The verbal agreement system of four Khām languages

Boudewijn Rempt
Rijksuniversiteit te Leiden

In this paper a morphemic analysis is given of the verbal agreement systems of four Khām languages. Khām (Nepali: Khām Kurā) belongs with Kiranti (Nepali: Kīrāntī) and Newari (Nepali: Nēvārī) to the Himalayan subgroup of the Bodic division of Tibeto-Burman. Khām is spoken in the Dhaivalāgiri, Rāptī and Karnālī Zones of western Nepal by between 30,000 and 40,000 speakers of the ‘Bhuda’, ‘Ghartī’ and ‘Rokha’ subtribes. The ‘Pun’ subtribe once also spoke Khām, but have long since lost their command of the language and nowadays speak Nepali (Watters & Watters 1973). The area where Khām is spoken lies between the Naudāndā Lekh in the north, the Dhaivalāgiri in the east, the Hīchuli Pātan in the west and the Jaljalā-Nisāne Dhuri in the south. The villages are mainly found in the valleys of the Uttar Ganga and the Sānu Bheri (Oppitz 1981:260).

The Khām-speaking people call themselves Māgar and their language Khām, but the relationship between Khām and the Māgar language is not a very close one (van Driem 1993). Like many other small minorities in Nepal, the speakers of Khām identify themselves with a larger and stronger ethnic group to gain in status, in this case with the Māgar, who rank relatively high in the caste hierarchy of Nepal (van Driem 1991b). Oppitz calls them ‘Northern Magar’ or ‘Kham speaking Magar’ (Oppitz 1981:260).

Their centre of habitation is the village of ‘Taka’ (Nepali: Takā) in Bāグルn district of Dhaivalāgiri Zone. Takā is mainly inhabited by members of the ‘Bhuda’ subtribe. Their language, Takāle Khām, is the most prestigious of all Khām languages and reportedly all speakers of Khām are proficient in it (Watters & Watters 1973). Takāle Khām is also spoken in the ‘Sera’ village, also in Bāグルn district (Watters 1973). There are several other Khām languages, ‘Gamāle’ (Nepali: Gamāle) and ‘Sheshi’. Some smaller dialect groups are reported, of which ‘Mhai’, ‘Maikot’ and ‘Nisi-Bhuji’ are the most important. Nisi-Bhuji is said to be a descendant of Takāle Khām.

Traditionally the Kham are a pastoral people migrating with their large flocks of sheep and goats. It seems that only recently have they begun growing crops, mainly potatoes and maize (Oppitz 1981: 261-2). According to De Sales (1984), the Kham-Magar still practice transhumance (seasonal movement of livestock).

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1 If only rough transcriptions of ethnonyms from the Nepali are known, they are given in quotation marks when they first appear, e.g. ‘Sheshi’. If a more accurate transcription is known, this is given between parentheses, e.g. (Nepali: Takāle).
Until recently the Kham-Magar possessed a shamanistic tradition, in which however the chants were sung in Nepali (De Sales 1984). Michael Oppitz (1981) has also researched the shamanistic traditions of the Kham Magars in the late seventies. Watters, too, has published a paper on Kham shamanism (Watters 1975b), pointing to resemblances between Siberian and Tibeto-Burman shamanistic traditions.

Watters (1991) reports that these languages are all mutually unintelligible. Each community has its own language, and even within the same language group, going from one village to the next means a change of dialect. The most important differences between the languages are found in their verbal systems. There also seems to be a dichotomy between the south-western group of dialects and the rest, in that south-western dialects, such as Mhai Khām, do not have lexical tone, while other dialects, such as Takāle, have lexical tone. In the tonal dialects, tone is an important indication of the cohesiveness and age of the affixes. However, only for Takāle Khām have the tonal characteristics of the verbal morphology been described, while it is not certain that Mhai Khām is indeed an atonal language (Watters 1975a: 67). Some languages (e.g. Malikot Khām) are phonologically much more innovative than the other languages (e.g. Bhuji Khām) (Watters 1975a:50), as is shown, for instance, in the degree of assimilation of the dual number suffixes to the free pronouns.

A detailed morphemic analysis of the Khām conjugations makes a tentative reconstruction of the verbal morphology of proto-Khām possible. This reconstruction can then be compared to similar reconstructions made for Kiranti and other Tibeto-Burman languages.

Conventions in this paper

The SIL orthography used in Watters (1973) for the description of Takāle Khām is adapted in this paper to his later transcription. The digraph *ng* is replaced by *ŋ*. The symbol *x* for schwa is replaced by *ə*. The translations of the examples have been taken directly from the sources.

**Abbreviations**

- Σ: verb stem
- sf: suffixal slot
- pf: prefixal slot
- 1: first person
- 2: second person
- 3: third person
- s: singular
- d: dual
- ns: non-singular (*more than one*)
1. DATA

Descriptions were available of the north-western language Takâle Khām (Watters 1973 and 1991, Watters & Watters 1973, Hale 1973), of Gamāle Khām (Watters 1991), Sheshi Khām (also Watters 1991) and of the south-western language Mhai Khām (Watters 1975). The verbal agreement system of Takâle Khām has been analysed before by Watters (1973), Weidert (1985) and van Driem (1993). Mhai Khām has previously been analysed by Watters (1975a) and DeLancey (1988). Most of the third person forms of the Mhai Khām transitive paradigm are missing from Watters (1975a), while DeLancey (1988) only gives singular forms, and in two instances incorrect ones. The data presented in Watters (1991) for Takâle Khām differ from the data on the same
language given in Watters (1973). In the description of Gamâle and Takâle, given in Watters (1991), dual patient forms are not given.

2. Characteristics of the Khâm Verb

Although there are many differences between the verbal systems of the four Khâm languages discussed in this paper, some similarities stand out. The most important is the distinction between two modes which is made in all Khâm languages. These two modes are variously labelled 'active' and 'passive' (Watters 1973), 'finite' and 'participial' (Watters 1975), 'response elicitation' and 'orientation' (Watters 1978) or 'narrative' and 'parenthetic' (Watters 1991). In this paper, for the sake of consistency, the terms 'narrative mode' and 'parenthetic mode' have been used everywhere, but in view of the use and meaning of this verb form a better name for the parenthetic mode would perhaps be 'participle in -o' or 'relative participle' or 'nominalised finite verb'.

In Khâm languages, the basic form of the parenthetic verb has preterite time reference. The parenthetic mode shows fewer tense distinctions than the narrative mode. Parenthetic mode is always indicated by the affixation of a form of the special parenthetic marker <-o> or <-u>, which in all Khâm languages is homophonous with the third person singular agent affix. In some cases the parenthetic mode is further indicated by a re-ordering of the agreement affixes.

The parenthetic verb functions as a relative participle. Its semantics seem to be comparable to those of the Nepalese participle in <-eko>, the Hayu participle in <-ji> or Limbu nominalised conjugated simplicia with the suffix <-pa>. The semantic value of the Khâm parenthetic mode verb form has not yet been described adequately, however, and it is not at all clear whether the parenthetic mode verb has the same range of uses in all languages of Khâm.

Watters (1975a:60) notes some tendencies for the Takâle parenthetic mode verb. It seems that if the parenthetic verb is prefixed by a possessive pronoun its antecedent is an object, otherwise a subject. The prefixed possessive pronoun correlates with the subject. From this description (Watters 1975a) it would appear that parenthetic mode verbs exist both with and without prefixes, although this is mentioned nowhere else.

(Watters 1975a:60, Takâle Khâm)

1. o-poh-o  (that) which he struck, 'that of his striking'
2. poh-o     (he) who struck it

If the antecedent of the participle is an object, the action stands in a genitive relation to the agent, which is indicated by the possessive pronoun. This use of possessive pronouns indicates the nominal nature of the parenthetic verb form. The object of such a possessed parenthetic verb form occurs at the beginning of the whole clause, giving the impression of a passive
construction. Watters (1970:60) postulates the existence of a copular verb with zero expression which is opposed to a negative copular verb.

(Watters 1975a:60, Takâle Khâm)

(3) 'ao ẑihm ram-e o-ő-ja-ő-o Ǿ
   this house Ram-ERG 3SA-3SP-build-PT-PAR Ǿ.copula
   'This house is of Ram's building, this house was built by Ram.'

(4) 'ao ẑihm ram-e o-ő-joy-ő-o ma:khə
   this house Ram-ERG 3SA-3SP-build-PT-PAR NEG.copula
   'This house is not of Ram's building, this house wasn't built by Ram.'

The parenthetic mode is also described as giving 'aside information', as being 'a kind of relativised clause which operates as an equative clause at the discourse level' (Watters 1991:20), or as being used to 'set the stage for a narrative or to give information outside the flow of the story' (Watters 1978). These functions would be in keeping with the participial nature of the parenthetic verb form. Carol Genetti (1992:410-411) also analyses the parenthetic mode constructions of Khâm in terms of relative clause constructions.

In three of the four Khâm languages discussed (namely Takâle Khâm, Gamâle Khâm and Mhai Khâm), transitive verbs show person and number agreement with both agent and patient. Intransitive verbs agree with person and number of the intransitive subject. Sheshi Khâm shows only subject agreement, both in intransitive and transitive verbs. Those Khâm languages in which the transitive verb agrees with the agent as well as with the patient contrast with other pronominalizing languages, such as the Kirântî languages Hayu and Bahing, in that Khâm languages often have discrete agent and patient affixes instead of fused portemanteau morphemes.

\[
\begin{array}{ll}
\text{Takâle Khâm} & \eta \Sigma \ni-t \\
\text{Hayu} & \Sigma \ni \\
\text{Bahing} & \Sigma \nā
\end{array}
\]

\[
\begin{array}{ll}
1s \rightarrow 2s & (<\eta \ni> 1sA, <\ni> 2sP) \\
& (<\ni> 1s \rightarrow 2) \\
& (<\nā> 1s \rightarrow 2)
\end{array}
\]

Where the Kirântî languages have a single fused affix to express the nature of both actants, Takâle Khâm expresses the same meaning by two separate affixes. Khâm is also unusual in that it exhibits both a prefixal and a suffixal agreement system. These prefixes have variously been analysed as a secondary development (Watters 1973) or as a retention from Tibeto-Burman (DeLancey 1988). Recently published evidence (Watters 1991) supports the former view rather than the latter.
The agreement systems of the Khâm languages do not formally distinguish between all seventy-five possible scenarios, as is also the case with the other pronominalizing Tibeto-Burman languages, even with present-day Bahing (van Driem 1991a). In all Khâm languages, widespread syncretism exists among scenarios, especially those with non-singular actants. For example, in Takâle Khâm the form je-S-si-T is used in three different situations, namely 2d→1p, 2p→1d and 2p→1p, as the distinction between second person dual agent and second person plural agent is neutralised in scenarios with a plural first person patient.

Compared to other pronominalizing languages, such as Bantawa Rai and Limbu, the Khâm languages show much more differentiation in their third person forms. Bantawa Rai distinguishes between dual and plural number of a third person actant only in the intransitive conjugation (Foltan 1992:9-11) and the Limbu transitive verb differentiates third person dual and plural actants only for third person agents in scenarios with a third person patient (van Driem 1987).

As van Driem (1992) observed for Tibeto-Burman pronominalizing languages, there is a tendency to keep the number of distinctive forms maximal for scenarios with a first person actant. While a hierarchy of distinctness according to person of actant is clearly present in languages such as Kulung (Tolsma 1993), in Khâm the most important parameter in determining distinctness is number. Singular actants of all persons are in most cases distinguished from dual or plural actants, while dual and plural actant markers have often merged into a non-singular marker.

3. Takâle Khâm

3.1. Data

Takâle Khâm is known through two descriptions provided by Watters (1973 and 1991). These descriptions are slightly conflicting and, in their conflict, also shed doubt on the accuracy of the data for Gamâle Khâm presented in Watters (1991). These discrepancies mainly involve the conflation of dual and plural patient morphemes. In the later paper, no dual patient forms are given, but some dual patient forms, according to Watters (1973), are given as plural patient forms in Watters (1991), e.g. the 2d→1d form ji-n-S-sit (1973) becomes 2d→1p (1991), in place of 2d→1p je-S-sit (1973). Moreover, in 1973, the 3d→2p and 3p→2p scenarios are expressed by the same form S-ci-T-ra, but in 1991 the form S-ci-T-ra is exclusively a 3p→2p form, with the form S-ci-T-ni, not recorded in Watters (1973), used for the 3d→2p scenario. Either genuine new forms have been discovered, or the data in Watters (1991) are somewhat idealised. Below a complete representation of both descriptions is given. The Takâle system is relatively simple compared to Gamâle Khâm, but the discrepancies between the two descriptions make an analysis problematic.
Another analysis is presented in van Driem (1993). The present analysis differs from his in the treatment of the parenthetic mode and the segmentation of the verbal complex in slots.

3.2 Phonology

Takâle Khâm is the only Khâm language for which a phonological description exists (Watters 1973, 1978 and Watters & Watters 1973). Twenty-two consonants are distinguished: /p, t, k, ph, th, kh, b, d, g, c, ch, j, s, z, h, r, l, m, n, v, w/ and six vowels: /i, e, a, a, u, o/. Vowels are distinguished for length and, if long, for nasalisation. In the transcription, length is shown by a colon and nasalisation by a following n. Only long vowels can be nasalised.

Takâle Khâm is a word-tone language. Tone consists of a combination of pitch pattern and voice register. There are two pitch patterns (high and low) and two voice registers (tense and lax). The lax voice register is marked with an h following the first vowel of a word. Watters does not provide an indication of pitch patterns in his grammatical and morphological descriptions. Only in the lexicon (Hiale 1973 and Watters & Watters 1973) is pitch indicated by an apostrophe preceding the syllable indicating tone 1, the high pitch. Since tone-related phenomena give a strong indication of the cohesiveness between the formatives in the affixal string (Watters 1985), information about tones is important for a correct analysis of the diachronic process. Watters (1975) presents some information about the tonal characteristics of some of the affixes of Takâle Khâm.

3.3 Synopsis of the verbal system

The transitive Takâle verb is obligatorily inflected for agent and patient. The intransitive verb is inflected for subject. Other obligatory flexional categories are tense/aspect and mood.

Nine different pronominal categories are distinguished by person and number: first, second and third person in singular, dual and plural number. In contrast to most other inflecting Tibeto-Burman languages, no Khâm language makes a distinction between inclusive and exclusive actants (Watters 1975). Since the Takâle verb agrees according to an accusative pattern, it is illuminating to show the intransitive verb forms next to the transitive verb forms in a table of the whole paradigm. With the exception of the third person singular transitive form Σ-7-∅ and forms not distinguishing dual and plural agent, intransitive forms are simply transitive forms without the patient marker.

There are four tenses: past <-ke>, terminate past <-e>, present <-zya> and future <-ya>. The past tense suffix <-ke> assimilates regularly to <-ki> before third person dual agent number <-ni>, illustrating the regular morphophonological assimilation of the vowel of some morphemes to an [i]
when the following morpheme contains an [i], a process which occurs in all Khâm languages.

Both past <-ke> and present <-zya> occur in the same suffixal slot, as does the terminate past <-e>, which has a zero allomorph if another morpheme follows the tense slot. The suffix of the future tense <-ya> occupies the last suffixal slot, suffixal slot 7, after the third person agent suffix slot. The marker of the future therefore occupies a different functional position than the other tenses in Takâle as well as in Sheshi Khâm. The future tense marker <-i-> is a prefix in Sheshi Khâm, as shown in 1s FUT əi-S-ŋa, while the past tense marker <-da> is a suffix, as in 1s PT S-ďa-ŋa.

Takâle third person agent suffixes fuse with the future tense suffix <-ya> in the following manner: 3s <-o> + FUT <-ya> → <-wa>, 3d <-ni> + FUT <-ya> → <-nya>, 3p <-ra> + FUT <-ya> → <-rya>.

Besides these obligatory categories, numerous optional particles and auxiliaries exist, indicating aspect, modality and so-called 'editorial status', defined by Watters (1973: 93) as expressing 'a number of editorial comments, or identifying the attitude of the speaker concerning the statement, or his attitude toward the listener.' Since these extensions occur after the simple inflected verbal form they have not been taken into account in this paper.

Table 1 gives the Takâle free pronouns, taken from Hale (1973). Table 2 shows the Takâle narrative mode agreement system according to Watters (1991). Table 3 gives the same system as presented in Watters (1973), but with the orthography adapted to Watters (1991). Table 4 gives the Takâle parenthetic mode, derived from Watters (1973: 102), but with some important changes in segmentation.

**Table 1. Pronouns of the 'Taka' & 'Sera' (Takâle) Khâm language  
(derived from Hale 1973:308-310)**

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Dual</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ŋa:</td>
<td>'gin</td>
<td>'ge:</td>
</tr>
<tr>
<td>2</td>
<td>nɔŋ</td>
<td>'jin</td>
<td>'je:</td>
</tr>
<tr>
<td>3</td>
<td>'əo, 'noː, 'hoː</td>
<td>əoni, noːni, hoːni</td>
<td>əora, noːra, hoːra</td>
</tr>
</tbody>
</table>

The forms used for third person pronouns are in fact proximal and distal deictics, not real third person pronouns. The dual forms əoni, noːni and hoːni consist of a dual marker <-ni> and the singular forms 'əo, 'noː and 'hoː. The plural forms əora, noːra and hoːra are similarly formed through affixation of the plural morpheme <-ra> to the singular forms. There is a strong indication that singular number in the context of Khâm in fact means 'unmarked for number', as is shown in example 5, where beːh 'basket' has singular verb agreement, although because of the iterative meaning the translation requires a plural. This is also the norm outside the area of European languages.
(5) ram-e be:h Ø-jay-Ø-o
    Ram-ERG basket 3sS-make-TRM-3sA
    'Ram makes baskets (from time to time).'\(^2\)

According to Watters (1975a) the third person non-singular free pronoun in proto-Khām was *'ya, which combined with the numeral '2' *nis to make a dual form and with one of two competing plural suffixes, *<-ra> or *<-ŋ>, to make a plural. The proto-Khām third person singular free pronoun is posited to be *'ol (Watters 1975a:54). These reconstructed third person pronouns, *'ya and *'ol, and not the modern third person pronouns, are thought by Watters to be the source of the third person affixes in the verbal paradigm.

In an earlier stage of Khām, first and second person dual free pronouns also consisted of two separate morphemes, namely a non-singular person morpheme and a dual number suffix *<-ni(s)>. In the conservative 'Bhuji' Khām language these pronouns still consist of two separate formatives: 1d ge-nis and 2d je-nis. Here the dual number suffix <-nis> is identical with the numeral '2' nis. In the innovative north-western 'Maikot' Khām language the corresponding forms have been reduced to 1d gi and 2d ji (Watters 1975:54).

\(^2\) English actually permits a similar usage: 'Ram makes a basket from time to time.' [Ed.]
### TABLE 2:

**Takāle agreement morphology (derived from Watters 1991:11-12)**

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>1sP</th>
<th>1dP</th>
<th>1pP</th>
<th>2sP</th>
<th>2dP</th>
<th>2pP</th>
<th>3sP</th>
<th>3dP</th>
<th>3pP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sA/S</td>
<td>ṭa-Σ-T</td>
<td></td>
<td>ṭa-Σ-ni-T</td>
<td>ṭa-Σ-ci-T</td>
<td>ṭa-Ø-Σ-T</td>
<td>ṭa-ra-Σ-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1dA/S</td>
<td>gi-n-Σ-T</td>
<td></td>
<td>gi-n-Σ-ni-T</td>
<td>gi-n-Σ-ci-T</td>
<td>gi-n-Ø-Σ-T</td>
<td>gi-n-ra-Σ-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1pA/S</td>
<td>ge-Σ-T</td>
<td></td>
<td>ge-Σ-ni-T</td>
<td>ge-Σ-ci-T</td>
<td>ge-Ø-Σ-T</td>
<td>ge-ra-Σ-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2sA/S</td>
<td>na-Σ-T</td>
<td>na-Σ-na-T</td>
<td>na-Σ-si-T</td>
<td>na-Ø-Σ-T</td>
<td>na-ra-Σ-T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2dA/S</td>
<td>ji-n-Σ-T</td>
<td>ji-n-Σ-na-T</td>
<td>ji-n-Σ-si-T</td>
<td>ji-n-Ø-Σ-T</td>
<td>ji-n-ra-Σ-T</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>2pA/S</td>
<td>je-Σ-T</td>
<td>je-Σ-na-T</td>
<td>je-Σ-si-T</td>
<td>je-Ø-Σ-T</td>
<td>je-ra-Σ-T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3sA/S</td>
<td>Σ-T-Ø</td>
<td>Σ-na-T-o</td>
<td>Σ-si-T-o</td>
<td>Σ-ni-T-o</td>
<td>Σ-ci-T-o</td>
<td>Σ-Ø-T-o</td>
<td>ya-Σ-T-o</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3:

'Taka' and 'Sera' verbal agreement morphology (based on Watters 1973:96-97)

<table>
<thead>
<tr>
<th></th>
<th>Intransitive</th>
<th>1sP</th>
<th>1dP</th>
<th>1pP3</th>
<th>2sP</th>
<th>2dP</th>
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<td></td>
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<tr>
<td>1dA/S</td>
<td>gi-n-Σ-T</td>
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</tr>
<tr>
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<td>ge-Σ-T</td>
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</tr>
<tr>
<td>2sA/S</td>
<td>no-Σ-T</td>
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<td></td>
</tr>
<tr>
<td>2dA/S</td>
<td>ji-n-Σ-T</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3sA/S</td>
<td>Σ-T-Ø</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3dA/S</td>
<td>Σ-T-ni</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3pA/S</td>
<td>Σ-T-œ</td>
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</tbody>
</table>

*Note: The table represents the verbal agreement morphology in the Taka and Sera languages, showing different forms for various grammatical features such as person, number, and tense.*
TABLE 4:

'Taka' and 'Sera' parenthetic paradigm (based on Watters 1973:101-102)*

<table>
<thead>
<tr>
<th></th>
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<th>1dP</th>
<th>1pP</th>
<th>2sP</th>
<th>2dP</th>
<th>2pP</th>
<th>3sP</th>
<th>3dP</th>
<th>3pP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sA</td>
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<td></td>
<td></td>
<td>ma-Σ-ni-T-o</td>
<td>ma-Σ-ci-n-T-o</td>
<td>ma-Σ-ci-T-o</td>
<td>ma-∅-Σ-T-o</td>
<td>ma-ni-Σ-T-o</td>
<td>ma-ra-Σ-T-o</td>
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<tr>
<td>1dA</td>
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<td>gi-n-Σ-ci-n-T-o</td>
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<td>gi-n-∅-Σ-T-o</td>
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<td>ya-ra-Σ-T-o</td>
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</table>

* The paradigm as given here differs in its segmentation from the paradigm as given by Watters (1973). Since it is possible for a parenthetic mode form to have both a tense marker and the parenthetic mode suffix <∅>, the parenthetic mode marker cannot occur in the tense slot.
3.4. Morphological analysis

In inflected forms of the Takāle Khām verb, four prefixal and seven suffixal slots or functional positions can be identified. These positions can be occupied by any of ten prefixal morphemes and seventeen suffixal morphemes. Table 2 shows fifty-one distinct forms for fifty-one theoretically differentiable scenarios meaning that all possible scenarios are distinguished. In Table 3, fifty-nine distinct forms appear for seventy-two theoretically differentiable scenarios, forty-eight of which are found to correspond to the fifty-one forms of Table 2.

Prefixal slot 1 (pf1) is the position for first and second person agent markers. Prefixal slot 2 (pf2) is the functional position of the first and second person agent/subject dual number marker <n>. Prefixal slot 3 (pf3) is occupied by the negative prefix <ma>. Third person patient morphemes occur in the fourth prefixal slot (pf4). Suffixal slot 1 (sf1) is occupied by first and second person agent morphemes and the reflexive morpheme <si>. Suffixal slot 2 is occupied by the first and second person dual number suffix <n>. An optional potential suffix can occupy suffixal slot 3 (sf3). Optional aspectual suffixes occur in suffixal slot 4 (sf4). while obligatory tense morphemes, with the exception of the future, occupy suffixal slot 5 (sf5). Third person agent number markers occupy the penultimate suffixal slot (sf6). The future tense morpheme occupies the last position in the suffixal string (sf7).

The agreement pattern is an accusative one. Intransitive subject and transitive agent are coded with the same morphemes, in opposition to the transitive patient, e.g. intransitive first person singular ȵa-Σ-T versus transitive 1s>2s ȵa-Σ-ni-T.

<table>
<thead>
<tr>
<th>pf1</th>
<th>pf2</th>
<th>pf3</th>
<th>pf4</th>
<th>Σ</th>
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<th>sf2</th>
<th>sf3</th>
<th>sf4</th>
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<td>Ø</td>
<td>na</td>
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<td>1nsP</td>
<td>N-INC</td>
<td>TRM</td>
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<td>zya</td>
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</tbody>
</table>
3.4.1 Prefixal slot 1: first and second person agents and subjects

<ηa-> 1s A/S
<ge-> 1ns A/S
<ηa-> 2s A/S
<je-> 2ns A/S

The first prefixal slot houses the first and second person agent/subject morphemes. The first person singular agent/subject prefix <ηa-> occurs in all forms with a singular first person agent or subject. The first person non-singular agent/subject prefix <ge-> is found in all forms where the number of the first person agent or subject is not singular and has two allomorphs, /ge/ and /gi/. The second allomorph, /gi/, occurs before the first/second person dual number marker <n->, historically related to the 3dA/S suffix <-ni> and the numeral 'two' nis. The 1nsA/S prefix <ge-> thus conforms to the regular Khâm morphophonological process where the vowel of certain morphemes assimilates to an [i] in some following morphemes.

The second person singular agent/subject morpheme <ηa-> occurs in all forms with a second person singular agent or subject. The second person non-singular subject/agent prefix <je-> occurs in all scenarios where the number of the second person subject or agent is not singular. It has two regular alternants, <je-> and <ji->. The second alternant occurs only before the first/second person dual number marker <n->, as with the 1nsA/S morpheme <ge->.

First and second person singular and plural agent/subject prefixes are identical to the possessive pronouns affixed to nouns. They are atonal, taking their tonal characteristics from the verbal root (Watters 1975a: 57).

3.4.2. Prefixal slot 2: the first/second person dual number affix <n->

<n-> 1/2dA/S

The first and second person agent/subject dual number prefix <n-> occurs in all scenarios with a first or second person dual agent or subject, except in the irregular 2d→1p form je-S-si-T (Watters 1973). This irregular form is not found in the 1991 representation of the paradigm, where a regular 2d→1p form ji-n-S-si-T is found. The 1/2dA/S prefix <n-> indicates duality of subject and agent in the first and second person. The 1/2dA/S prefix <n-> is historically derived from the general dual number suffix <-ni>, which is in this form still found for third person dual affixes, 3dA/S <-ni> and s→3d <ni>.

In other studies the 1/2dA/S prefix <n-> is not separated from the 1nsA/S prefix <ge-> and the 2nsA/S prefix <je->, giving two dual agent morphemes, 1dA/S <gin-> and 2dA/S <jin->. In such an analysis, 1nsA/S
<ge-> is analysed as a first person plural agent/subject marker, but 2nsA/S <je-> must still be analysed as a second person non-singular agent marker, and not as a second person plural agent marker (e.g. van Driem 1993:318), because of the 2d→1p form je-Σ-si-T.

3.4.3. Prefixal slot 3: the negative morpheme <ma->

<ma->   NEG

In prefixal slot 2, the negative morpheme <ma-> may occur. Watters (1973) analyses <ma-> as a question marker. It seems this interrogative use arises out of the negative meaning of <ma->, involving the interpretation of negative sentences as questions when the time reference is present or future.

Examples (from Watters 1973:106)
(6)  nata sya na-Ø-sayh-ya
2s-LOC game 2sa-3sp-kill-FUT
‘You’ll kill some game up there.’

(7)  nata sya na-ma-Ø-sayh-ya
2s-LOC game 2sa-NEG-3sp-kill-FUT
‘Did you kill some game up there?’

(8)  ya-ma-ra-cyu:
1sA-NEG-3pP-watch
‘I won’t watch them.’

Example 7 is probably better translated as ‘Didn’t you kill any game up there?’.

3.4.4. Prefixal slot 4: third person patient

<Ø->   3sp
<ni->   s→3d
<ya->~<ra->   3nsP
<yara->   3ns→3ns

Prefixal slot 4 houses the third person patient morphemes. The third person singular patient prefix <Ø-> occurs in all scenarios with a third person singular patient. The 3d→3d porte-manteau prefix <ni-> occurs in all scenarios with a singular agent and a third person dual patient. The third person non-singular patient prefix <ya-> has an allomorph <ra-> when it is not used word-initially and occurs in all scenarios with a third person non-singular patient, except where the distinction between dual and plural number of third
person actant is made by the use of the s→3d portemanteau prefix <ni-> or where the 3ns→3ns portemanteau prefix <yara-> is used. The 3ns→3ns portemanteau <yara-> is used in all 3ns→3ns scenarios. In contrast to the analysis provided by van Driem (1992), I consider this to be a single morpheme filling a single slot, thus dispensing with the need for another slot containing a 3ns→3ns portemanteau <ra->, homophonous with the <ra-> allomorph of the 3nsP prefix <ya->.

The third person prefixes form tonal compounds with the verbal stem in the same manner as nominal compounds are made from two lexical stems. (Watters 1975a: 54 and note 4). The 3ns→3ns prefix <yara-> may derive from two 3nsP prefixes <ra-> or from a proto-Khâm third person plural pronoun *ya and a plural marker *<-ra>. The diachronic origin of the other third person patient prefixes is clear. The s→3d prefix <ni-> is related to all nominal, pronominal and verbal dual markers in Takâle Khâm, derived from the proto-Khâm numeral *nis 'two', while 3nsP <ra-> is related to the nominal, pronominal and verbal marker of the plural <-ra> or <-ra>.

3.4.5. Suffixal slot 1: first and second person patient morphemes and the reflexive morpheme

<-si>     REF
<-na>     1sP
<-si>     1nsP
<-ni>     2sP
<-ci>     2nsP

Suffixal slot 1 houses the reflexive marker <-si> and the first and second person patient suffixes. First person singular patients are marked with the 1sP suffix <-na>. Whenever the number of the first person patient is not singular, suffixal slot 1 is filled by the 1nsP suffix <-si>. Second person singular patients are indexed in suffixal slot one with the 2sP suffix <-ni>. Whenever the number of the second person patient is not singular, suffixal slot 1 is occupied by the 2nsP suffix <-ci>. These suffixes are completely regular in distribution.

3.4.6. Suffixal slot 2: the first/second person dual number suffix <-n>

<-n>     1/2dP

The first and second person dual number suffix occurs in all forms with a first or second person dual patient, except in the 2d→1d ji-n-Si-T form. The 1/2dP suffix <-n> thus indicates duality of patient in the first and second person.

