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Pangwa Tangsa agreement markers and verbal operators

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ABSTRACT

Although most of the languages in the Northern Naga group do not exhibit verb agreement, it is present in most of the varieties that are part of Tangsa (termed Tangshang in Myanmar). All of these languages are part of a bigger grouping we will term Tangsa-Nocte. This chapter will concentrate on surveying verb agreement in languages that belong to one group of thes languages Tangsa, namely the Pangwa group, and show that the forms of verb agreement can be used as criteria for subgrouping within Pangwa. Data is presented from 17 Pangwa varieties, and compared with Tangsa-Nocte languages outside the Pangwa group. Three of these are dealt with in more detail in this volume – Hakhun (Boro 2019), Muklom (Mulder 2019) and Phong (Dutta 2019).

Pangwa Tangsa agreement markers and verbal operators[1]

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1 Introduction

This chapter will survey agreement marking in the Pangwa group within Tangsa-Nocte (see Tangsa-Nocte Introduction (Morey 2019). After briefly introducing the Pangwa group (§1.1), I will suggest a sub-grouping within Pangwa, based on the verbal morphology in the form of examples of the markers in the 'negative', 'past' and 'future' (Table 3) for 17 Pangwa varieties and comparative information for 5 Non-Pangwa Tangsa-Nocte varieties. This will be followed by overview of the functions of the agreement markers in §2. These markers, which can be termed **agreement words** (DeLancey 2015, Konnerth and DeLancey2019) consist of two parts, a **verbal operator**, generally an onset consonant that appears to be an eroded verbal auxiliary or copula, and the **agreement marker** (or **argument index,** following Boro (2019)). These agreement words co-occur with a verbal stem (see Morey 2018 for a discussion of verb stem alternation in Pangwa Tangsa[2]). The forms and functions of the verbal operators are treated in more detail in §3 and the forms of the agreement markers in §4. A range of other functions showing agreement marking are surveyed in §5. In §6 we briefly introduce a Pangwa variety, Champang, that does not mark person agreement, and present preliminary findings about its verbal system. We conclude this chapter with some suggestions about the historical development of these agreement words within Pangwa Tangsa §7.

[2] In this paper, we will use the term Tangsa-Nocte when referring to all of the languages including those dealt with in Boro (2019), Dutta (2019) and Mulder (2019). However when referring to just those languages that include the Pangwa group, we will usually simply use Tangsa.

As already mentioned, the agreement word is treated in this paper as a phonological word. Some prosodic evidence for this in Cholim was presented in Morey (2011), but a deeper study of the prosodic realisation of verbs in combination with agreement marking will likely give a more nuanced overview of this situation.

2 Pangwa

As mentioned in Tangsa-Nocte Introduction (Morey 2019), one group of linguisticvarieties is now known as Pangwa in India. These groups were sometimes referred to as either Rangpang/Rangpan or Heimi/Haimi by earlier authors (Dewar 1931). Khan Lann (2017) spells this term as Pangva and divides them into Upland and Eastern Pangva. The Pangwa is probably the largest identifiable group within Tangsa-Nocte, and one of the defining features is that they all sing a particular traditional song, the Wihu song (Barkataki-Ruscheweyh and Morey 2013, Morey and Schöpf 2019).

Linguistic criteria to define Pangwa are more difficult to isolate, but in this chapter we will suggest three morphological features that might be used to identify groups within Tangsa-Nocte:

i) The presence of verb agreement,
ii) The lack of a comprehensive hierarchical marking and inverse marking, and
iii) A mix of preverbal and postverbal elements to mark the Tense/Aspect/Modality and Polarity categories in some varieties.

Of these three, the category of verb agreement is held in common with Nocte languages, with the Hakhun group (which is sometimes treated as part of Nocte), with the Muklom-Havi group, with the Tikhak group, and with Phong. However the second feature, lack of comprehensive hierarchical marking,[3] can distinguish Pangwa from each of these other groups except the Tikhak which also lacks hierarchical marking. Finally, the presence of some preverbal elements in the marking of some Tense/Aspect categories, such as future and negative in at least some varieties, sets the many of the Pangwa group aside from the other Tangsa-Nocte languages.

Based on an overview of agreement markers and the verbal operators with which they combine in the 17 Pangwa varieties presented in Table 3, we suggest that four groupings within Pangwa can identified on morphological grounds as shown in Table 1:

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[3] As will be seen below in section 6.2, Muishaung does have a fairly robust hierarchical system, though not as comprehensive as Hakhun, Muklom and Phong. It seems that this criterion is not very strong

	Varieties	**Contrastive Features**
Group 1	Ngaimong, Joglei, Muishaung, Mungre, Maitai	stop finals in past / negative; postverbal only marking in past, negative and (mostly) in the future
Group 2	Cholim, Longri, Chamchang, Shecyü, Louchäng	open finals carrying tone mostly 3 in past / negative (except some 3rd persons) preverbal mV- + open syllables, carrying tone 2, in the future
Group 3	Lungkhi, Khalak	open finals in past (in k-), negative (in b-) and future (except some 3rd persons) no preverbal elements in combination with agreement marking
Group 4	Yvngban Wvng (Rangsi), Shangti, Gaqlun, Rinkhu, Rera	perverbal marking in the negative, with postverbal agreement markers usually bare preverbal marking in the future in some varieties tone marking of agreement markers mostly tones 1 and 2

Table 1. Subgroups within Pangwa on morphological grounds

In Table 3 we have also included data from five non Pangwa varieties, Haqchum, Hakhun, Yongkuk, Muklom and Phong. The Hakhun data is from Boro (2017, 2019),[4] the Muklom data from Mulder (2019)[5] and the Phong data from Dutta (2019). The Haqchum data was collected in Myanmar in 2014 and the Yongkuk data is from Das Gupta (1980) but was checked with a Longchang consultant, Mr. Nong Yongkuk, in January 2007.

The ordering of the Pangwa varieties in Table 3 follows the four groups proposed in Table 1. The ordering of the varieties in Group 2, currently Cholim, Longri, Chamchang, Shecyü, Louchäng, might be revisited on the basis of a set of marked tone correspondences presented in Table 2. As we can see, for this group of words all of the Group 1 varieties carry Tone 1, as does Louchäng from Group 2. Chamchang and Shecyü carry tone 2, