragmatics. Besides the case of copy vowels that follow a transparent complete assimilation rule, there is at least one other case, namely Karbi (§3.1), where a vowel alternation between *ka-* ~ *ke-* has been explained on phonological grounds, but following a more opaque pattern seemingly based on syllable structure.

Synchronically meaningful vowel alternations are found in the Southern Kuki-Chin language Mro (§3.5) and in both dialects of the Qiang/Northeastern TB language rGyalrong (§5.1.1, 5.1.2). In both cases, the alternation is between a low vowel /a~ɐ~ʌ/ and a schwa. Even though the low vowel in Mro only functions as a participant nominalizer, and in rGyalrong the whole range of nominalization functions is associated actually with both prefixes (marking a semanto-pragmatic distinction characterized by +/- control and +/- human), there is a commonality between the two languages: Adjective derivation gets exclusively marked by the schwa alternant. An idea expressed by Scott DeLancey (personal communication, May 2009) is that the vowel alternation could reflect two different constructions, whereby the *kə-* form could come from **gV-*, but the prefix with the full low vowel /a~ɐ~ʌ/ could be a fused form of an original prefix sequence, the velar prefix plus a synchronically existent /a/ prefix related to transitivity marking.

7.1.2. Characteristics and Distributions of Functions

This section summarizes and discusses characteristics and distributions of derivational functions first, then of clausal nominalization, and, lastly, of the more general function of verb citation marking.

7.1.2.1. Derivational Functions

For derivational functions, the scope is the single word, more specifically, the verb. In the order of frequency or prominence of the respective function, the case of participant nominalization in §7.1.2.1.1, adjectival modification in §7.1.2.1.2, action/event nominalization in §7.1.2.1.3, and adverb derivation in §7.1.2.1.4 are discussed below.

7.1.2.1.1. Participant nominalization.

Participant nominalization is the only function of **gV-* reflexes attested in all three branches, where we found evidence of the prefix: in almost all CTB subgroups (with the exception of Sema Naga, and restricted to Dimasa within Sal), in Eastern Kiranti (WTB), and in rGyalrong (NETB).

In both Tangkhul (CTB) and Eastern Kiranti, participant nominalization is marked by the *gV-...-pa* construction, whereas in all other languages, it is the prefix alone. In Limbu and Belhare (Eastern Kiranti), the *-pa* as the unmarked, masculine form of the derived noun alternates with *-ma* for a marked, feminine form. In the other two Eastern Kiranti languages looked at, Athpare and Camling, the *-pa* is optional. It is argued that the *-pa* has become optional, since the *gV-...-pa* construction appears to be old and reconstructable to at least Proto-Western-TB, probably PTB.

Participant nominalization is the cover term for agent and patient nominalization. In most of my sources, only examples of agent nominalization could be found, which may or may not mean that **gV-* is not involved in the derivation of patient nouns in these languages. Examples that show **gV-* to derive patient nouns as well are specifically reported only for Daai Chin (Mizo-Kuki-Chin) and Limbu (Eastern Kiranti), as well as rGyalrong (NETB), where the distinction between agent and patient noun derivation is encoded in the schwa (S/A argument) versus full low vowel /a~ɐ/ (O argument) alternation.

We may also note that in the Northern Kuki-Chin language Lamkang and in the Southern Kuki-Chin language Daai Chin, there seems to be a consistent pattern of (possibly obligatorily) adding an incorporated O argument or a verbal complement.

7.1.2.1.2. Derivation of adjectival modifiers.

The derivation of adjectival modifiers is the second-most prominent function of **gV-* reflexes. In CTB, it is the one function that is found in all the subgroups. Dimasa (Sal) and Karbi distinguish between two adjective constructions: An indefinite construction, where the emphasis is on the head noun ('a black **cloth**') and a definite construction, where the emphasis is on the adjective, which then can be defined as the semantic and syntactic head ('a **black** cloth').

In both languages, the indefinite construction is the unmarked construction in that it is marked by the prefix only, and the definite construction is the marked one, taking the form *a-gV-* in Karbi and *gV-...-pa* in Dimasa. The marked definite construction is probably derived from an appositive construction 'a cloth, a **black one**'.

Another characteristic of adjectival modification observed in CTB is that there is a tendency for adjectival modifiers to follow the head noun, whereas relative clauses tend to precede the head noun, which is schematized in Table 8.

Table 8 – Constituent Order within Adjectival Attribution vs. RCs

	Position 1	Position 2
Adjectival Attribution	**Noun [HEAD]**	Modifier [DEP]
Relative Clause	Modifier [DEP]	**Noun [HEAD]**

Aside from CTB, adjectival modification by means of our prefix is not found in Eastern Kiranti, but it is found in rGyalrong, where only the schwa alternant derives adjectival modifiers (although all other forms seem to exploit the vowel alternation for semanto-pragmatic purposes).

As noted before (§3.9), the occurrence of **gV-* on numerals and indefinite quantifiers is mentioned in this study as well as it is hypothesized that in those languages,

the **gV-* used to (if it does not still) derive deverbal nominal modifiers, and that per extension, our prefix appeared on those word classes that equally function as nominal modifiers. Numerals beginning with a velar stop initial syllable are found in Tangkhul (although only ordinal numbers), in Miju (numbers one to six), and in Cogtse rGyalrong (evidence of numbers one to seven as well as nine). Likewise, indefinite quantifiers with a putatively extended **gV-* reflex are found in Tenyidie, Tangkhul, and Sema Naga as well as in Meithei (see introduction to §3), where, however, no other data evidencing our prefix could be gathered from a very thorough grammar (Chelliah, 2003). It would be interested to search for our prefix in the old literary records of the language.