3.4.7. Suffixal slot 3: the potential affix <-du>

<-du>     POT/PPT
Suffixal slot 3 houses the potential suffix <-du>, which, like the Nepali auxiliary sakru expresses both ability/potentiality and a prior or completed past tense event. In many languages there is a relation between past tense and potential mood or irrealis.³ This relation is notoriously difficult to analyse. (Palmer 1986:210-215)

The potential/prior past suffix <-du> can occur in the past, present, future and terminate past tenses, and in the non-inceptive aspect. I have not found examples where POT/PTT <-du>, the non-inceptive suffix N-INC <-ta> and a tense suffix occur together. Watters (1973:108-110) contends that the POT/PTT <-du> occurs in suffixal slot 4, but since POT/PTT <-du-> can occur at the same time as the non-inceptive suffix <-ta> they cannot both occur in suffixal slot 4.

Examples (Watters 1973:109)
(9) ram ba-du-ke
   Ram go-pot/ptt-pt
   'Ram already went.'

(10) ram-e be:h Ø-jay-du-ke-o
    ram-ERG basket 3sp-make-POT/PTT-PT-3SA
    'Ram already made the basket.'

(11) ña: no han.to ña-guhm-du-e
    I that cliff-LOC 1sp-climb-POT/PTT-TRM
    'I can climb that cliff.'

(12) no-e zihm Ø-jay-du-wa
    he-ERG house 3sp-build-POT/PTT-3SA-FUT
    'He may be able to build a house.'

(13) ram-e o-ka:h ma-Ø-day-du-ta-o
    Ram-ERG 3sgen-dog neg-3sp-find-POT/PTT-N-INC-3SA
    'Ram has not been able to find his dog yet.'

3.4.8. Suffixal slot 4: optional aspectual morphemes

<-ri> IMP
<-ta> N-INC

³ This Khâm morpheme <-du> seems clearly cognate to the Lahu verb-particle tû 'purposive; irrealis,' though the range of this Lahu particle extends to the semantic realm of the future rather than the past. [Ed.]
Suffixal slot 4 houses the optional aspect morphemes, viz. the suffix of the impending aspect IMP <ri> and the suffix of the non-inceptive aspect N-INC <ta>.

The impending aspect <ri> occurs with both preterite and present tenses. The combination of preterite tense and impending aspect gives a notion of immediacy, while the combination of present tense and impending aspect indicates that something is sure to happen in the future, though not the near future.

Examples (from Watters 1973:109)
(14) ram gyoh:o ta-ri-ke-Ø
   Ram great become-IMP-PT-3SS
   'Ram is about to become great.'

(15) ram gyoh:o ta-ri-zya-Ø
   Ram great become-IMP-PRS-3SS
   'Ram will be great someday (sure, but distant).'

The non-inceptive aspect marker <ta> 'yet' can only occur with the negative morpheme <ma> in the terminate past tense <-e>, and indicates that the action has not yet begun.

Examples (from Watters 1973:109)
(16) ram ma-ba-ta-e-Ø
   Ram NEG-go-N-INC-TRM-3SS
   'Ram hasn’t gone yet.'

(17) ram-e ñalay⁴ ma-cyu:-na-ta-o
   Ram-ERG 1-lāī NEG-sec-1SP-N-INC-3SA
   'Ram hasn’t seen me yet.'

3.4.9. Suffixal slot 5: obligatory tense morphemes

<ke>     PT
<-e> - <Ø> TRM
<-zya>   PRS

Suffixal slot 5 is filled with one of the obligatory tense morphemes: past tense <ke>, terminate past tense <-e> and present tense <-zya>. If the tense is future, the future tense suffix <-ya> is placed last in suffixal slot 5 and suffixal

⁴ The Khām postposition -lay is obviously a loan of the Nepali postposition -lāī, and I gloss it as such.
slot 3 remains empty. Terminate past tense <-e> has a zero allomorph when it is not the last morpheme of the affixal string.

The preterite tense <-ke> indicates that the action or state had its starting point in the past. It may imply that the action is still going on, but it is not clear whether this is an implication arising out of the context, or part of the core meaning of the tense.

Examples (from Watters 1973:101)
(18) ram ba-ke-Ø
    Ram go-PT-3ss
    ‘Ram went.’

(19) na-zá syan-ke-Ø
    1sGEN-child sleep-PT-3ss
    ‘My child slept (and is still asleep).’

The terminate past tense <-e> is not a true tense despite its name. Any temporal reference is dependent upon the context, either in the form of time adverbs or a general temporal frame of reference. According to Watters (1973: 100) terminate past <-e> bears an ‘iterative’, ‘axiomatic’ or ‘eventive’ connotation. It seems to function as an imperfective aspect marker. The terminate past suffix <-e> has a zero allomorph if followed by another morpheme.

Examples (from Watters 1973:100-101)
(20) kan. zyu-kə ka:h-rə hu-Ø-rə
    food eat-GER6 dog-p come-TRM-3pA
    ‘When food is eaten, dogs come.’

(21) ram-e ahjyo na-be:h Ø-jay-Ø-o
    Ram-ERG yesterday 2sGEN-basket 3sp-make-TRM-3SA
    ‘Ram made your basket yesterday.’

(22) ram-e be:h Ø-jay-Ø-o
    Ram-ERG basket 3ss-make-TRM-3SA
    ‘Ram makes baskets (from time to time).’

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5 A better translation would perhaps be ‘My child has fallen asleep’ or ‘My child has gone to sleep’.

6 The only context in which a verbal suffix <-kə> is mentioned by Watters is as part of a third person hortative marker, which consists of a prefix <-gəl-> and a suffix <-kə> (Watters 1973: 120-121). There also seems to be a locative suffix <-kə>, glossed as ‘at’ (Watters 1973:50). In this example, zyu-kə is glossed by Watters as ‘when eaten’, which seems to indicate that a gerundive suffix <-kə> GER also exists, perhaps related to the locative <-kə>.
(23) ram  nam-so ma-ba-e?
Ram 2s-COM NEG-go-TRM
'Has Ram gone with you?'

The present tense <-zya> indicates that the action is in motion or the state current in the present. According to Watters (1973:101) its meaning ranges from 'recent iterative' to 'present continuous'.

Examples (Watters 1973:101)
(24) ŋa-zihm  bənɔ yu:-zya-Ø
1sGEN-house really leak-PRS-3ss
'Ve my house is really leaking (now). / As of late my house is really leaking.'

(25) ram sin-da ba-zya-Ø
Ram wood-for go-PRS-3ss8
'Ram is going for firewood. / As of late Ram has been going for firewood.'

(26) no-ra-e zihm  Ø-jay-zya-ra
3p-ERG house 3sp-build-PRS-3sa
'As of late they have been building a house. / They are (now) building a house.'

3.4.10. Suffixal slot 6: third person agent/subject morphemes

<-Ø>  3ss
<-o>  3sa
<-ni>  3da/s
<-ra>  3nsa/s

Suffixal slot 6 is occupied by the third person subject and agent morphemes. Third person singular subject and agent are differentiated, in contrast with the situation for the first and second person subjects and agents. A third person singular intransitive subject is indexed zero. A third person singular transitive agent is indexed by the 3sa suffix <-o>, which occurs in all transitive scenarios with a third person singular agent.

In the description provided in Watters (1973), the third person non-singular agent/subject suffix <-ra> occurs in all scenarios with a third person non-singular agent or subject, except where dual number of third person agent or subject is indicated by the third person dual agent/subject suffix <-ni>, viz. in the 3ds Σ-Τ-ni, 3d→1s Σ-na-Τ-ni, 3d→2s Σ-ni-Τ-ni, 3d→3s Ø-Σ-Τ-ni and 3d→3ns yara-Σ-Τ-ni forms. The paradigm in Watters (1991) is

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7 A better translation would perhaps be 'As of late, my house has really been leaking'.
8 Since sin. is not the grammatical patient, it is not marked in the verb, and the subject does not get the ergative marker <-e>. 
different. Here <ni> is a 3dA/S suffix which occurs in all scenarios with a dual third person agent or subject, and <ro> is a 3pA/S suffix which occurs in all scenarios with a third person plural agent or subject.

3.4.11. Suffixal slot 7: future tense

<y> FUT

Suffixal slot 5 may be occupied by the future tense morpheme <y>, in which case suffixal slot 3 remains empty. The exact semantic value of <y> is still unknown. It can be used as an assurance or a warning and may be related to an auxiliary particle, the 'non-immediate imperative tense' <yo>, which occurs in the imperative and hortative moods.

Examples (Watters 1973:101: 116)
(27) ram ačihi hu-Ø-y
Ram today come-3sS-FUT
'Ram will come today (don't worry).'

(28) caošo bo-yo boh-Ø-y
carefully take-away-IMPV2 spill-3sS-FUT
'Take it away carefully; it'll spill.'

(29) ram ba-Ø-y
Ram go-3sS-FUT
'Ram will go.'

Examples of the imperative verb (Watters 1973: 119)
(30) aš ja:h-ke
here put_in-IMPV1
'Put it in here (immediate[sic])'

(31) aš ja:h-yo
here put_in-IMPV2
'Put it in here (when you get the chance)'

3.5. The parenthetic mode

The parenthetic mode is a nominalised finite verb form and functions as a relative participle, in some respects comparable to the Nepalese participle in <eko>. The parenthetic mode verb is recognisable by the special parenthetic mode suffix <o>, which is homophonous with the third person singular agent suffix. The parenthetic mode can only occur in the preterite and in the present
tense. Preterite tense is indicated by a zero morpheme, present tense by the suffix \(-zya\) (PRS). This analysis contrasts with that found in Watters (1973:102):

"... all 1st and 2nd person actors (any number) in passive forms are the same as those in active forms both in marking and in ordering. The conversion from active past to passive past is made simply by deleting the tense marker -ke and adding the passive marker -o. For example, given the active form nga-poh-ni-ke 'I hit you' the passive would be nga-poh-ni-o."

In the parenthetic mode, the third person agent morphemes \(<o->\) (3sA), \(<-ni>\) (2dA), \(<-ra>\) (3pA) are prefixed instead of suffixed. Other than this there are no changes in order of affixes, nor in the meaning of the agreement morphemes. Four prefixal and four suffixal slots with thirteen prefixal markers and eight suffixal markers can be identified in the verbal system of the parenthetic mode. This system is represented in table 6 below.

**Table 6. Segmentation of the Takāle Khām parenthetic mode verb.**

<table>
<thead>
<tr>
<th>pf1 agent</th>
<th>pf2 1/2d</th>
<th>pf3 NEG</th>
<th>pf4 3P</th>
<th>(\Sigma)</th>
<th>sf1 1/2P</th>
<th>sf2 1/2d</th>
<th>sf3 T</th>
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</thead>
<tbody>
<tr>
<td>na 1sA/S</td>
<td>n</td>
<td>na</td>
<td>(\emptyset) 3sp</td>
<td>na 1sp</td>
<td>n 1/2dp</td>
<td>(\emptyset) pt</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>ge 1nsA</td>
<td>ni</td>
<td>si</td>
<td>(\emptyset) 3nsP</td>
<td>1nsP</td>
<td>2sp</td>
<td>zya PRS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>na 2sA</td>
<td>ya</td>
<td>ni</td>
<td>(\emptyset) 3nsP</td>
<td>2nsP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>je 2nsA</td>
<td>yara</td>
<td>ci</td>
<td>(\emptyset) 3nsP</td>
<td>2nsP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o 3sA</td>
<td></td>
<td></td>
<td>(\emptyset) 3nsP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ni 3dA</td>
<td></td>
<td></td>
<td>(\emptyset) 3nsP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ra 3nsA</td>
<td></td>
<td></td>
<td>(\emptyset) 3nsP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examples (Watters 1973:103)
(32) ao zihm ram-e o-Ø-jay-o
    this house Ram-ERG 3sA-3sP-build-PAR
    'This house was built by Ram.'
(33) ao zihm ram-e o-Ø-jay-zya-o
    this house Ram-ERG 3sA-3sP-build-PRS-PAR
    'This house was being built by Ram.'
(34) ao sohmlo ηa: ηa-ra-en-o
    this three I 1sA-3pP-shear-PAR
    'These three were sheared by me.'
(35) ao sohmlo ηa: ηa-ra-en-zya-o
    this three I 1sA-3pP-shear-PRS-PAR
    'These three were being sheared by me.'

4. Gamälë Khâm

The only available description of Gamälë is Watters (1991). The material is very limited, but it is clear that there are great differences between the agreement systems of Takâle and Gamälë Khâm. The Gamälë agreement system is much more complicated and convoluted than the Takâle system. There is more paradigmatic homonymy, and the affixes are not so neatly separable.

Watters (1991) gives variant forms for several scenarios:

1s→2s NPT  a-Σ-kæ-T ~ a-Σ-ø-T
1s→2s PT  ye-Σ-kæ ~ ye-Σ-ø
1s→3s  a-Σ-η-Ø-T ~ a-Σ-Ø-T
1s→3p  a-Σ-η-ra-T ~ a-Σ-ra-T
2s→1s  nœ-Σ-kaη-T ~ nœ-Σ-η-T
3s→1p  T-Σ-si-wo ~ T-Σ-si-u
3s→2s  T-Σ-kæ-o ~ T-Σ-ø-o
3s→3p  T-Σ-o-ra ~ T-Σ-o

These variant forms have also been taken into account in the analysis of the verbal agreement system.

4.1. Synopsis of the verbal system

The transitive Gamälë verb is obligatorily inflected for agent and patient. The intransitive verb is inflected for subject. Other obligatory flexional categories are tense and aspect. About other categories that may be marked on the verb, such as negation or mood, nothing is known at present.
Gamále Khám distinguishes first, second and third person and singular, dual and plural number. As with Takâle Khám, no inclusive-exclusive distinction is made in Gamále Khám. Although Watters does not present forms with a dual patient, he explicitly acknowledges the existence of such forms (Watters 1991:13). The actants of some scenarios are marked twice on the verb, for example in the 2s→1s form nɔ-ɔ-κα-ŋ-ŋ-T form the first person patient is marked both by the first plural agent and non-third singular <-κα> and by the marker of first person singular subject/patient <-ŋ>.

At least four tense-aspect distinctions are made in Gamále: a preterite tense, a future tense, an iterative/habitual aspect and a continuous aspect. The preterite tense is either marked by the suffix of the preterite <-khē>, third person preterite portemanteau prefix <-ya->, by zero in scenarios where a first person singular is the most agentive actant, and possibly by other morphemes as yet undescribed. The iterative/habitual tense is marked by a zero morpheme. The continuous tense is indicated by a suffix <-ja>, which occurs directly after the verbal root. The future tense suffix <-ke> occurs in the same suffixal slot as the preterite suffix <-khē>, unlike Takâle, where the future tense occupies a different slot than the other tense markers.

Examples of the tenses (Watters 1991:7-9):

(36) a-hna-ŋ-ŋ I go (iterative/habitual)
(37) a-hna-ja-ŋ I am going (continuous)
(38) a-hna-ŋ-ke I will go (future)
(39) ye-hna-ŋ I went (preterite)
(40) nɔ-hna-ŋ-ŋ-khē youS went (preterite)
(41) ya-hna-ŋ-ŋ-wo he looked at me (preterite)
### TABLE 7:

Gamāle Khām verbal agreement system (Watters 1991:10-11)

<table>
<thead>
<tr>
<th></th>
<th>Intrans.</th>
<th>1sP</th>
<th>1dP</th>
<th>1pP</th>
<th>2sP</th>
<th>2dP</th>
<th>2pP</th>
<th>3sP</th>
<th>3dP</th>
<th>3pP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sA/S</td>
<td>a-Σ-η-T</td>
<td></td>
<td></td>
<td></td>
<td>a-Σ-(k)-αέ-T</td>
<td>a-Σ-σι-T</td>
<td>a-Σ-(η)-∅-T</td>
<td></td>
<td></td>
<td>a-Σ-(η)-ra-T</td>
</tr>
<tr>
<td>1dA/S</td>
<td>ye-Σ-∅-T</td>
<td></td>
<td></td>
<td></td>
<td>ye-Σ-∅-T</td>
<td>ye-Σ-∅-T</td>
<td>ye-Σ-∅-∅-T</td>
<td></td>
<td></td>
<td>ye-Σ-∅-ra-T</td>
</tr>
<tr>
<td>1pA/S</td>
<td>ye-Σ-αέ-T</td>
<td></td>
<td></td>
<td></td>
<td>ye-Σ-k-αέ-T</td>
<td>ye-Σ-k-αέ-∅-T</td>
<td></td>
<td></td>
<td>ye-Σ-k-αέ-ra-T</td>
<td></td>
</tr>
<tr>
<td>2sA/S</td>
<td>na-Σ-αέ-T</td>
<td>na-Σ-(kα)-η-∅-T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>na-Σ-∅-T</td>
<td></td>
<td>na-Σ-∅-T</td>
</tr>
</tbody>
</table>

Note that in the preterite tense, all first person singular forms are made with the first person singular/preterite portemanteau prefix <ye->, in which case the tense slot remains empty.
4.2. Morphological analysis

In inflected narrative forms of the Gamâle verb one prefixal and six suffixal slots can be identified. These positions can be occupied by any of four prefixal and sixteen suffixal morphemes. Table 7 shows thirty-five different forms for fifty-one theoretically possible different scenarios, indicating the extent of the homonymy in the Gamâle paradigm.

The first prefixal slot (pf1) houses first and second person morphemes, first person tensed portemanteaux and third person tensed portemanteaux. The first suffixal slot (sf1) contains the marker of continuous aspect. Suffixal slot 2 (sf2) contains morphemes indicating first and second person actants, as does suffixal slot 3 (sf3). Both suffixal slot 4 (sf4) and suffixal slot 5 (sf5) contain third person morphemes. Suffixal slot 6 (sf6) houses first and second person tense/aspect suffixes.

4.2.1. Slots and morphemes:

Table 8. Segmentation of the Gamâle narrative mode verb.

<table>
<thead>
<tr>
<th>pf1</th>
<th>Σ</th>
<th>sf1</th>
<th>sf2</th>
<th>sf3</th>
<th>sf4</th>
<th>sf5</th>
<th>sf6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2;</td>
<td>CONT</td>
<td>1/2</td>
<td>1/2</td>
<td>3</td>
<td>3</td>
<td>1/2tense</td>
<td></td>
</tr>
<tr>
<td>3tense</td>
<td></td>
<td>a</td>
<td>ja</td>
<td>kə</td>
<td>η</td>
<td>o</td>
<td>Ø</td>
</tr>
<tr>
<td>1sA/S/NPT</td>
<td>CONT</td>
<td>1sA/n3sp</td>
<td>3sA</td>
<td>3ss/p</td>
<td>1/2PT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ye</td>
<td></td>
<td>Ø</td>
<td>ke</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n3A/S</td>
<td>1dA/S</td>
<td>1pA/S/2ss/p</td>
<td>3dA/S</td>
<td>3ns</td>
<td>1/2FUT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nə</td>
<td></td>
<td>sāi</td>
<td></td>
<td>1/2HAB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2sA/S</td>
<td></td>
<td>1pp</td>
<td></td>
<td>Ø</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1spt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A/S/PT</td>
<td>2dA/S</td>
<td>sō</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Prefixal slot 1: first and second person agent/subject markers and tensed portemanteaux

<aa-> 1sA/S/NPT

<na-> 2sA/S

<ye-> n3A/S

<yaa-> 3A/S/PT

The first prefixal slot houses the first and second person agent/subject prefixes and tensed portemanteaux. The first person singular agent/subject non-preterite portemanteaux prefix <a-> occurs in all scenarios with a first person singular agent or subject in any non-preterite tense and is identical to
the first person singular possessive pronoun prefix `<a->, as in `a-kwi 'my hand'. When the tense is preterite, first person singular agent or subject is not formally marked by a prefix, but the non-third agent/subject prefix `<ye-> marks general involvement of a non-third agent or subject. In first person singular preterite scenarios the suffix of the preterite `<khê>' which normally occurs in suffixal slot 6, does not occur.

The second person singular agent/subject prefix `<na-> occurs in all scenarios with a second person singular agent or subject. It is identical to the second person singular possessive pronoun prefix `<na->, as in `na-kwi 'your hand'.

The non-third agent and subject prefix `<ye-> occurs in all scenarios with a first or second person agent or subject except in the first person singular agent/subject non-preterite tense forms, where the first person actant is marked with the first person singular non-preterite prefix `<a->, and in second person singular forms where the second person singular prefix `<na-> occurs. Watters (1991:9-10) supposes that in an older situation all first and second person scenarios were marked by an evidential prefix `*<ye->, which is presently being replaced by other prefixes, such as first singular agent/subject non-preterite `<a-> and second singular agent/subject `<na->.

The third person agent/subject preterite tensed portemanteau prefix `<ya-> also occurs in prefixal slot 1. Watters (1991:10-11) mentions that if the agent or subject is a third person, the tense morphemes occur in prefixal slot 1. He gives one example of a preterite form with a third person agent, `ya-hna-kong-wo 'He looked at me' (Watters 1991:19), which shows that this third person preterite morpheme is different from the first and second person preterite morpheme `<khê>' which occurs in suffixal slot 6.

4.2.3 Suffixal slot 1: continuous tense
`<ja> CONT

Suffixal slot 1 is occupied by the suffix of the continuous tense `<ja>. Only one example of this tense is given, `a-hhu-a-jt-y (Watters 1991:9) which may be translated as 'I am going'.

4.2.4 Suffixal slot 2: first and second person actants
`<kɔ> 1pA/n3sP
`<Ø> 1dA/S
`<sǐ> 1P
`<sī> 2dA/S
`<sɔɔ> 2p

Even when a scenario involves two actants both possibly indicated by one of the morphemes that occur in suffixal slot 2, only one of those actants is actually marked in suffixal slot 2.
The suffix \(<-k\alpha>\) occurs in all scenarios with a first person singular patient, a first person plural agent or a second person singular patient, except when another suffix occurs in suffixal slot 2, viz. the 2d→1s form ye-\(\Sigma\)-si\(\eta\)-\(T\), the 2p→1s form ye-\(\Sigma\)-sa\(\eta\)-\(T\) and the 1d→2s form ye-\(\Sigma\)-\(O\)-\(T\). The morpheme \(<k\alpha>\) thus marks a plural first person agent and a singular non-third patient. The 1p\(\alpha\)/n3n\(\phi\) suffix \(<k\alpha>\) appears to be optional in the following four forms, judging from the different forms presented by Watters (1991) in different parts of his paper:

- 2s→1s \(n\alpha-\Sigma-k\alpha-\eta-T\)
- 1s→2s/NPT \(a-\Sigma-k-\alpha\tilde{e}-T\)
- 1s→2s/prt \(ye-\Sigma-k-\alpha\tilde{e}\)
- 3s→2s \(T-\Sigma-k-\alpha\tilde{e}-o\).

Suffixal slot 2 is also occupied by the first person dual agent/subject zero suffix \(<-\emptyset>\), the first person plural patient morpheme \(<-si>\), the second person dual subject/agent suffix \(<-si>\) and the second person plural actant marker \(<-sa>\). The first person dual agent/subject zero suffix occurs in all scenarios with a first person dual agent or subject, effectively blocking the slot. The first person plural patient suffix \(<-si>\) occurs in all scenarios with a first person plural patient except when suffixal slot 2 is occupied by the second person dual agent morpheme \(<-si>\). The first plural patient suffix \(<-si>\) also does not appear in the irregular 2s→1p form \(n\alpha-\Sigma-\emptyset-T\).

The second person dual subject/agent suffix \(<-si>\) occurs in all scenarios with a second person dual subject or agent. When second dual agent/subject \(<si>\) is followed by the velar first person singular marker \(<-i>\) its nasalised quality is neutralised. The second dual agent/subject marker \(<-si>\) has originated from the combination of a second person non-singular marker *\(<-sa>\) and a dual morpheme *\(<-ni>\). The dual marker has been reduced to mere nasalisation, but the vowel of the preceding morpheme still has the [I] alternant which allowing dual regularly induces. This process can also be seen in the free pronouns of Maikut where the first person dual form is \(g\tilde{i}\) and the second person dual is \(j\tilde{i}\). This feature alone would seem to be enough to classify Gamâle as an innovative Khâm language, instead of a conservative one, as claimed by Watters (1991:2).

The second person plural marker \(<-sa>\) occurs in all scenarios with a second person plural subject, agent and patient, except in the 2p→1p form ye-\(\Sigma\)-si-\(T\), where suffixal slot 2 is occupied by the first person plural patient morpheme \(<-si>\), in the 1d→2p form ye-\(\Sigma\)-\(O\)-\(T\), where suffixal slot 2 is occupied by the first person dual agent/subject zero morpheme, and in the 1p→2p form ye-\(\Sigma\)-k-\(\alpha\tilde{e}\)-\(T\) where suffixal slot 2 is occupied by the 1p\(\alpha\) suffix \(<-k>\). The second plural suffix \(<-sa>\) does not indicate the nature of the involvement of the second person actant. The vowel of the second person plural morpheme \(<-sa>\) adapts itself to the vowel of some following morphemes. When followed by the third
person singular agent suffix <-o>, second plural <-so> assimilates with the /o/ to /so/. The second person plural morpheme <-s> assimilates to <-si> when followed by the third person dual marker <-n>, following the general assimilation rules of Khâm, where the vowel of a morpheme always assimilates to a following dual marker. The alternate form <-s-í> of the second person plural suffix <-s> in the 1s→2p form a-Σ-s-í-T is curious. The nasalisation may indicate the residual presence of a first person singular nasal suffix <-n>, but the [i] vocalisation is inexplicable, and the correspondence with the second person dual agent/subject marker <-s-í> suggests that the form is misplaced in the table in Watters (1991:11) and belongs to the 1s→2d scenario.

4.2.5. Suffixal slot 3: first and second person actants

<-n>  1s
<-n̂>  1pA/S/2sS/P

Suffixal slot 3 can be filled by one of two morphemes: first person singular <-n> or the first plural agent/subject and second singular subject/patient marker <-n̂>.

The marker of the first person singular <-n> occurs in all scenarios where a first person subject or patient is involved. It may optionally occur in scenarios with a third person patient indicating a first person singular agent. It is possible that the 1s suffix <-n> also occurs in scenarios with a second person patient, but is not realised overtly because of the nasal final vowel of the preceding morpheme <-n̂>. In a comparable situation however, it is the nasalisation that gives way to the nasal suffix, viz. in the 2d→1s form ye-Σ-si-n, where the second dual agent/subject suffix <-s-í> is denasalised, so an assimilation of first singular <-n> with second singular agent/subject <-n̂>- to /n̂/ is not likely.

It is not clear whether the optional occurrence of first singular <-n> as an agent marker is a vestige of an older situation where first singular <-n> simply indicated involvement of first person actant, of an older marking strategy where first and second person actants are marked in preference to third person actants, or of a recent development where first singular <-n> will gain the function of an obligatory first person singular actant marker.

The first person plural agent/subject and second person singular subject/patient marker <-n̂> occurs in all scenarios with first person plural agent or subject and in all scenarios with a second person singular subject or patient, except for the irregular 1d→2s form ye-Σ-∅-T.

4.2.6. Suffixal slot 4: third person actants

<-o>  3sA
<-n̄>  3dA/S

Suffixal slot 4 is occupied by morphemes indicating a third person agent or subject. The third person singular agent morpheme <-o> occurs in all
scenarios with a third person singular agent. It has an alternant <-wo> or <-u> after the first person plural patient suffix <-si>. The third person dual agent/subject suffix <-ji> occurs in all scenarios with a third person dual agent or subject except for the irregular 3ns→1p form T-Σ-si-ɾə.

4.2.7. Suffixal slot 5: third person actants

<-Ø> 3sS/P
<-ɾə> 3ns

Suffixal slot 6 also contains morphemes indicating a third person actant, viz. the third person singular subject/patient zero marker and the third person non-singular marker 3ns <-ɾə>. These morphemes occur in the suffixal string after the other third person morphemes, as is shown by the 3s→3p form T-Σ-o-ɾə, for which however an alternative form T-Σ-o is also noted.

A third person singular subject or patient is always marked by zero in contrast to a third person agent, which is marked by third singular agent <-o>. The third person non-singular actant marker <-ɾə> occurs in all scenarios with a non-singular third person, except where duality of third person actant is formally marked by the third dual agent/subject suffix <-ŋi>, which occurs in suffixal slot 4, viz. in the third person dual intransitive form T-Σ-ŋi, the 3d→1s form T-Σ-kə-ŋi-ŋi, the 3d→2s form T-Σ-kə-ŋə-ŋi, the 3d→2p form T-Σ-si-ŋi, the 3d→3 form T-Σ-ŋi, and except where third person patient is not formally marked, viz. in the 2s→3p form na-Σ-T, in the 2d→3p form ye-Σ-si-T and in the 3d→3p form T-Σ-ŋi. The suffix of third person non-singular involvement is not specified as to the role of that involvement.

4.2.8. Suffixal slot 6: first and second person tense suffixes

<-khē> 1/2-PT
<-ke> 1/2-FUT
<-Ø> 1/2-HAB

Suffixal slot 7 contains the tense markers in scenarios where the most agentive actant is not a third person. The suffix of the preterite, <-khē>, does not appear in preterite scenarios with a first person singular agent or subject. Examples (Watters 1991:6-9):

(42) ye-hna-ja-ŋ I went.
(43) ye-hna-ŋə-khē We went.
(44) ye-hna-sə-khē YouP went.
(45) na-hna-ŋə-kəŋ-khē You8 looked at me.
(46) ya-hna-ŋə-ŋ-wo He looked at me.

The suffix of the future, <-ke>, may occur together with the first person singular agent/subject non-preterite portmanteau prefix <-a->, as in the following example:

(47) a-hna-ŋ-ke I will go.
The iterative/habitual tense is formally unmarked and can also co-occur with the first person singular agent/subject non-preterite portmanteau prefix ą-, as in the following example:

(48) a-hna-ą-∅  
I go.

If the most agentive actant is a third person, then the tense morphemes occur in prefixal slot 1. These third person tense prefixes do not have the same form as the corresponding first and second person tense suffixes, as can be seen from the comparison between ya-hna-kəŋ-wo 'He looked at me' and na-hna-ə-h-khə 'you5 went'.

4.3 Parenthetic mode

Watters (1991:20) gives a few parenthetic mode forms. The narrative forms he compares with the parenthetic forms do not all correspond to the narrative forms he presents in his overview of the paradigm.

Table 9. Gamâle parenthetic mode verb forms.