7.1.2.1.3. Action/event nominalization.

Action/event nominalization is the logically most basic function, as all it does is, in fact, derive a syntactically nominal form from a verb. This function is associated with reflexes of **gV-* in some Central TB subgroups and in rGyalrong of Qiang/Northeastern TB. In particular, we find it in Karbi, Tangkhul, Lamkang (Mizo-Kuki-Chin), and possibly in Tenyidie of the Central TB group. Both Karbi and Tangkhul feature two action/event nominalization constructions, a general one and one for the derivation of abstract nouns. The general derivation construction takes the simple prefix form, whereas the abstract nominalization construction is the marked one, employing the *a-gV-* double prefixation strategy in Karbi, but a *gV-...-t* circumfix form in Tangkhul.

Although we certainly reconstruct this most general function for the proto form **gV-*, we did not find it widely attested in the family in this study. We have to assume that in languages, in which this function is not productive anymore synchronically, another nominalizer must have at some point become more dominant or general and (over time) replaced the **gV-* prefix for the nominalization of verbs, so that **gV-* specialized in its functional range.

7.1.2.1.4. Derivation of Adverbs.

Adverb derivation does not belong to the typically reported cluster of functions of nominalization. But it seems like it could be related to it, since adverbs are modifiers just like adjectives. Adverb derivation is included here as there might be a case of this function in Lamkang, although this needs to be confirmed by future research.

7.1.2.2. Clausal Nominalization

Clausal nominalization refers to whole clauses functioning as NPs. This may include subordinate clauses like relative, complement, or adverbial clauses, but has more recently also been shown to be a common source for new main/finite verb constructions in TB (see DeLancey, in press).

7.1.2.2.1. Relative Clause Nominalization.

Nominalizing clauses so they can function as nominal modifiers to head nouns is the typical way of creating relative clauses in TB (Matisoff, 1972, DeLancey, 2005). Therefore, the distinction between relative clauses and adjectival modifiers, which essentially are nominalized verbs, is much less clear than in Indo-European, for example, where those functions are based on substantially different constructions.

As pointed out in the section on adjectival modification (§7.1.2.1.1; Table 8), TB languages tend to have a consistent pattern of constituent ordering of head noun and nominal modifier, where adjectival modifiers follow their head noun, but relative clauses precede their head noun. In at least one language, this syntactic means of constituent ordering is the only way those two functions are distinguished, cf. Tenyidie (CTB, see §3.2).

Apart from Tenyidie, relative clauses are formed by means of nominalization with our prefix in Karbi (CTB), Tangkhul (CTB), the Mizo-Kuki-Chin languages Lamkang and possibly Tiddim Chin (CTB) as well as in rGyalrong (NETB).

In rGyalrong, the vowel alternation in the prefix seems to mark a semanto-pragmatic distinction as discussed for most other functions, although the exact interpretation does not appear to be clear.

Lastly, another interesting typological fact is that Tangkhul actually has another relative clause construction, which is a headless relative clause, marked by our prefix as well as by reduplication of the verb root.

7.1.2.2.2. Complement and Adverbial Clause Nominalization.

Complement and adverbial clauses are less often based on a **gV-* nominalization construction than relative clauses. We find both in Karbi, Tenyidie and at least **gV-* nominalized adverbial clauses in Tangkhul (all CTB) as well as in rGyalrong.

Also, as there are various types of both complement and adverbial clauses, we could note that complement and adverbial clauses are not always uniformly based on the same **gV-* nominalization construction; data from Karbi show that. However, a lot of grammatical descriptions consulted also simply did not seem to get to the necessary details regarding subordination types.

7.1.2.2.3. Main Verb Constructions.

Main verb constructions based on nominalization with **gV-* could only be found in CTB including Karbi, Tangkhul, and the Mizo-Kuki-Chin language Lamkang.

First, in Karbi (§3.1), this construction marks the progressive aspect,. In Tangkhul (§3.3), a very specialized construction translating into English as 'not only… but also' appears to be based on **gV-* nominalization. Finally, Lamkang (§3.4) has developed a main clause construction with **gV-* which yields an existential/locative clause featuring a the nominalized stative copula.

7.1.2.3. Verb Citation Form

At least in Tangkhul (CTB, see §3.3) and rGyalrong (NETB, see §5.1.1-2) as well as seemingly in Karbi (CTB), our prefix marks the verb citation form. For a moment, we can pretend not to know anything about these languages and learn from Matisoff (1972) that, "as a general rule of thumb applicable throughout the Tibeto-Burman family, whenever one discovers the particle used in verb citation, one can be sure of having discovered the most important nominalizer of the language …" (p. 248). In reality, of course, we already know that in these languages, the respective velar prefixes mark the whole range of nominalization functions. These languages are also the ones that have developed a main verb construction based on nominalization (which is the case for Lamkang as well, although in Lamkang it is only a very specialized main verb construction restricted to one specific nominalized copula).

7.1.3. Distribution and Characteristics of the a-gV- and gV-...-pa Constructions

Most instances of the *a-gV-* and *gV-...-pa* constructions, two for each, are found in CTB (§3.9), where we find three instances involved in the derivation of adjectival modifiers, the most prominent function associated with our prefix in Central TB, and one involved in the derivation of participant nouns, the second most prominent function in CTB. In addition, data from Kiranti (WTB) show that *gV-...-pa* is the only construction featuring our prefix in this branch of TB, although Athpare and Camling do not require the suffix part (anymore). The function of *gV-...-pa* in Kiranti is also the derivation of participant nouns.