<table>
<thead>
<tr>
<th>scenario</th>
<th>parenthetic form</th>
<th>narrative form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s→2s</td>
<td>a-Σ-ə-e-(o)</td>
<td>a-Σ-(k)-ə-e-T</td>
</tr>
<tr>
<td>1s→3s</td>
<td>a-Σ-ŋ-(o)</td>
<td>a-Σ-(ŋ)-∅-T</td>
</tr>
<tr>
<td>2s→1s</td>
<td>na-Σ-ŋ-(o)</td>
<td>na-Σ-(kə)-ŋ-T</td>
</tr>
<tr>
<td>2s→3</td>
<td>na-Σ-(o)</td>
<td>na-Σ-∅-T</td>
</tr>
<tr>
<td>3s→1s</td>
<td>ə-Σ-ŋ-(o)</td>
<td>T-Σ-kə-ŋ-o</td>
</tr>
<tr>
<td>3s→2s</td>
<td>ə-Σ-ə-e-(o)</td>
<td>T-Σ-(k)-ə-e-o</td>
</tr>
<tr>
<td>3s→3s</td>
<td>ə-Σ-(o)</td>
<td>T-Σ-∅-o</td>
</tr>
<tr>
<td>3s→3p</td>
<td>ə-Σ-(o)-rə</td>
<td>T-Σ-∅-(rə)</td>
</tr>
</tbody>
</table>

The process of forming parenthetic mode verbs entails the placement of a parenthetic mode marker ą-o in suffixal slot 4. This parenthetic mode suffix is homophonous to the third person agent suffix ą-o, which also occurs in suffixal slot 4. Third person agent markers are then prefixed to the verb, presumably in prefixal slot 1. The third person singular parenthetic mode prefix is ə-ą-

5. Sheshi Khăm

Sheshi Khăm is only known through the description provided by Watters (1991:13-15). No other studies of Sheshi Khăm exist. Watters (1991) gives full paradigms for three tenses, the parenthetic mode paradigm and the free personal pronouns.
5.1. Free pronouns

Like other Khâm languages, Sheshi Khâm distinguishes nine pronominal categories. There is first, second and third person in singular, dual and plural number. First and second person dual pronouns are formed through the affixation of a dual number marker <-ni> to the plural pronoun. Before the development of the dual distinction the first person plural pronoun ge and the second person plural pronoun je would have had a non-singular meaning. As in the other Khâm languages, the dual number marker <-ni> forces an assimilation of the vowel of the preceding morpheme to [i].

Third person dual and plural pronouns are formed through the affixation of a dual or plural number marker to the unmarked or singular third person form o. The question whether third person singular o is marked for singular number or unmarked for number cannot be resolved with the information that has been published to date. As in Takâle Khâm, the third person pronoun o does not assimilate to a following dual morpheme <-ni>. This indicates a difference in phonological status between the first and second person dual pronouns and the third person dual pronoun.


<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>first person</td>
<td>ŋa</td>
<td>gi-ŋi</td>
<td>ge</td>
</tr>
<tr>
<td>second person</td>
<td>ŋəŋ</td>
<td>ji-ŋi</td>
<td>je</td>
</tr>
</tbody>
</table>
| third person | o        | o-ŋi  | o-ŋaŋ |}

5.2 Synopsis of the verbal system

Sheshi Khâm is the third large dialect nucleus in Khâm. It diverges from other Khâm languages in that there is no agreement with the patient. The Sheshi verb only agrees with the most agentive actant, the subject for intransitive verbs and the agent for transitive verbs.

Watters (1991) reports three tense/aspect distinctions: past tense <-dɔ>, future tense <-ai-> and continuous aspect <-jya>. Sheshi Khâm, like the other Khâm languages discussed in this paper, distinguishes two modes, narrative and parenthetic.

<table>
<thead>
<tr>
<th>past narrative</th>
<th>future narrative</th>
<th>continuous narrative</th>
<th>parenthetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s  $Σ$-də-ŋa</td>
<td>əi-Σ-ŋa</td>
<td>Σ-jya-ŋa</td>
<td>ŋa-Σ-ŋ-(u)</td>
</tr>
<tr>
<td>1d  $Σ$-də-cya</td>
<td>əi-Σ-cya</td>
<td>Σ-jya-cya</td>
<td>gi-ni-Σ-ci-(u)</td>
</tr>
<tr>
<td>1p  $Σ$-də-yə</td>
<td>əi-Σ-yə</td>
<td>Σ-jya-yə</td>
<td>ge-Σ-y-(u)</td>
</tr>
<tr>
<td>2s  $Σ$-də-na</td>
<td>əi-Σ-na</td>
<td>Σ-jya-na</td>
<td>nə-Σ-n-(u)</td>
</tr>
<tr>
<td>2d  $Σ$-də-ci-na</td>
<td>əi-Σ-ci-na</td>
<td>Σ-jya-ci-na</td>
<td>ji-n-Σ-ci-n-(u)</td>
</tr>
<tr>
<td>2p  $Σ$-də-cya</td>
<td>əi-Σ-cya</td>
<td>Σ-jya-cya</td>
<td>je-Σ-ci-(u)</td>
</tr>
<tr>
<td>3s  $Σ$-da</td>
<td>əi-Σ-wa</td>
<td>Σ-jya-w</td>
<td>a-Σ-(u)</td>
</tr>
<tr>
<td>3d  $Σ$-də-niya</td>
<td>əi-Σ-niya</td>
<td>Σ-jya-w-ni</td>
<td>Ø-ni-Σ-(u)</td>
</tr>
<tr>
<td>3p  $Σ$-də-ra</td>
<td>əi-Σ-ra</td>
<td>Σ-jya-w-anj</td>
<td>ə-ra-Σ-(u)</td>
</tr>
</tbody>
</table>

5.3 Morphological analysis

Segmentation of the Sheshi conjugational system requires positing two prefixal slots and five suffixal slots, occupied by eight prefixes and ten suffixes. Prefixal slot 1 is occupied by the marker of the future tense and the parenthetic mode actant affixes. Dual number morphemes and the third person plural number prefix occur in the parenthetic mode in prefixal slot 2. Suffixal slot 1 is occupied by the other tense morphemes. Suffixal slot 2 houses actant markers. Second and third person markers occur in suffixal slot 3. Suffixal slot 4 houses the non-singular number morpheme <-ya>. Suffixal slot 5 is occupied by markers indicating the mode of the verb. In his presentation of the Sheshi conjugations, Watters (1991) indicates that the parenthetic mode suffix <-u> is optional. There is some confusion, however, as to the correct interpretation of his table on page 15. As it stands it may mean that in the parenthetic mode a parenthetic suffix <-u> may optionally be affixed, but that the ending /a/ of the narrative mode verb is never present, whether <-u> is affixed or not, or, alternatively, the parenthetic mode verb endings are the same for first and second person scenarios as the narrative mode verb endings, and <-u> may be affixed to indicate parenthetic mode, but is optional. In the first case, a narrative mode suffix <-a> must be isolated, which contrasts with a parenthetic mode suffix <-u ~ Ø>. In the second case, an optional parenthetic mode suffix <-u> can be identified which contrasts with a zero expression of the narrative mode.
Table 12. Segmentation of the Sheshi Khām verb
(narrative and parenthetic mode).

\[
\begin{array}{cccccccc}
\text{pf1} & \text{pf2} & \Sigma & \text{sf1} & \text{sf2} & \text{sf3} & \text{sf4} & \text{sf5} \\
\text{əi} & \text{ni} & \text{n} & \text{ḍə} & \text{ḍə} & \text{ŋə} & \text{rə} & \text{aŋ} & \text{ya} & \text{u} \\
\text{FUT} & \text{dPAR} & \text{PT} & \text{1s} & \text{3p} & \text{ns} & \text{PAR} \\
\text{ŋə} & \text{ra} & \text{jə} & \text{ci} & \text{na} & \text{na} \\
\text{1SPAR} & \text{3pPAR} & \text{CONT} & \text{1d}/\text{2ns} & \text{2np} & \text{w}/\text{wa}/\text{Ø} & \text{mi} \\
\text{ge} & \text{w}/\text{wa}/\text{Ø} & \text{mi} & \text{3} & \text{3d} \\
\text{1nSPAR} & \text{3PAR} \\
\text{nə} & \text{2SPAR} & \text{je} & \text{2nSPAR} \\
\text{a}-\text{a}-\text{Ø} & \text{3nSPAR} \\
\text{a}-\text{a}-\text{Ø} & \text{3nSPAR} \\
\text{3PAR} & \\
\end{array}
\]

5.3.1. Prefixal slot 1: parenthetic actant prefixes and the future morpheme <əi->

\[
\begin{align*}
& <əi-> \quad \text{FUT} \\
& <ŋə-> \quad \text{1SPAR} \\
& <\text{ge}-> \quad \text{1nSPAR} \\
& <\text{a}-> \quad \text{2SPAR} \\
& <\text{je}-> \quad \text{2nSPAR} \\
& <\text{a}-\text{a}-\text{Ø}> \quad \text{3PAR} \\
\end{align*}
\]

The first prefixal slot is occupied by the future tense morpheme <əi-> and by morphemes indexing the actant in the parenthetic mode. A first person singular actant is indicated by the prefix <ŋə-> and a first person non-singular actant by the morpheme <ge->. The first person non-singular prefix <ge-> has a regular allomorph <gi-> when followed by the dual number morpheme <ni->.

A second person singular actant in the parenthetic mode is indicated by the prefix <nə->, a second person non-singular actant by <je->. The second person non-singular prefix <je-> has a regular allomorph <ji-> when followed by the dual number morpheme <n->.

A third person actant in the parenthetic mode is indexed by the third person prefix <a->. Number of third person actant is not indicated by a syncretised person/number morpheme, like the first and second person morphemes, but by a number affix (dual <ni-> or plural <ra->) in prefixal slot 2. The third person prefix <a-> has two allomorphs, namely zero before the dual morpheme <ni->, and <ə> before the third person plural morpheme <ra->. This analysis of the third person markers as a singular marker followed by a dual or a plural marker is analogous to the organisation of the free pronominal paradigm.
5.3.2. Prefixal slot 2: number

<ní- ~ n-> dPAR
<ræ-> 3pPAR

The dual number suffix <ní-> occurs in prefixal slot 2 in all cases where the number of the actant in the parenthetic mode of the verb is two. It has an allomorph <n-> after the second person non-singular prefix <je->, which itself has an allomorph <ji-> before the dual marker <n- ~ ni->.

The prefix <ræ-> occurs when the number of the third person actant is plural and the mode of the verb is parenthetic.

5.3.3. Suffixal slot 1: tense

<dr - -da> PT
<jya> CONT

The first suffixal slot contains tense morphemes. The tense morphemes only occur in narrative mode. Past tense is indicated by the PT suffix <dr>. The preterite suffix <dr> has an allomorph <-da> if it is the last overt morpheme in the affixal string, i.e. in the third person singular preterite tense form Σ-da. The continuous aspect is indicated by <-jya>.

5.3.4. Suffixal slot 2: actant

<jηa> 1s
<ci> 1d/2ns
<wa - wa - Ø> 3

Suffixal slot 2 is occupied by three morphemes indicating the actant. A first person singular actant is indexed by <jηa>, a first dual and second non-singular actant by <ci>, and third person actant by <wa - wa - Ø>.

The first dual and second non-singular suffix <ci> combines with either the second person non-plural suffix <na> or the non-singular suffix <ya> to indicate the number of second person actant and also combines with the non-singular suffix <ya> to indicate a dual first person actant.

The third person suffix <wa> does not occur in the parenthetic mode and has a zero allomorph in third person non-singular future tense forms and in the past tense. The third person suffix <wa> also has an allomorph <wa> in the third person singular future form əi-Σ-wa.

5.3.5. Suffixal slot 3

<ræ - -anj> 3p
<na> 2np
<ní> 3d

Three morphemes occur in suffixal slot three. The suffix of the third person plural <-ræ - -anj> occurs in all scenarios with a third person plural actant. In the continuous tense, when 3p <-ræ - -anj> is preceded by the third
person actant marker <w>, the allomorph <aj> occurs. The suffix <na> occurs in all scenarios with a second person singular or dual actant and indicates second person non-plural actant. When 2np <na> co-occurs with the 1d/2ns suffix <ci>, the whole form can only indicate the intersection of non-plurality and non-singularity and so indexes a dual second person actant. The suffix <ni> indicates a third person dual actant.

5.3.6. Suffixal slot 4: non-singular number

<yka> ns

The suffix <yka> occurs in first person dual and plural, second person plural and third person dual forms, and indicates non-singular number of actant. It does not occur in second person dual forms, or in the third person continuous form Σ-jya-w-ni, probably because there is a restriction in Sheshi Khām which limits the total number of person-markers in the suffixal string to two. Diachronically, non-singular <yka> is derived from a plural number marker.

5.3.7. Suffixal slot 5: mode

<u> PAR

The parenthetic mode suffix <u> seems to be optional. It may co-occur with all actants, but not with tense morphemes. The involvement of a third person actant is in the parenthetic mode not indicated by a suffix, but only by the parenthetic mode third person prefixes.

6. Mhai Khām

6.1. Data

In Watters (1975a) an almost complete paradigm of the Mhai Khām transitive verb was presented. Watters (1975a) was the basis for the analysis presented in DeLancey (1988), which unfortunately contains some errors in the data.

The verbal agreement systems of Ṭakāle Khām and Mhai Khām, when superficially examined, look very much alike. A closer examination, however, reveals many differences in structure. Ṭakāle is organised along simple, nominative-accusative marking lines. Mhai shows a much more complicated system, where the first person actant in 1→2 scenarios is marked with different morphemes than the first person markers in 1→3 scenarios. First person singular patients are marked if the agent is a third person, but not when the agent is a second person. Because the material is so incomplete, the following morphemic analysis cannot be very thorough. It is unlikely that an analysis of the complete paradigm would present so many portemanteau morphemes.
6.2 Synopsis of the verbal system

The transitive Mhal verb is obligatorily inflected for number and person of agent and patient and for tense. Like all Khăm languages, nine pronominal categories can be distinguished: first, second and third person in singular, dual and plural number. Again, there is no inclusive-exclusive opposition.

Watters (1975) gives one tense marker, \(<-kə>\), which, judging from his translations, indicates preterite time reference.
**TABLE 13:**

Mhai Khâm verbal agreement system (derived from Watters 1975).

<table>
<thead>
<tr>
<th></th>
<th>Intr.</th>
<th>1sP</th>
<th>1dP</th>
<th>1pP</th>
<th>2sP</th>
<th>2dP</th>
<th>2pP</th>
<th>3sP</th>
<th>3dP</th>
<th>3pP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sA/S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ṁn-Σ-T-n</td>
<td>ṁn-Σ-T-ci-n</td>
<td>ṁn-Σ-T-ci</td>
<td>Ø-Σ-T-η</td>
<td>ya-n-Σ-T-η</td>
<td>ya-ra-Σ-T-η</td>
</tr>
<tr>
<td>1dA/S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>gi-n-Σ-T-n</td>
<td>gi-n-Σ-T-ci-n</td>
<td>ge-Σ-T-ci</td>
<td>Ø-Σ-T-ci</td>
<td>ya-ra-Σ-T-ci</td>
<td></td>
</tr>
<tr>
<td>1pA/S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ge-Σ-T-n</td>
<td>ge-Σ-T-ci-n</td>
<td></td>
<td>Ø-Σ-T-e</td>
<td>ya-ra-Σ-T-e</td>
<td></td>
</tr>
<tr>
<td>2sA/S</td>
<td>nō-Σ-T-n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>nō-Σ-si-T-n</td>
<td>nō-Σ-si-T-n</td>
<td>nō-ra-Σ-T-n</td>
<td></td>
</tr>
<tr>
<td>2dA/S</td>
<td>ji-n-Σ-T-ci-n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ji-n-Ø-Σ-T-ci-n</td>
<td>ji-n-na-Σ-T-n</td>
<td>ji-ra-Σ-T-ci-n</td>
<td></td>
</tr>
<tr>
<td>3sA/S</td>
<td>Σ-T-η-u</td>
<td>Σ-si-T-u</td>
<td>Σ-T-n-u</td>
<td></td>
<td></td>
<td></td>
<td>Ø-Σ-T-u</td>
<td>ya-n-Σ-T-u</td>
<td>ya-ra-Σ-T-u</td>
<td></td>
</tr>
<tr>
<td>3dA/S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ø-Σ-T-ni</td>
<td></td>
<td></td>
<td>ya-ra-Σ-T-ni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3pA/S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ø-Σ-T-m</td>
<td></td>
<td>ya-ra-Σ-T-m</td>
<td></td>
</tr>
</tbody>
</table>
6.3. Morphological Analysis

As far as can be inferred from the data given in Watters (1975a), in inflected forms of the Mhai verb, three prefixal and five suffixal slots can provisionally be identified. These positions can be occupied by any of nine prefixal and eleven suffixal morphemes. No doubt the total number of morphemes will increase when more information about Mhai Khâm becomes available. Table 13 shows thirty-seven distinct forms for forty-nine different scenarios.