Table 9 summarizes the distribution of functions associated with the constructions. The Southern Kuki-Chin (Mro and Daai Chin) instance of *a-gV-* is put in square brackets as it is still analyzable into the two components of derivation of adjectival modifiers by means of the velar prefix, and nominalization of those by means of the *a-* prefix.

Table 9 – Distribution of Functions Associated with the *a-gV-* and *gV-...-pa* Constructions

	Adjectival Modifier Construction	**Participant Nominalization**	**Action/Event Nominalization**
a-gV-	1-Karbi (definite) (CTB) 2-[Southern Kuki-Chin (adjective nominalization) (CTB)]		1-Karbi (abstract nouns) (CTB)
gV-...-pa	1-Dimasa (definite) (CTB)	1-Tangkhul (CTB) 2-Kiranti (WTB)	

As noted in §2.5, *a-* and most probably *-pa* as well can be reconstructed to nominalizers in PTB just like our **gV-*, which makes the two constructions look like double nominalization constructions. Future research may be able to provide a historical syntactic account for how the constructions evolved.

7.2. The Case of Postverbal Velar Nominalizers

Looking through the data, we find cases of velar nominalizers that cover functions like the ones discussed in this thesis with one problem: instead of prefixes, they occur postverbally. More peculiarly, among Northeast Indian Tibeto-Burman languages, there is the case of Rabha and also Garo, where we find nominalizing velar suffixes that look conspicuously familiar considering the velar prefixes in other Sal and especially B-K languages.

In Rabha, the suffix *-kai* nominalizes verbs, and derives adjectival modifiers as we see in (166).

(166) *réŋ-kai* *bok-kai* *miŋkú*
go-NMLZ white-ATTR cat
'(the) going' 'white cat'
(Rabha; B-K) [Joseph, 2007, pp. 620-6]

Similarly, we recognize a familiar-looking suffix *-gip-a* in Garo that productively nominalizes verbs as in (167), where it is followed by the accusative marker *-ko*. We

have to keep in mind that Garo still has seven intransitive verb roots (see §3.5) that start out with frozen allomorphs of our **gV-* prefix, one being exactly *gip-*.

(167) *Ra·-sot-**gip-a**-ko* *nik-a-ming.* '(I) saw the butcher.'
(Garo; B-K) [Burling, 2004, p. 293]

Lastly, also in Sema Naga where we recognized our prefix in adjectival forms in §3.6 above, we also find a post-verbal velar element *kew* that appears to derive nominal modifiers from verbs with active semantics as in (168).

(168) *li-no* *axatì* *iɣiqɨ* *kew* *kicelu*
she-ERG fruit fall *kew* collect
'she collected the fruit that has fallen' [Sreedhar, 1980, p. 85]

As these suffixes in Rabha, Garo, and Sema Naga look as if they could be related to our prefixes in form and function, we would like to identify a plausible syntactic mechanism that could turn our nominalizing prefix into a suffix.

A preliminary hypothesis could be derived from two examples from Tenyidie (Angami Naga). In (169) (repeated from §3.5), we see a relative clause whose nominalized verb is a copular element.

(169) *[kí-nù* *kə̀-bá]* *tèpfə̀* *ù …*
house-LOC ***gV**-VM* dog the
'The dog that is in the house …' [Herring, 1991, p. 58]

Now if we look at (170), we notice that the same copular element from (169) functions as an auxiliary here, but still receives the nominalizing prefix that marks the predicate as a whole, which is *lē kə̀-bá* containing the bare stem of the lexical verb 'to think' as well as the nominalized auxiliary/copula.

(170) *[mhà lē kə̀-bá] thēmie̲ ù*
thing think ***gV-**VM man the
'The man who thinks' [Herring, 1991, p. 57]

Our preliminary hypothesis could then be a historical process of syntactic change, whereby the combination of nominalizing prefix plus copular element gets reanalyzed as a new nominalizing suffix. This hypothesis could also explain why the suffixes *-kai*, *-gip-a* in Rabha and Garo, and the postverbal particle *kew* are either monosyllabic with a dipthong or disyllabic instead of just having a reduced vowel as has been the case in the velar prefixes.

7.3. The Case of Nominalizing Prefixes with Palatal Onsets

We have seen prefixes with palatal onsets in Lisu (Central Loloish, Southeastern TB) and Akha (Southern Loloish, Southeastern TB) discussed in §6.1.1. These data were suggested not to consider as reflexes of our **gV-* prefix, as this would require evidence of a mechanism that triggered the change, which could not be found.

Another case of a prefix with a palatal initial associated with functions of the typical nominalization cluster is the Qiangic/Northeastern TB language Qiang (see LaPolla & Huang, 2003; LaPolla, 2003b). It is a voiceless palatal affricate in Qiang in a prefix with a copy vowel, represented as *tɕV-*.[56] This prefix occurs in a main verb construction marking the continuative aspect (i.e., translating into the English adverbs 'still' and 'yet' or 'V a little longer') or prospective aspect (i.e., 'still want to/be going to V') (LaPolla & Huang, 2003, pp. 175 ff.).

More conspicuously, we get it in verbs inside of adverbial clauses as in (171), where the genitive suffix clearly indicates that the verb form is nominalized, and the only

[56] This prefix is homophonous with the prohibitive marker (LaPolla & Huang, 2003, p. 175). Note that Wood (2008, p. 92) reconstructs a negative copula **gəy* for Proto-Bodo-Garo (see Appendix A, §6).

other grammatical marker besides the *tɕV-* prefix is a *ma-* negative prefix, which most likely does not have a derivative force.

(171) *qa* *stuaha* *ma-tɕi-tɕʰə-tɕ,* *japə* *xuəla*
1SG rice NEG-CON-eat-GEN hand wash
'Before I eat, I wash my hands.' [LaPolla & Huang, 2003, p. 241]

We also find this prefix associated with adjective marking[57], adding a sense of 'to a relative degree', as exemplified in (172).[58]

(172)

tɕa-wa	*tɕa-ŋjiq*	*ma-tɕa-xtsa*
CON-big	CON-black	NEG-CON-small
'relatively big'	'relatively black'	'not so small'
		[LaPolla & Huang, 2003, p. 214]

The *tɕV-* prefix also occurs in a construction prefixing onto a copula following a nominalized main verb (LaPolla & Huang, 2003, p. 194), which would be an interesting construction to look at if this prefix turned out to be a reflex of **gV-*.

Finally, example (173) shows that there is a *-kəpa* suffix (see the Sal language Garo's *-gipa* nominalizer (cf. §7.2) and the fossilized *khə-...-kpa* in the Western Kiranti language Dumi in §4.2).

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[57] It is worth pointing out that LaPolla & Huang (2003) consider the two functions of continuative aspect marking and adjective marking linked to the same morpheme, and not as two homophonous morphemes, as he says, "the continuative aspect marker ... used in the comparative construction ... has the effect of a relative degree marking adverb with the sense of 'relatively *adjective*' or 'even more *adjective*' ..." (p. 213/4).

[58] Note also that superlatives are marked by *tɕi-* as in *tɕi-fi* 'whitest' *tɕi-xtsa* 'smallest', which might be parallel to superlative marking by means of *ke-* in Tenyidie (Kuolie, 2006, 117), a language with a robust **gV-* prefix, see §3.2.

(173) *(qaqəi)-tɕəu-la* *i-pə-k-əs* *qə:,* *qa* *ictɕimaqa*
1SG.REFL-home-LOC DIR-arrive-go-NMLZ before 1SG often

ə-je-sa *roi-kəpa*
one-two-sentences call-HABIT:1SG

'Before returning to my own home, I often call out a few sentences.'
[LaPolla & Huang, 2003, p. 171]

CHAPTER VIII

CONCLUSION

This thesis has presented robust evidence of the existence of a velar nominalizing prefix in Western TB and Qiang/Northeastern TB as well as in the residual category of Central TB, which is likely to get reclassified as more than only one TB branch with advances in the documentation of TB languages. The only branch, where no data of clear evidence could be found, is Southeastern TB, a branch that has mostly become isolating as it has lost the inherited PTB morphology more generally.

The data have shown that the PTB 'adjectival prefix' (§1.1) cannot be reasonably isolated from other functions of nominalization in the languages as presented in this thesis. The only plausible explanation of the widespread occurrence of this 'adjectival prefix' along with its use for other functions typically associated with nominalization in TB is that we are in fact dealing with a nominalizer at the stage of PTB that has developed to mark clusters of functions in the various languages, different for different languages but always with recurrent elements.

There is quite a number of issues addressed briefly throughout this thesis and emerging now as we draw a conclusion that await further study in future research. On the TB historical-comparative side, the relationship between our **gV-* nominalizer, the TB genitive velar suffix (e.g. *-kyi* in Classical Tibetan (WTB), *-ki* in Meithei (CTB)), and the TB velar copula (e.g. *gi* in Tshangla (WTB), *ka* in Tani (WTB)) would be interesting to explore. A nominalization-genitive syncretism[59] exists in the Western TB language Chantyal's *-wa* suffix, where the genitive is argued to have developed from a nominalizer

[59] Cf. Matisoff's (1972) famous article on 'Lahu nominalization, relativization, and genitivization'.

through the stage of relative clause marking (as an extension of nominal modifier marking, which is essentially the same explanation used in the present study for the occurrence of **gV-* on numerals and quantifiers) as argued by Noonan (1997). An example for the close relationship between nominalizers and copulas in TB is the fact that **way* is reconstructed as both a nominalizer and a copula by Matisoff (2003, pp. 645,660).

Another TB historical-comparative project that remains for future study is to come up with a plausible scenario of the historical pathways that created the *a-gV-* and *gV-...-pa* constructions referenced in this thesis. Also, language-specific projects would be to see if the Tangkhul *gV-...-t* construction for the derivation of abstract nouns and the the *to-gV-* construction in Cogtse rGyalrong for the derivation of patient nouns can be traced back to their origins.

Another construction to explore not only of interest for TB studies, but also with a more general typological implication is reduplication. Data presented here show that reduplication creates the headless relative clause construction in Tangkhul (§3.3), as well as appears to exist in Sema Naga (§3.6) and in Lisu (§6.1.1) in an adjective modification construction although the functional effect is unknown. We do know, however, that in Lisu, a reduplicated verb root without further marking behaves syntactically nominal – which might have developed from an original nominalizer plus reduplicated verb root construction.

These are only a few research directions that can be taken from here. It seems like the systematic study of nominalization in Tibeto-Burman has just begun, and many questions about the relationships between functions have not been answered yet, others have not even been possible to ask yet. It is my hope that this thesis will constitute a valuable point of reference for future research.