Prefixal slot 1 is occupied by morphemes indicating first and second person agents and portemanteaux. Prefixal slot 2 is the functional position of the first and second person dual number marker <-n->. Third person patient morphemes occur in prefixal slot 3. Suffixal slot 1 is occupied by the first person non-singular patient suffix <-si>. The preterite tense morpheme <-ka> occurs in the next slot, suffixal slot 2. Suffixal slot 3 houses morphemes indicating a first or second person actant and portemanteaux. Suffixal slot 4 is occupied by the second person dual number affix <-n>. The last slot in the suffixal string is occupied by third person agent morphemes.

Table 14. Segmentation of the Mhai Khâm narrative mode verb.

<table>
<thead>
<tr>
<th>pf1</th>
<th>pf2</th>
<th>pf3</th>
<th>Σ</th>
<th>sf1</th>
<th>sf2</th>
<th>sf3</th>
<th>sf4</th>
<th>sf5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2A</td>
<td>1/2d</td>
<td>3p</td>
<td>Ω</td>
<td>1nsP</td>
<td>si</td>
<td>kα</td>
<td>y</td>
<td>n</td>
</tr>
<tr>
<td>ηa</td>
<td>n</td>
<td>Ø</td>
<td>nα-n-</td>
<td>na</td>
<td>ci</td>
<td>ni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1ns→2</td>
<td>1/2dA</td>
<td>3SP</td>
<td>1nsP</td>
<td>PRT</td>
<td>1s→3</td>
<td>2d</td>
<td>3SA</td>
<td></td>
</tr>
<tr>
<td>ge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1ns→2</td>
<td></td>
<td>3dp</td>
<td></td>
<td></td>
<td>12ns</td>
<td>3dA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nα</td>
<td></td>
<td>ra</td>
<td></td>
<td></td>
<td>e</td>
<td>m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2SA</td>
<td></td>
<td>3nsp</td>
<td></td>
<td></td>
<td>1p→3</td>
<td>n</td>
<td>3nsA</td>
<td></td>
</tr>
<tr>
<td>je</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nSA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/3→3ns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.3.1. Prefixal slot 1: first and second person agents and portemanteaux

<-ηa->  1s→2
<-ge->  1ns→2
<-nα->  2SA
<-je->  2nSA
<-ya->  1/3→3ns

The first prefixal slot houses the first and second person agent morphemes and portemanteaux. The 1s→2 portemanteau <-ηa-> occurs in all scenarios with a first person singular agent and a second person patient. The
1ns→2 portemanteau prefix <ge-> occurs in all first person agent scenarios where the number of the first person agent is not singular and where the patient is a second person. It has two allomorphs, <ge-> and <gi->. The second allomorph, <gi->, occurs before the first/second person dual number marker <n-> in prefixal slot 2, viz. in the 1d→2s gi-n-Σ-T-n and 1d→2d gi-n-Σ-T-ci-n forms.

The second person morphemes occurring in prefixal slot 1 are not portemanteaux like the first person morphemes, but occur in all scenarios with a second person agent. The second person singular agent morpheme <n-> occurs in all scenarios with a second person singular agent. The second person non-singular agent prefix <je-> occurs in all scenarios where the number of the second person agent is not singular. Like the 1ns→2 portemanteau <ge->, 2nsA <je-> has two regular allomorphs, <je-> and <ji->. The second alternant, <ji-> occurs only in forms where the first and second person dual number morpheme <n-> occurs in prefixal slot 2, viz. 2d→1np ji-n-Σ-T-ci-n, 2d→3s ji-n-Σ-T-ci-n, and 2d→3d ji-n-n-Σ-T-ci-n.

The 1/3→3ns portemanteau morpheme <ya-> occurs in all scenarios with either a first or a third person agent and a third person non-singular patient. It is probably historically derived from the same morpheme as the Takâle third person non-singular prefix <ya->, namely the proto-Khâm third person plural pronoun *ya.

6.3.2. Prefixal slot 2: the first and second person dual agent number affix <n->

<n->

The first and second person dual agent number prefix <n-> occurs in all scenarios where a first or second person dual agent is marked by a prefix, except in the 1d→2p form ge-Σ-T-ci, and in the 2d→3p form je-ra-Σ-T-ci-n. The prefix <n-> indicates duality of agent in the first and second person.

6.3.3. Prefixal slot 3: third person patient morphemes

<Ø->

<na- ~ n- ~ na->

<ra->

Prefixal slot 3 houses the third person patient morphemes. A third person singular patient is always marked by zero, as in the other Khâm languages.

The third person non-singular patient prefix <ra-> occurs in all scenarios with a third person non-singular patient, except where the paradigm formally differentiates dual and plural third person patients with the third person dual patient prefix <na- ~ n- ~ na->, viz. in the 1s→3d form ya-n-Σ-T-y, 2s→3d form na-na-Σ-T-n, the 2d→3d form ji-n-na-Σ-T-ci-n and the 3s→3d form ya-n-Σ-T-u. The conditioning of the allomorphy of the third person dual patient prefix <na- ~ n- ~ na- > remains unclear. The basic morph may be <n-> and the alternant
might be explained by the preceding first and second person dual morpheme <n-, necessitating an epenthetic vowel /ə/, but this is by no means clear. The <na-> allomorph cannot be explained.

6.3.4. Suffixal slot 1: the first person non-singular patient marker <-si>

<-si> 1nsP

Suffixal slot 1 houses the first person non-singular patient suffix <-si>, which occurs as far as is known in all scenarios with a first person non-singular patient, except for the irregular 2d→1d form ji-n-Σ-Τ-ci-η.

6.3.5. Suffixal slot 2: tense

<-kɔ> ̣pt

The preterite morpheme <-kɔ> has the following allomorphs:

<-kɔ> before a morpheme consisting of a consonant only, the second person dual suffix <-cim> and the second person plural suffix <-ci>.

<-ku> before the third person agent suffix <-u> if there is an intervening consonant, such as first person singular patient <-η>, second person singular patient <-n>, or second person plural patient <-c>.

<-k> before a suffix consisting only of a vowel, such as 1p→3 <-e> or third person agent <-u>.

<-ki> before third person dual agent <-ni>.

6.3.6. Suffixal slot 3: first and second person markers and portemanteaux

<-η> 1s→3
<-ci> 12ns
<-e> 1p→3
<-n> 2s

Suffixal slot 3 is occupied by morphemes indicating the presence of a first or second person actant. Three of the suffixes that occur in this slot are unspecified as to the grammatical role of the actant they index, and two must be regarded as portemanteaux.

The first person singular and third person portemanteau suffix 1s→3 is unspecified as to the direction of the relation between the first person actant and the third person actant. The direction of the relation between the actants indexed by 1s→3 <-η> is determined by the affixes with which the 1s→3 morpheme co-occurs.

When 1s→3 <-η> co-occurs with one of the third person patient morphemes, viz. third singular patient <∅>, third dual patient <n> or third plural patient <ra>, the nature of the first person involvement is agency. When 1s→3 <-η> co-occurs with the third person singular agent suffix <-u>, the nature of
the first person involvement is patience. Whether 1s→3 <-ŋ> also occurs with third person dual or plural agent markers is not known.

The 1p→3 portemanteau suffix <-e> occurs in all scenarios with a first person plural agent and a third person patient and indicates a transitive relation between a first person plural agent and a third person patient.

The second person singular actant morpheme <-ŋ> occurs in all scenarios with a second person singular actant and is unspecified as to the grammatical nature of that actant.

The suffix <-ci> marks the involvement of a non-singular first or second person actant and is unspecified as to the nature of that involvement. The non-singular first and second person suffix <-ci> occurs in all scenarios where a second person actant is involved whose number is not singular, in the 1d→3s form Ø-Σ-T-ci, and in the 1d→3ns form ya-ru-Σ-T-ci. In these last two cases plural number of first person agent is formally marked by the 1p→3 suffix <-e>, leaving only the dual agent scenario for the non-singular marker <-ci>.

The first and second non-singular suffix <-ci> has an allomorph <-c> before the third person singular agent suffix <-u>, in a process similar to the disappearance of the vowel of the preterite marker <-kɔ> before third singular agent <-u>, demonstrating the phonological rule /V/ → [Ø]/_V.

6.3.7. Suffixal slot 4: second person dual marker

<-ŋ> 2d

The suffix <-ŋ> occurs in all scenarios with a second person dual actant suffix and indicates duality of a second person actant.

6.3.8. Suffixal slot 5: third person agent suffixes

<-u> 3SA
<-ni> 3dA
<-mi> 3nsA

The last slot in the suffixal string, suffixal slot 5, is occupied by morphemes indicating involvement of a third person agent.

The third person singular agent suffix <-u> occurs in all scenarios with a third person singular agent. I differ from previous analyses (Watters 1975 and DeLancey 1988) in the segmentation of forms with a third person singular agent. I segment the form pohkuju 'He hit me' into a root <poh->, a preterite tense suffix <kʊ-> (an allomorph of preterite <kɔ->), a first person singular suffix <-ŋ> and a third person singular agent suffix <-u>, instead of into a root <poh->, a preterite suffix <-k>, a third person singular agent suffix <-u> and a first person singular patient suffix <-ŋu>, making possible a much simpler and regular analysis of the whole agreement system.

The third person non-singular suffix <-mi> occurs in all scenarios with a third person non-singular agent, except where the paradigm differentiates dual and plural number of a third person agent through the third person dual agent
suffix \( (<\text{-ni}) \), which is found in the 3d\( \rightarrow \)3s form \( \emptyset -\Sigma-\text{T-ni} \) and the 3d\( \rightarrow \)3d form \( \text{ya-ra-}\Sigma-\text{T-ni} \), and possibly in other forms with a third person dual agent, which are as yet unpublished.

### 6.4. The parenthetic mode

The parenthetic mode material is extremely limited, but some forms at least are presented in Watters 1975a, scattered throughout the paper, enabling a provisional analysis of the Mhai parenthetic mode verb.

#### Table 15. Mhai Khām parenthetic mode verb forms.
(Derived from Watters 1975)

<table>
<thead>
<tr>
<th>scenario</th>
<th>narrative mode</th>
<th>parenthetic mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s( \rightarrow )2s</td>
<td>( \eta\alpha-\Sigma-\text{T-n} )</td>
<td>( \eta\alpha-\Sigma-\text{n-u} )</td>
</tr>
<tr>
<td>1s( \rightarrow )2d</td>
<td>( \eta\alpha-\Sigma-\text{T-ci-n} )</td>
<td>( \eta\alpha-\Sigma-\text{ci-n-u} )</td>
</tr>
<tr>
<td>1s( \rightarrow )2p</td>
<td>( \eta\alpha-\Sigma-\text{T-ci} )</td>
<td>( \eta\alpha-\Sigma-\text{c-u} )</td>
</tr>
<tr>
<td>3s( \rightarrow )1s</td>
<td>( \Sigma-\text{T-}\eta-u )</td>
<td>( \sigma-\Sigma-\eta-u )</td>
</tr>
<tr>
<td>3s( \rightarrow )2s</td>
<td>( \Sigma-\text{T-n-u} )</td>
<td>( \sigma-\Sigma-n-u )</td>
</tr>
<tr>
<td>3s( \rightarrow )2p</td>
<td>( \Sigma-\text{T-c-u} )</td>
<td>( \sigma-\Sigma-c-u )</td>
</tr>
</tbody>
</table>

The verbal system undergoes the same changes as in Takāle Khām. Third person agent morphemes are now prefixed, and a special parenthetic mode marker, homophonous to the third person singular agent marker, is suffixed to the simple verb.

### 7. Development of the Khām verbal morphology

When Bauman (1975:86-87) wrote his *Pronouns and Pronominal Morphology in Tibeto-Burman*, the only Khām language about which descriptions were available was Takāle. The Takāle agreement system is very innovative and Bauman was forced to conclude that Khām '...more than any other language seems to overstep the norms'. Any direct comparison between Takāle Khām and other, non-Khām, pronominalizing Tibeto-Burman languages is extremely hazardous. Various scholars have proposed solutions to this problem. Bauman (1975) rests the case and views Khām as an exception. Watters (1975) argues for a system which originally had only suffixes, expressing subject agreement. DeLancey (1988) views the prefixes as reflexes of an original Tibeto-Burman prefixal paradigm.

Recently more information about other Khām languages has become available, and it is now possible to construct a tentative model of proto-Khām, and to compare this model with similar models for other Tibeto-Burman language groups, such as Kiranti.
Little is known as yet about the relations between the different dialects or languages of the Khâm group. The differences between Takâle and Gamâle are very large. Cognacy is reported to be high, between 92% and 96% of all lexical items, but the phonological forms of the cognates vary widely, as can be inferred from the difference between Takâle khyo ‘long’ versus Gamâle hlu ‘long’. Both words are said to be derived from a proto-form *slo ‘long’ (Watters 1991:4). The lack of knowledge about the sound laws of the languages under examination hampers any attempt to set up formal correspondences between morphemes, and this holds for any endeavour in the field of Tibeto-Burman morphological reconstruction. If enough caution is exercised, however, a comparison of obviously relatable forms may nonetheless yield testable results.

Four sources of evidence are important in examining the Khâm agreement system: the free pronouns, the tonal evidence on the cohesiveness of the affixes, the order of the functional positions in the affixal string, and the form and semantic value of the affixes themselves.

### 7.1 Free pronouns

In order to be able to identify similarities between the free pronouns and pronominal affixes an examination of the free pronouns is necessary. Such information as is available is shown in Table 16.