APPENDIX A

DATA OF VELAR PREFIXES WITH PUTATIVELY UNRELATED FUNCTIONS

1. EXHORTATIVE

1.1. Nocte (Konyak; Sal; Central TB)

(no other data on velar prefixes, not with adj or infinitive)

(A1) *kha-cha/ye/e* 'Let us eat.'
kha-boan-tong-e 'Let us take a rest.'
kha-cen-ka-a 'Let him go.'
(Nocte; Konyak; Sal) [Das Gupta, 1971, p. 27]

1.2. Sulung (Sherdukpen, Bugun/Khoa, Sulung, Lishpa; Western TB)

(no other data on velar prefixes)

Exhortative 'let' with *ki* (see Tayen, 1990)

2. CAUSATIVE

2.1. Tangsa (Konyak; Sal; Central TB)

(no other data on velar prefixes)

(A2) *naosa-ra* *satha*
child eats
'The child eats.'
(Jogli/Yogly dialect of Tangsa; Konyak; Sal; Central TB)
[Das Gupta, 1980, p. 32]

(A3) *anyiao-ra* *nao-ma* *ka-sai-tha*
mother child **ka**-eat
'the mother feeds the child'
(Jogli/Yogly dialect of Tangsa; Konyak; Sal; Central TB)
[Das Gupta, 1980, p. 32]

(A4) *kimrang* *khomta*
horse walk
'the horse walks'
(Jogli/Yogly dialect of Tangsa; Konyak; Sal; Central TB)
[Das Gupta, 1980, p. 32]

(A5) *nga* *kimrang* *ka-khom-ta-lak*
I horse **ka-**walk
'I make the horse walk'
(Jogli/Yogly dialect of Tangsa; Konyak; Sal; Central TB)
[Das Gupta, 1980, p. 32]

2.2. Daai Chin (SK-C; Mizo-Kuki-Chin; Central TB)

(velar prefix associated with participant nominalization, adjectival modifiers, *a-gV-* construction)

"With descriptive verbs, *k-* adds an intensive or causative meaning; with intransitive verbs, *k-* makes the verb transitive, causative, or directive." (Hartmann, 2001b, p. 130)

(A6)

sang	'be right'	*k-sang*	'take one's part'
bäü	'be/do wrong'	*k-bäü*	'blame'
sim pyak	'fall apart'	*k-sim k-pyak*	'destroy'
pha	'arrive'	*k-pha*	'catch up/cause to arrive'

(Daai Chin; SK-C; Mizo-Kuki-Chin; Central TB) [Hartmann, 2001b, p. 130]

3. REFLEXIVE

3.1. Tiddim Chin (NK-C; Mizo-Kuki-Chin; Central TB)

(*ki-* also marking reciprocals, passives and benefactives, possibly relative clauses as well)

"'ki-' with a following indicative verb form usually calls for translation by what are frequently called 'passive' or 'reflexive' constructions in English." (Henderson, 1965, p. 97)

(A7) *baibek* *gual+nuam* *lua* *ki-sa* *in*
r.v.bulbul enjoy.oneself so.much **ki-**feel FP
'the red-vented bulbul was enjoying himself so excessively'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 97]

(A8) *ka* *ki-sat* *kha*
1:EXCL **ki-**hit:IND be.bitter:IND
[to hit oneself by mistake]
'I hit myself by mistake'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 99]

3.2. Mro (NK-C; Mizo-Kuki-Chin; Central TB)

(there are two velar prefix reflexes of **gV-* in Mro, one marking adjectival modifiers and occurring in *a-gV-* construction, the other one deriving participant nouns; regarding putatively unrelated functions, it marks reflexives, reciprocals, and verbalization)

(A9) *msyn* 'decorate' *ka-msyn* 'make oneself beautiful'
mshie 'wash' *ka-mshie* 'wash oneself'
(Mro; SK-C; Mizo-Kuki-Chin; Central TB) [Hartmann, 2001a, p. 137]

4. RECIPROCAL

4.1. Tenyidie/Angami Naga (Central TB)

(Tenyidie *kê-* also marks participant nominalization, derives adjectival modifiers, and occurs on verbs in relative, complement, and adverbial clauses, as well as on

quantifiers; regarding putatively unrelated functions, *kê-* marks reciprocals and verbalization)

(A10) *kê-sî* 'to know each other' (*si* 'to know')
kê-sē 'to meet each other' (*se* 'to meet')
kê-prî 'to fear each other' (*prí* 'to fear')
kê-tsə̀ 'to give to each other' (*tsə̀* 'to give')
(Tenyidie (Angami Naga); Central TB) [Kuolie, 2006, p. 123]

4.2. Tiddim Chin (NK-C; Mizo-Kuki-Chin; Central TB)

(*ki-* also marking benefactives, passives and reflexives, possibly relative clauses as well)

(A11) *ki-it* *ni*
ki-love:IND IMP:1PL:INCL
'let us love one another'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 99]

(A12) *amau gel* *a-ki-it-uh* *hi*
3PL REFL 3-**ki**-love:IND-3PL FP
'they love one another'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 99]

4.3. Siyin (NK-C; Mizo-Kuki-Chin; Central TB)

(no other velar prefixes found)

Stern, 1984: Reciprocal marker *kî-*.

4.4. Mro (NK-C; Mizo-Kuki-Chin; Central TB)

(there are two velar prefix reflexes of **gV-* in Mro, one marking adjectival modifiers and occurring in *a-gV-* construction, the other one deriving participant nouns; regarding putatively unrelated functions, it marks reflexives, reciprocals, and verbalization)

(A13)

ho	'speak'	*kaho*	'speak with each other'
mkon	'answer'	*kamkon*	'discuss'
khei	'love'	*kakhei*	'love each other'

(Mro; SK-C; Mizo-Kuki-Chin; Central TB) [Hartmann, 2001a, p. 137]

4.5. Thadou (NK-C; Mizo-Kuki-Chin; Central TB)

(*kī-* occurs with reciprocals, verbalization, and passives)

(A14)

kī-hlèp	'deceive'	*ī-kī-hlèp*	'deceive each other'
kī-mú	'see'	*ī-kī-mú*	'see each other'
kī-pòm	'embrace'	*ī-kī-pòm*	'embrace each other'
kī-tÀn	'be cut'	*ī-kī-tÀn*	'cut each other'
kī-thù?	'revenge'	*ī-kī-thù?*	'to take revenge on each other'

(Thadou; NK-C; Mizo.Kuki-Chin; Central TB) [Krishan, 1980, p. 62]

ī- optional if *-tò?* is suffixed:

(A15)

(ī-)kī-sil-tò?	'to wash each other'
(ī-)kī-záp-tò?	'to fan each other'
(ī-)kī-ló-tò?	'to resemble each other'

(Thadou; NK-C; Mizo.Kuki-Chin; Central TB) [Krishan, 1980, p. 62]

4.6. Athpare (Eastern Kiranti; Kiranti; Western TB)

(Athpare *ka-* also marks participant nominalization in the *gV-...-pa* construction)

"[The reciprocal participle] is formed by inserting the AP formant /ka-/ between the reduplicated stem. A reciprocal action is expressed by the participle together with the verb /ca-/ 'eat', which functions as a reflexive-reciprocal auxiliary" (Ebert, 1997a, p. 80)

(A16) *ani hup-ka-hup cay-i-e*
we(PI) embrace-**AP**-embrace AUX:REFL:PB-1/2-PT
'we embraced each other'
(Athpare; Eastern Kiranti; Kiranti; Western TB) [Ebert, 1997a, p. 79]

(A17) *unci lem-ga-lem u-cay-e*
they beat-**AP**-beat 3A/S-AUX:REFL:PB-PT
'they beat each other'
(Athpare; Eastern Kiranti; Kiranti; Western TB) [Ebert, 1997a, p. 79]

(A18) *unci-ŋa misen ni-ga-ni*
they-OBL acquaintance know-**AP**-know

o-co-mett-u-ci-ci
3A/S-AUX:REFL:3U-CAUS-3U-3NS.U-NPT:[copy]

'they make them introduce each other'
(Athpare; Eastern Kiranti; Kiranti; Western TB) [Ebert, 1997a, p. 79]

4.7. Belhare (Eastern Kiranti; Kiranti; Western TB)

(Belhare *ka-* also marks participant nominalization in the *gV-...-pa* construction)

"Reciprocity is expressed by *V-ka-V* or *V-kabila* with the auxiliary *cama*. The construction with *-kabila* incorporates a benefactive notion, cf. *han-ka-han* or *han-kabila cama* 'to distribute among each other (from *han-ma* 'to distribute'), but *tha tok-ka-tok* vs

**tha tok-kabila cama* 'to know each other (from *tha tok-ma* 'to know')." (Bickel, 2003, p. 561)

(A19) *han-ka-han* *han-kabila* *cama*
distribute-**ka**-distribute distribute-RCPR AUX
'distribute among each other' id.
(Belhare; Eastern Kiranti; Kiranti; Western TB)
[Bickel, 2003, p. 561; glosses added]

(A20) *tha + tok-ka-tok* **tha + tok-kabila* *cama*
know-**ka**-know
'know each other'
(Belhare; Eastern Kiranti; Kiranti; Western TB)
[Bickel, 2003, p. 561; glosses added]

5. VERBALIZATION

5.1. Tenyidie/Angami Naga (Central TB)

(Tenyidie *kê-* also marks participant nominalization, derives adjectival modifiers, and occurs on verbs in relative, complement, and adverbial clauses, as well as on quantifiers; regarding putatively unrelated functions, *kê-* marks reciprocals and verbalization)

(A21) *kê-thê + miè* 'to treat a person honorably' (*thê + miè* 'man')
kê-thê + nŭ 'to behave like a woman' (*thê + nŭ* 'woman')
kê-sêguó 'to have many children like a crab' (*sêguó* 'crab')
kê-rətsŏ 'to put on beautiful costumes' (*rêtsô* 'decoration')
(Tenyidie (Angami Naga); Central TB) [Kuolie, 2006, p. 124]

5.2. Thadou (NK-C; Mizo-Kuki-Chin; Central TB)

(*kī-* occurs with reciprocals, verbalization, and passives)

"[…] a bound morpheme *kì-*, also used as neuter marker […] is prefixed to the noun base or a bound form. These roots are always transitive." (Krishan, 1980, p. 59)

(A22)	*lói*	'friend'	*kī-lói*	'to accompany'
	vòp	'lap'	*kī-vòp*	'to carry (in lap)'
	thÀt	'killing'	*kī-thÀt*	'to commit suicide'
	tém	'request'	*kī-tim*	'to request'
	-cát	'fear'	*kī-cát*	'to fear'

(Thadou; NK-C; Mizo.Kuki-Chin; Central TB) [Krishan, 1980, p. 59]

5.3. Mro (NK-C; Mizo-Kuki-Chin; Central TB)

(there are two velar prefix reflexes of **gV-* in Mro, one marking adjectival modifiers and occurring in *a-gV-* construction, the other one deriving participant nouns; regarding putatively unrelated functions, it marks reflexives, reciprocals, and verbalization)

(A23)	*(a)the*	'fruit'	*k-the*	'bear fruit'
	(a)pau	'flower'	*k-pau*	'flower/blossom'

(Mro; SK-C; Mizo-Kuki-Chin; Central TB) [Hartmann, 2001a, p. 136]

6. NEGATIVE IMPERATIVE

(cf. Wood (2008, p. 92) Proto-Boro-Garo negative copula **gəy*)

6.1. Sema Naga (Central TB)

(velar prefix also marks adjectival modifiers and occurs on quantifiers)

Negative imperatives contain postverbal *-ke*, which is not present in other inflections such as past tense in (23), habitual aspect in (24), progressive aspect in (25), and with the modal to express ability in (26).