<table>
<thead>
<tr>
<th></th>
<th>Takâle</th>
<th>Sheshi</th>
<th>Bhuji</th>
<th>Maikot</th>
<th>Proto-Khâm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s</td>
<td>ɲa:</td>
<td>ɲa</td>
<td>-</td>
<td>-</td>
<td>*ɲa</td>
</tr>
<tr>
<td>1d</td>
<td>ɲin</td>
<td>ɲini</td>
<td>ge nis</td>
<td>gī</td>
<td>*ɲe (ns)</td>
</tr>
<tr>
<td>1p</td>
<td>ɲe:</td>
<td>ge</td>
<td>ge</td>
<td>-</td>
<td>*ɲoŋ</td>
</tr>
<tr>
<td>2s</td>
<td>ɲən</td>
<td>ɲəŋ</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2d</td>
<td>ɲin</td>
<td>ɲini</td>
<td>je nis</td>
<td>jī</td>
<td>*je (ns)</td>
</tr>
<tr>
<td>2p</td>
<td>ɲe:</td>
<td>je</td>
<td>je</td>
<td>-</td>
<td>*ɲoŋ</td>
</tr>
<tr>
<td>3s</td>
<td>ɲo, ɲo:, ɲo:</td>
<td>o</td>
<td>-</td>
<td>-</td>
<td>*ɲo</td>
</tr>
<tr>
<td>3d</td>
<td>ɲs+&lt;-ni&gt;</td>
<td>oni</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3p</td>
<td>ɲs+&lt;-ra&gt;</td>
<td>ɲəŋ</td>
<td>-</td>
<td>-</td>
<td>*ɲa/*ɲaŋ</td>
</tr>
</tbody>
</table>

It is safe to reconstruct a first person singular pronoun *ɲa and a second person singular pronoun *ɲəŋ, which happen to be identical to Benedict’s (1972:93) Proto-Sino-Tibetan reconstructions *ɲa and *ɲəŋ.

Bauman (1975:114, 149) argues for the reconstruction of two other Proto-Tibeto-Burman roots, a first person pronoun *ɡya and a second person pronoun *kya. In Khâm these roots are reflected as non-singular pronouns. The palatalisation of the second person plural form *je seems to be present in all Khâm languages. Accordingly, a first person non-singular free pronoun is reconstructed as *ɲe and a second person non-singular free pronoun as *ɲe. It
is clear that no vestiges of an original dual-plural distinction remain in the free pronouns of any Khâm language. While all Khâm languages differentiate between dual and plural, these forms are recent innovations, as is shown by Bhuji Khâm. It is not necessary to reconstruct distinct dual pronouns for Proto-Khâm, though of course synthetic dual forms, made with a suffix derived from the numeral *nis 'two', may well have been present. Only in the verbal affixes do some traces of an original dual remain, in the form of modern reflexes of the proto-Khâm first and second person verbal dual suffix *<ci>.

As pointed out above, in the description of the Takâle free pronouns (Table 1), Watters (1975:54) reconstructs a third person singular pronoun *ol, a third person non-singular pronoun *ya, and two competing third person plural suffixes *-ra and *-lj. He does not make explicit his reasons for reconstructing a lateral approximant in the third person singular form, and on the basis of the Sheshi evidence I would reconstruct a protoform *o. The plural suffix *<-ra> may simply be the non-word-initial allomorph of the non-singular third person pronoun *ya, as it is still in the Takâle verb, which subsequently developed into a plural marker *ra or *ra, used with all nouns and third person pronouns. On the basis of Sheshi 3p oyaj a third person plural suffix *yaaj may be reconstructed, perhaps consisting of plural morpheme *ya and a generalized dual marker *lj, developed out of *lji < *ni. The verbal third person dual marker 3dA/S <-lji> in Gamâle may also give support to this hypothesis.

7.2 The tonal cohesiveness of the Takâle verbal complex

The tonal system of Takâle Khâm, the only dialect about which such information is available, is reportedly based on the word as the domain of tone. A lexical stem carries two tones, a stem-tone and a suffix-tone. The suffix-tone is realised on the affixes appended to the stem. Affixes do not have an independent tone. When two lexical stems form a compound their tones also compound, the second stem taking the stem-tone of the first stem but giving its own suffix tone to the affixes appended to the whole compound. If two lexical stems are juxtaposed without affixes in between and without forming a compound, their tones undergo sandhi, but the two stems still keep their own stem tone.

The first and second person agent and subject singular and plural prefixes have no independent tone, but take their tone from the verbal stem. Dual prefixes consist of two morphemes, the pronoun and a dual marker <n-> developed out of Proto-Tibeto-Burman *<g>-ni-s> 'two'. This dual marker had an independent tone, which has been preserved in the dual affixes. The tone of the dual affixes forms a compound with the verbal stem. This seems to indicate that at the time of the affixing of the dual prefixes the dual prefixes still consisted of two separate morphemes. All first and second person prefixes are identical with the possessive pronouns prefixed to nouns. The parenthetic mode verb is a nominalised finite construction and as such can be preceded by
possessive pronouns, indicating the agent of the action. The first and second person possessive prefixes then spread to the non-nominalised finite verb forms.

Third person patient prefixes still have some tonal characteristics of their own and form a tonal compound with the verbal stem which indicates their relative phonological independence.

All verbal suffixes have their own stem tones, and undergo sandhi with adjacent stem-tone bearing morphemes. Verbal suffixes thus do not depend for their tonal quality on the verb stem, but form independent phonological entities. Although this loose phonological bond means that suffixes can easily change places, the suffixes are syntactically bound to the verb in fixed positions in the affixal string. This calls to mind the system of fixed pronominal clitics envisaged by van Driem (1990:28) for Proto-Kiranti. The lack of phonological integration seems to indicate that the affixal system of Khâm is a relatively recent development. While the present-day verbal agreement system of Takâle Khâm looks very much like something that could have been ancestral to the other pronominalizing languages, the system itself does not have to be very old.

7.3. Agreement system

A synthesis of the correspondences which will be discussed in this section is given in Table 17:

Table 17. The proposed proto-Khâm verbal agreement system

<table>
<thead>
<tr>
<th>ye?</th>
<th>ma</th>
<th>∑</th>
<th>si</th>
<th>t/ke</th>
<th>ija</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS</td>
<td>neg</td>
<td></td>
<td>si</td>
<td>jya</td>
<td>1s</td>
<td>3s</td>
</tr>
<tr>
<td>1ns</td>
<td></td>
<td>PRS/CONT</td>
<td>ci</td>
<td>12p</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ka?</td>
<td></td>
<td></td>
<td>2ns</td>
<td></td>
<td></td>
<td>PAR</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>n</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7.3.1. Prefixes

The actant prefixes of Takâle, Mhai and Sheshi are clearly nothing but possessive pronouns which were originally affixed to the parenthetic mode verb and later spread to the narrative mode verb forms. In Sheshi Khâm the prefixes still occur only in the parenthetic mode. In Takâle and in Mhai these parenthetic mode actant prefixes have been reanalysed as agent markers in the case of first and second person prefixes and as patient markers in the case of third person prefixes. Whether the third person prefixes also originate in the possessive pronominal paradigm cannot be decided. Their position differs from
the position of the first and second person prefixes, while in Sheshi all traces of third person suffixes vanish in the parenthetic mode, while the first and second person suffixes remain in place. These facts indicate a basic difference between first and second person pronominal affixes and third person pronominal affixes.

The Gamâle prefixes are difficult to analyse. As is the case in Sheshi Khâm, some tense morphemes occur as prefixes. In Sheshi Khâm this is limited to the future prefix <əi->. In Gamâle, tense markers occur in prefixal slot 1 in all third person agent scenarios. Gamâle has tensed portemanteaux in first person singular agent/subject scenarios in prefixal slot 1 as well. Both Takâle and Gamâle have two suffixal tense slots and it may be that the Sheshi future prefix <əi-> was originally a suffix, since Sheshi has only one suffixal tense slot. A separate prefixal tense slot thus does not seem very likely for proto-Khâm.

Two of the actant marking prefixes in Gamâle are possessive pronouns as in the other Khâm languages, viz. the 1SA/S/NPT prefix <a> and the 2SA/S prefix <na>. But the non-third person agent/subject prefix <ye-> does not occur in any pronominal paradigm. Two hypotheses for the origin and development of this Gamâle Khâm prefix are possible.

According to the first hypothesis, the non-third agent/subject prefix could be cognate to the marked scenario prefix *<ta- - na-> or the second person prefix <ke-> which van Driem reconstructs for Proto-Tibeto-Burman (van Driem 1993:326). Elsewhere (Rempt 1993) I argue that these two protomorphemes should be reconstructed as one second person marker. Watters connects the Gamâle prefix n3A/S <ye-> with a Proto-Tibeto-Burman evidential or second person marker *<te-> (Watters 1991:7-8).

The most likely hypothesis however, is that the non-third agent/subject prefix <ye-> is the result of a merger of weakened forms of the first person non-singular possessive pronoun *<ge-> and the second person non-singular possessive pronoun *<je->, originally prefixed to parenthetic mode verbs. If this were the case, then the first person singular agent/subject preterite tense portemanteau prefix <a-> and the second person singular agent/subject prefix <na-> are not recent innovations, but vestiges of an earlier system very much like the Mhai and Takâle systems. Gamâle would then be innovative instead of conservative.

Other possible indications of the innovativeness of Gamâle Khâm are the development of a second person dual marker <əi> out of a second non-singular morpheme *<əɔ> and a dual morpheme *<əi> and the development of the first person plural and second person singular suffix <əɛ> out of the second person singular suffix *<ən>, which may be reconstructed for proto-Khâm. The etymology [əɛ] *[n] is given in Watters (1991:8), though he does not give evidence for this development.
No Khâm-internal comparative evidence for a proto-Khâm etymology of the Takâle negative prefix *<na>- is available, but since cognates occur in almost all Tibeto-Burman languages, it can safely be reconstructed for Proto-Khâm.

In summary, arguments can be given for the reconstruction of only one prefix: the negative prefix *<ye->. A reconstruction of a prefix *<ye->, possibly indicating a marked scenario, may be correct, but is very uncertain in view of the innovative nature of Gamâle.

### 7.3.2. Suffixes

The only information we have about Khâm reflexive forms stems from Takâle Khâm. The Takâle reflexive suffix <-si> occurs immediately adjacent to the verbal root, in suffixal slot 1. This seems to agree with the reconstruction made by van Driem (1990, 1991a, 1992 and 1993) of a reflexive morpheme *<-nû> occurring in the most anterior position of the suffixal string. Accordingly, a reflexive proto-morpheme *<-si> is postulated for proto-Khâm, occurring in first position in the suffixal string.

All Khâm languages show a reflex of a nasal first person suffix in an anterior part of the suffixal string:

<table>
<thead>
<tr>
<th>Language</th>
<th>Person</th>
<th>Suffix</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takâle</td>
<td>1sP</td>
<td>&lt;-na&gt;</td>
<td>sf1</td>
</tr>
<tr>
<td>Gamâle</td>
<td>1s</td>
<td>&lt;-û&gt;</td>
<td>sf3</td>
</tr>
<tr>
<td>Sheshi</td>
<td>1s</td>
<td>&lt;-ûa&gt;</td>
<td>sf2</td>
</tr>
<tr>
<td>Mhai</td>
<td>1s→3</td>
<td>&lt;-û&gt;</td>
<td>sf3</td>
</tr>
</tbody>
</table>

Takâle <-na> may either be a development from a velar nasal, or else a reflex of Proto-Tibeto-Burman 1s→2 *<-nyâ>. Gamâle, Sheshi and Mhai all point to a velar nasal first person singular proto-morpheme, unmarked for grammatical role. Accordingly, a morpheme *<-û> or perhaps *<-ûa> can be reconstructed, at a position in the first part of the suffixal string.

First and second person non-singular morphemes are reflected in all Khâm languages:

<table>
<thead>
<tr>
<th>Language</th>
<th>Person</th>
<th>Suffix</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takâle</td>
<td>1nsP</td>
<td>&lt;-si&gt;</td>
<td>sf1</td>
</tr>
<tr>
<td></td>
<td>2nsP</td>
<td>&lt;-ci&gt;</td>
<td>sf1</td>
</tr>
<tr>
<td>Gamâle</td>
<td>1pP</td>
<td>&lt;-si&gt;</td>
<td>sf3</td>
</tr>
<tr>
<td></td>
<td>2ns</td>
<td>&lt;-ûa&gt;</td>
<td>sf3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(&lt;2d &lt;-si&gt; (&lt;2ns &lt;-ûa&gt; + d *&lt;-ûi&gt;)) &amp; 2p &lt;-ûa&gt;</td>
<td></td>
</tr>
<tr>
<td>Sheshi</td>
<td>1d/2ns</td>
<td>&lt;-ci&gt;</td>
<td>sf2</td>
</tr>
<tr>
<td>Mhai</td>
<td>1nsP</td>
<td>&lt;-si&gt;</td>
<td>sf1</td>
</tr>
<tr>
<td></td>
<td>2ns</td>
<td>&lt;-ci&gt;</td>
<td>sf3</td>
</tr>
</tbody>
</table>

Both Gamâle 1pP <-si> and 2ns <-ûa>, and Sheshi 1d/2ns <-ci> seem to argue for an original first and second person non-singular morpheme, but Takâle and Mhai show that two separate morphemes must be reconstructed for Proto-Khâm, a first person non-singular marker <-si> or <-ûa> and a second
person non-singular marker <ci>. In Mhai Khâm the first person non-singular affix <-si> occurs in the first position in the affixal string, earlier than the second person non-singular affix <ci>. This suggests that the first non-singular proto-morpheme must also be located closer to the stem than the second non-singular morpheme.

The Gamâle second person dual suffix <-si> originally consisted of a second person non-singular morpheme <-sâ> and a dual number affix *<-ni>. The dual number suffix <-ni> has left its mark on the vowel of the second dual agent/subject marker in the form of the [i] vocalisation and the nasalisation. The 2ns affix <-sâ> was subsequently reanalyzed as a second person plural affix. The Sheshi Khâm first person dual and second person non-singular suffix <-ci> would seem to be the result of a merger between a first person non-singular and a second person non-singular suffix.

Only Mhai and Sheshi seem to have retained a reflex of the Proto-Tibeto-Burman first and second person plural suffix *<-i>:

<table>
<thead>
<tr>
<th>Language</th>
<th>Case</th>
<th>Suffix</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheshi</td>
<td>ns</td>
<td>&lt;-ya&gt;</td>
<td>sf4</td>
</tr>
<tr>
<td>Mhai</td>
<td>1p→3</td>
<td>&lt;-e&gt;</td>
<td>sf3</td>
</tr>
</tbody>
</table>

The Sheshi non-singular suffix <-ya> seems originally to have had a plural meaning, which was extended to cover non-singular meaning.

A suffix which has reflexes in all the languages under examination is the second person singular suffix:

<table>
<thead>
<tr>
<th>Language</th>
<th>Number</th>
<th>Suffix</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takâle</td>
<td>2sp</td>
<td>&lt;-ni&gt;</td>
<td>sf1</td>
</tr>
<tr>
<td>Gamâle</td>
<td>1pas/2ssp</td>
<td>&lt;-ơe&gt; (&lt;*&lt;-n&gt;)</td>
<td>sf3</td>
</tr>
<tr>
<td>Sheshi</td>
<td>2np</td>
<td>&lt;-na&gt;</td>
<td>sf3</td>
</tr>
<tr>
<td>Mhai</td>
<td>2s</td>
<td>&lt;-n&gt;</td>
<td>sf3</td>
</tr>
</tbody>
</table>

The Gamâle first person plural agent/subject and second person singular subject/patient suffix <-ơe> is the result of a merger of a second person singular suffix *<-n> and a dual number suffix *<-n>. Of the two suffixes, the second singular *<-n> is the older. It is not clear whether any vowel is associated with this suffix. The position of the proto-morpheme 2s <-n> will be near the stem, though after the first person plural suffix *<-si>, as reflected by Mhai Khâm.