(A24) *cú* 'eat/ate'
cú-lò 'eat!'
*cú-**ke**-lò* 'do not eat!'
cú-pe 'cause to eat!'
cú-pe-ke-wi-lò 'do not cause to eat!'
(Sema Naga; Central TB) [Sreedhar, 1980, p. 117]

(A25) *cú-wà* 'ate'
cú-mo-we 'did not eat'
(Sema Naga; Central TB) [Sreedhar, 1980, p. 117]

(A26) *cú-cenì* 'eats (habitually)'
cú-cemo 'does not eat (habitually)'
(Sema Naga; Central TB) [Sreedhar, 1980, p. 117]

(A27) *cú-anì* 'is/was eating'
cú-amo 'is/was not eating'
(Sema Naga; Central TB) [Sreedhar, 1980, p. 117]

(A28) *cú-luwe* 'could eat'
cú-mlawe 'could not eat'
cú-mla / cú-lumla 'cannot eat'
(Sema Naga; Central TB) [Sreedhar, 1980, p. 117]

6.2. Miju (Central TB)

(velar prefix also marks participant nominalization, derives adjectival modifiers, and occurs on numbers one to six)

Velar **suffix** marking negative imperatives:

"[The negative imperative] is also expressed by inserting *ka/kai* between the verb and the tense suffixes for recent future." (Das Gupta, 1977, p. 32)

(A29) *hinglung wan thal-**ka**-yu* 'Do not break the glass!'
*tai-**ka**-yu* 'Do not go!'
(Miju;Mishmi; Central TB) [Das Gupta, 1977, p. 32]

7. BENEFACTIVE

7.1. Tiddim Chin (NK-C; Mizo-Kuki-Chin; Central TB)

(*ki-* also marking passives, reciprocals and reflexives, possibly also relative clauses)

"With a following subjunctive verbal form the sense to be conveyed by the translation is that of an action performed for or on behalf of someone else." (Henderson, 1965, p. 99)

(A30) *sial* *ki-go* *pen*
mithan **ki**-kill:SUBJ FP
'the mithan that was killed'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 99]

(A31) *hausapa* *sial* *a-ki-gawh* *hi*
headman mithan 3-**ki**-kill:SUBJ FP
'a mithan was killed for the headman'
(Tiddim Chin; NK-C; Mizo-Kuki-Chin; Central TB) [Henderson, 1965, p. 99]

8. PASSIVE

8.1. Tiddim Chin (NK-C; Mizo-Kuki-Chin; Central TB)

(*ki-* also marking benefactives, reciprocals and reflexives, possibly relative clauses in the below examples (A32)-(A34))

(A32) *lopa* *a* *ki-kho + khia* *sa* *te*
grass 3 **ki**-weed.out:IND already NMLZ
'the grass which had already been weeded out' [Henderson, 1965, p. 97]

(A33) *Khaw + Lei* *a* *ki-ci* *mi* *khat*
PN 3 **ki**-call:IND man one
‚a man called Khaw Lei' [Henderson, 1965, p. 97]

(A34) *Khaw + Lei* *Ui* *Kai* *ki-ci* *hi*
PN dog lead **ki**-call:IND FP
‚it is called ‚Khaw Lei Leading his Dog' [Henderson, 1965, p. 97]

8.2. Thadou (NK-C; Mizo-Kuki-Chin; Central TB)

(*kī-* occurs with reciprocals, verbalization, and passives)

"*Neuter Base* is formed by prefixing *ki-* to the basic verb roots or nouns [...]. These can be called passive and reciprocal." (Krishan, 1980, p. 62)

(A35) *thÀt* 'kill' *kī-thÀt* 'be killed'
dòp 'to lift' *kī-dòp* 'be lifted'
tÀn 'to cut' *kī-tÀn* 'be cut'
(Thadou; NK-C; Mizo-Kuki-Chin; Central TB) [Krishan, 1980, p. 62]

9. COPULA

9.1. Tshangla (Tshangla-Takpa; East Bodic; Western TB)

(no other data on velar prefixes)

"[...] copular clauses built on *gila* normally encode identity and set membership, but may also encode description, possession, location, and existence when special emphasis is being added." (Andvik, 2003, p. 448)

(A36) *ja-ga dung Wamrong **gila***
1S-LOC village PN COP
'my village is Wamrong'
(Tshangla; WTB) [Andvik, 2003, p. 448]

(A37) *unyu to zhimpu **gila***
DEM food sweet COP
'this food is delicious!'
(Tshangla; WTB) [Andvik, 2003, p. 448]

(A38) *om toka sha tsong-me **gi-du?***
now bull meat sell-INF COP-SUB
'how about selling meat?'
(Tshangla; WTB) [Andvik, 2003, p. 448]

(A39) *topda-gi khe-wa **gisa***
gun-AGT strike-NMLZ COP
'(he) may have been shot'
(Tshangla; WTB) [Andvik, 2003, p. 448]

(A40) *nangka shek-pa(-ga) songo-ba shadar phi-nyicha **giwala***
inside arrive-NMLZ(-LOC) person-PL shout do-NF COP COP
'the people who had arrived inside were shouting'
(Tshangla; WTB) [Andvik, 2003, p. 450]

10. TENSE/ASPECT

10.1. Cogtse dialect of rGyalrong (Qiangic; Northeastern / Qiang TB)

(velar prefix *kə-* derives adjectival modifiers, occurs on numbers one through seven and nine; velar prefix *ka-* marks non-final verbs obligatorily, and final verbs optionally)

ke-PFT 'remote past'
ke-IPF 'remote future'

(A41a) *ŋa* *pya-ŋ* *ko* (b) *ŋa* *ke-pya-ŋ* *ko*
1SG take-1SG AUX:S 1SG **TSF**-take-1SG AUX:S
'I am going to take (it)' 'I will take (it)'
(rGyalrong Cogtse; Qiangic; Northeastern / Qiang TB) [Nagano, 1987, p. 28]

(A42a) *ŋa* *nə-pya-ŋ* *ko* (b) *ŋa* *ke-nə-pya-ŋ* *ko*
1SG PF-take-1SG AUX:S 1SG **TSF**-PF-take-1SG AUX:S
'I have taken (it).' 'I took/had taken (it)'
(rGyalrong Cogtse; Qiangic; Northeastern / Qiang TB) [Nagano, 1987, p. 28]

10.2. Classical Tibetan

In Classical Tibetan, there is a *g-* prefix marking future tense (DeLancey, 2003a, p. 261; Hahn, 1979, p. 194), which could be related to **gV-*.

APPENDIX B

ABBREVIATIONS

Abbreviations Used in Glosses

:	Additional function/sense (in portmanteau-morphemes
-	Morpheme boundary
+	(Former) morpheme boundary between lexicalized combinations
.	Used in gloss if more words are needed for translation
ABL	Ablative
ABS	Absolutive
ABST	Abstract
ACC	Accusative
ADJ	Adjective
ADV	Adverb
AFTER	After V-ing
AGR	Agreement (Lamkang)
AGT	Agentive (Lamkang)
AP	Active Participle (Kiranti)
APT	Actual Present
ASSOC	Associative
ATTR	Attributive
AUX	Auxiliary
BEN	Benefactive
CAUS	Causative
CL.FIN	Clause Final (Mro)
CLF	Classifier
CNTR	Contrastive
COMPL.EVNT	Completive: Event (Lamkang)
CON	Continuative Aspect
COP	Copula
CVB.ST	Converb: State (Lamkang)
DDET	Distance Determiner
DEF	Definite
DEM	Demonstrative
DIM	Diminutive
DIR	Directional

DIST	Distal
DL	Dual
DLMT	Delimitative
EMPH	Emphasis
ERG	Ergative
EX	Exclusive
EXCL	Exclusive
EXCESS	V to Excess (Lamkang)
FP	Final Particle (Tiddim Chin)
FOC	Focus
FUT	Future
G	General
GEN	Genitive
GNM	Gnomic (Lamkang)
GOAL	Primary Object Marker and Preposition (Karbi)
HAB	Habitual
HON	Honorific
IMP	Imperative
INCL	Inclusive
IND	Indicative
INDEF	Indefinite
IPF	Imperfective
INST	Instrumental
INTENT	Intentional
INTR	Interrogative
IRR	Irrealis
LOC	Locative
M	Masculine
MID	Middle
N	Neuter
NEG	Negation
NEUT	Neutral Tense-Aspect Suffix
NF	Non-Final
NOM	Nominative
NMLZ	Nominalizer
NPT	Non-Preterite (Kiranti)
NS	Non-Singular
OPT	Optative
P	Patient
PART	Particle
PAST	Past Tense
PDET	Proximate Determiner
PERF	Perfective
PF	Perfect

PFV	Perfective
PFT	Perfective
PI	Plural inclusive
PL	Plural
PN	Proper name
POL	Polite
POSS	Possessive
PP	Postposition
PREF	Prefix
PROG	Progressive
PT	Preterite
Q	Interrogative/Question
RCM	Relative Clause Marker
RCPR	Reciprocity Marker
RDPL	Reduplication
RE	Reason Complementizer (Tenyidie)
REFL	Reflexive
S	Single Argument in an Intransitive Clause
S	Subject of an Intransitive or Reflexive Verb (Dumi)
SG	Singular
SI	Shared Information
SUBJ	Subject Marker
SVC	Serial Verb Construction
TOP	Topic
TSF	Tensifier (Cogtse rGyalrong)
U	Undergoer
V	Verb
VM	Verbal Marker
VN	Verbal Noun
VNC	Verbal Noun, Action (Dimasa)

Abbreviations Used in Text

AdvC	Adverbial Clause
CC	Complement Clause
CTB	Central Tibeto-Burman
JP	Jinghpaw
N	Noun
NEI	North East India
NETB	Northeastern Tibeto-Burman
NK-C	Northern Kuki-Chin
NP	Noun Phrase
PTB	Proto-Tibeto-Burman
RC	Relative Clause
SETB	Southeastern Tibeto-Burman
SK-C	Southern Kuki-Chin
TAME	Tense, Aspect, Mood, Evidentiality
TB	Tibeto-Burman
WTB	Western Tibeto-Burman

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