Takâle, Gamâle and Mhai, but not Sheshi, show reflexes of a dual number suffix *<-n>:

<table>
<thead>
<tr>
<th>Language</th>
<th>Number</th>
<th>Suffix</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takâle</td>
<td>12dp</td>
<td>&lt;-n&gt;</td>
<td></td>
</tr>
<tr>
<td>Gamâle</td>
<td>1pas/2ssp</td>
<td>&lt;-ơe&gt; &lt;*-&lt;-n&gt;</td>
<td></td>
</tr>
<tr>
<td>Mhai</td>
<td>2d</td>
<td>&lt;-n&gt;</td>
<td></td>
</tr>
</tbody>
</table>

As discussed above, the Gamâle 1pas/2ssp is the result of a merger of two morphemes, a second singular *<-n> and a dual *<-n>. The nasal dual morphemes are developments of the Proto-Tibeto-Burman numeral *<-g-ni-s>
'two', and are in fact recent accretions to the verbal paradigm and not retentions from Proto-Tibeto-Burman. Since Sheshi does not show traces of a related first or second person dual number affix, it does not seem correct to reconstruct a dual affix *<-n> for proto-Khām.

As mentioned, Sheshi, Gamāle and Takāle all have two tense slots. Since only one tense of the Mhai verb paradigm is available, it remains uncertain whether Mhai also possesses two tense slots. Sheshi Khām has one prefixal tense slot and one suffixal slot. Takāle has two suffixal tense slots, like Gamāle Khām. Gamāle in addition marks tense by *portemanteaux* in prefixal slot one.

<table>
<thead>
<tr>
<th>Table 18. Khām tense morphemes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future</strong></td>
</tr>
<tr>
<td>Takāle</td>
</tr>
<tr>
<td>Gamāle</td>
</tr>
<tr>
<td>Sheshi</td>
</tr>
<tr>
<td><strong>Preterite</strong></td>
</tr>
<tr>
<td>Takāle</td>
</tr>
<tr>
<td>Gamāle</td>
</tr>
<tr>
<td>Sheshi</td>
</tr>
<tr>
<td>Mhai</td>
</tr>
<tr>
<td><strong>Continuous/present</strong></td>
</tr>
<tr>
<td>Takāle</td>
</tr>
<tr>
<td>Gamāle</td>
</tr>
<tr>
<td>Sheshi</td>
</tr>
<tr>
<td><strong>Terminate past</strong></td>
</tr>
<tr>
<td>Takāle</td>
</tr>
</tbody>
</table>

Thus, two tense slots must be postulated, one close to the verbal root, one at the other extremity of the affixal string, as reflected by the Takāle and Gamāle suffixal tense slots. It seems that in Sheshi Khām the future tense morpheme <-ai>, which occurs in the prefixal tense-slot, is cognate to the Takāle future tense <-ya>, which occurs in the most anterior position of the affixal string. Since morphemes occurring further from the verbal root are less fixed in their positions in the affixal string than morphemes occurring closer to the root (cf. Bybee 1985), it is not unlikely that an originally posterior suffixal future morpheme changed its place to a prefixal position in Sheshi Khām, which means that Sheshi also supports the reconstruction of two suffixal tense slots.

The first tense slot contains the preterite tense suffix *<-ke> or *<-de>, as reflected by the Mhai preterite <-ke>, Sheshi preterite <-dā> and Takāle preterite <-ke>. A dental-initial form would fit in with van Driem’s (1993: 320) reconstruction of a Proto-Tibeto-Burman preterite morpheme *<-te>. The first tense slot also may have contained a present/continuous marker *<-yza> or *<-zya>, as can be inferred from Takāle present <-zya>, Gamāle continuous <-jya> and Sheshi continuous <-jya>.
The second tense slot may have contained a future marker *<-yai> or *<-ya>, reflected by the Sheshi future <ai> and the Takāle future <-ya>. This future tense may be connected with an imperative or a reassuring particle.

The morphemes in the Gamāle second tense slot, sf6, pose some problems. If we accept Watters' (1991: 8) tentative sound law for Gamāle Khām, the original form of the preterite *<-khê> would have been *<-khen>. There does not appear to be a cognate form of this morpheme in any other Khām language that I know of. The future tense suffix *<-ke> looks like a cognate to PT *<-ke>, but both slot and meaning are wrong, though the form is right. Perhaps a new morpheme *khen with preterite time reference, originating in an auxiliary, was appended to the end of the simple verb. This caused a semantic shift in a preterite suffix *<-ke> from preterite to future, which was followed by a shift in the affixal string to the place of the original future morpheme, i.e. at the end of the suffixal string. In Gamāle subsequently many changes in tense marking occurred, resulting in the tensed portemanteaux found in prefixal slot 1. If correct, the development of the tense markers indicates once again the innovativeness of Gamāle Khām.

The ubiquitous Gamāle 1pA/n3p suffix *<-kê> has no obvious cognates and may well stem from a reanalysed preterite suffix *<-ke>. Alternatively Gamāle *<-kê> might be seen as a suffixal reflex of the morpheme van Driem (1993) reconstructs for proto-Tibeto-Burman as the second person prefix *<-kê->, in which case a reconstruction of a second person suffix *<-kê> may be placed anterior to the other second person morphemes, possibly even before the tense marker, to reflect the anterior position of the morpheme in Proto-Tibeto-Burman.

While the modern languages have not preserved the original third person suffixes very well, it is not true that 'third person indexation tends to be a rather haphazard matter,' as DeLancey (1988:52-53) claims. Very definite patterns and developments can be recognised:

<table>
<thead>
<tr>
<th>Language</th>
<th>Case</th>
<th>Suffix</th>
<th>Tense Slot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takâle</td>
<td>3SA</td>
<td>&lt;-o&gt;</td>
<td>sf6</td>
</tr>
<tr>
<td>Gamâle</td>
<td>3SA</td>
<td>&lt;-o - -wo - -u&gt;</td>
<td>sf4</td>
</tr>
<tr>
<td>Sheshi</td>
<td>3s</td>
<td>&lt;-w - wa - Ø&gt;</td>
<td>sf2</td>
</tr>
<tr>
<td>Mhai</td>
<td>3SA</td>
<td>&lt;-u&gt;</td>
<td>sf5</td>
</tr>
</tbody>
</table>

In the allomorphy of the Gamâle affixes the development of the third person singular affixes can still be seen. The original proto-Khām third person affix was *<-u>, a reflex of Tibeto-Burman 3p <-u>. Later, the third person singular free pronoun *<-o> became suffixed in Takâle and Gamâle. In Takâle Khām the old third person singular suffix *<-u> disappeared, while in Gamâle traces still remain. Sheshi third person <-w - wa - Ø> and Mhai third person singular agent <-u> also reflect the original suffix *<-u>.

Although all daughter languages show a reflex of a third dual suffix, this suffix should not be reconstructed for proto-Khām:
Takāle 3dA/S <-ni> sf6
Gamāle 3dA <-ŋi> sf4
Sheshi 3d <-ni> sf3
Mhai 3dA <-ni> sf5

It is clear that all these morphemes are reflexes of the proto Tibeto-Burman numeral *<-g-ni-s> 'two', and thus new formations, and not retentions from Proto-Tibeto-Burman. It is entirely likely that proto-Khām did not distinguish between dual and plural number of third person actant.

Takāle 3nsA/S <-ŋo> sf6
Gamāle 3ns <-ŋo> sf5
Sheshi 3p <-ra ~ -rŋ> sf3
Mhai 3nsA <-ŋi> sf5

Only Mhai Khām seems to have retained a reflex of an original third plural affix *<-ŋ>, in a posterior position in the affixal string. Proto-Khām *<-m> seems cognate to the proto-Kiranti third plural agent prefix *<-me> and Proto-Tibeto-Burman plural agent *<-m> (van Driem 1991b and 1993). The many prefixal cognates of a third plural agent morpheme *<-me> in other languages may mean that the suffixal position of 3nsA in Mhai is an innovation.

It seems from this comparison of third person affixes that in the modern languages the old affixes, of Proto-Tibeto-Burman provenance, are being replaced by suffixes based on the third person free pronouns.

Since in all Khām languages under review here the parenthetic mode suffix has the same form as the third person singular suffix, it is reasonable to reconstruct for proto-Khām a parenthetic mode marker *<-u>, with the same form as the reconstructed third person singular affix *<-u>.

8. CONCLUSION

The most serious problem in comparative Tibeto-Burman linguistics is the dearth of dependable data. Khām forms no exception. Although a subgroup on the level of Kiranti, very little has been published to date on Khām languages. All material has been gathered by one man, David Watters. The situation for Kiranti is a little better. About The Xīfān languages in China almost no information is available. The Kuki-Chin-Naga languages remain virtually undescribed. Consequently, any conclusions reached on the basis of the presently available material are tentative.

It can be demonstrated that the conjugations of the Khām languages reflect an earlier agglutinative verbal agreement system with suffixes indicating person and number of actant but not grammatical role. This system of affixes can be compared with the reconstructions reached for Proto-Tibeto-Burman. The reconstruction made by Bauman (1975) differs a great deal from both the
reconstruction made by van Driem (1993) and the reconstruction reached for Khām in this paper, but many affixes that can be reconstructed for Khām seem cognate to affixes found in the reconstruction made by van Driem.

While it seems that the elements of the conjugations of the Khām languages are retentions from a Proto-Tibeto-Burman agreement system, the possibility of an independent parallel development cannot be ruled out completely. Just as French developed its emphatic and clitic pronouns as in moi, je te l’ai donné ‘I gave it you’ independently of the Romanian emphatic and clitic forms as in ţi le-am dat ţie ‘[I] gave it you’, the conjugational systems of Khām and Kiranti may have developed independently but in parallel fashion from an original situation where some or even most pronominal matter was independent from the verbal form, to a situation where pronouns were fixed to the verb.

Still, it is much more likely that these conjugations date back to Proto-Tibeto-Burman, but only when more Tibeto-Burman languages are described in more detail, facilitating a thorough comparative analysis of both morphology and phonology, can questions about the origin and development of the conjugational systems be answered.
APPENDIX 1. Takāle Khām intransitive verb paradigm ‘to dance’ (derived from Watters 1973:99):

1s  ȵa: ȵasyake
1d  gin ginsyahke
1p  ge: gesyahke
2s  nən. nəsyake
2d  jin jinsyahke
2p  je: jesyahke
3s  no syahke
3d  noni syahkini
3p  norə syahkerə

APPENDIX 2. Takāle Khām reflexive verb paradigm ‘to hit’ (derived from Watters 1973:97-98):

1s  ȵa: ȵapohsike
1d  gin gin ginpohsike
1p  ge: ge: gepohsike
2s  nən. nəpohsike
2d  jin jin jinpohsike
2p  je: je: jeppohsike
3s  no pohsike
3d  ni ni pohsikini
3p  ya ya pohsikero

APPENDIX 3. Takāle Khām transitive verb paradigm ‘to hit’ (derived from Watters 1973:97-98):

Narrative mode

1s→2s  ȵa: nən.lay ṱapohnikə
1s→2d  ȵa: jinlay ṱapohcineke
1s→2p  ȵa: jelay ṱapohcike
1s→3s  ȵa: nołay ṱapohke
1s→3d  ȵa: nonilay ṱanipohke
1s→3p  ȵa: noralay ṱarapohke
1d→2s  gin nanləy ginpohnikə
1d→2d  gin jinlay ginpohcineke
1d→2p  gin jelay ginpohcike
1d→3s  gin nołay ginpohke
1d→3d  gin nonilay ginrapohke
1d→3p  gin noralay ginrapohke
1p→2s  ge: nən.lay gepohnikə
1p→2d  ge: jinlay gepohcike
1p→2p  ge: jelay gepohcike
1p→3s  ge: nolay gepohke
1p→3d  ge: nonilay gerapohke
1p→3p  ge: noralay gerapohke
2s→1s  nən. njalay nəpohnake
2s→1d  nən. ginlay nəpohsinke
2s→1p  nən. gelay nəpohsike
2s→3s  nən. nolay nəpohnke
2s→3d  nən. nonilay nənipohke
2s→3p  nən. noralay nərapohke
2d→1s  jin njalay jinpohnake
2d→1d  jin ginlay jinpohsike
2d→1p  jin gelay jepohsike
2d→3s  jin nolay jinpohnke
2d→3d  jin nonilay jinrapohke
2d→3p  jin noralay jinrapohke
2p→1s  je: njalay jepohnake
2p→1d  je: ginlay jepohsike
2p→1p  je: gelay jepohsike
2p→3s  je: nolay jepohke
2p→3d  je: nonilay jepapohke
2p→3p  je: noralay jepapohke
3s→1s  noe9 njalay pohnakeo
3s→1d  noe ginlay pohsinkeo
3s→1p  noe gelay pohsikeo
3s→2s  noe nən. lay pohnikeo
3s→2d  noe jinlay pohcinkeo
3s→2p  noe jelay pohcikeo
3s→3s  noe nolay pohkeo
3s→3d  noe nonilay nipohkeo
3s→3p  noe noralay yapohkeo
3d→1s  noni njalay pohnakini
3d→1d  noni ginlay pohsinkerə
3d→1p  noni gelay pohsikerə
3d→2s  noni nən. lay pohnikini
3d→2d  noni jinlay pohcinkerə
3d→2p  noni jelay pohcikerə
3d→3s  noni nolay pohkini
3d→3d  noni nonilay yapohkini
3d→3p  noni noralay yapohkini
3p→1s  norae njalay pohnakerə

9 Note that only the third person singular and the third person plural are marked with the ergative postposition ◄-►.
3p→1d  norae ginlay pohsinkera
3p→1p  norae gelay pohsikerø
3p→2s  norae nonlay pohnikerø
3p→2d  norae jinlay pohcinkerø
3p→2p  norae jelay pohcikerø
3p→3s  norae nolay pohkerø
3p→3d  norae nonilay yarapohkerø
3p→3p  norae noralay yarapohkerø

APPENDIX 4. Mhai Khâm transitive verb paradigm ‘to hit’ (derived from Watters 1975):

Narrative mode

1s→2s  yapohkøn
1s→2d  yapohkøcin
1s→2p  yapohkøci
1s→3s  pohkøn
1s→3d  yanpohkøn
1s→3p  yarapohkøn
1d→2s  ginpohkøn
1d→2d  ginpohkøcin
1d→2p  gepohkøn
1d→3s  pohkøci
1d→3d  yarapohkøci
1d→3p  yarapohkøci
1p→2s  gepohkøn
1p→2d  gepohkøcin
1p→2p  gepohkøci
1p→3s  pohke
1p→3d  yarapohke
1p→3p  yarapohke
2s→1s  nápohkøn
2s→1d  nápohsikøn
2s→1p  nápohsikøn
2s→3s  nápohkøn
2s→3d  nánarapohkøn
2s→3p  nárapohkøn
2d→1s  jinpohkøcin
2d→1d  jinpohkøcin
2d→3s  jinpohkøcin
2d→3d  jinnapohkøcin
2d→3p  jerpohkøcin
2p→1s  jepohkøci
2p→1d  jepohsikøci
2p→1p  jepohsikaci
2p→3s  jepohkaci
2p→3d  jerapohkaci
2p→3p  jerapohkaci
3s→1s  pohkuju
3s→1p  pohsiku
3s→2s  pohkuwu
3s→2p  pohkuwu
3s→3s  pohku
3s→3d  yanpohku
3s→3p  yarapohku
3d→3s  pohkini
3d→3d  yarapohkini
3d→3p  yarapohkam
3p→1p  pohsikam
3p→3s  pohkam
3p→3d  yarapohkam
3p→3p  yarapohkam

Parenthetic mode
1s→2s  ṇapohnu
1s→2d  ṇapohcinu
1s→2p  ṇapohci
3s→1s  opohju
3s→2s  opohnu
3s→2p  opohcu
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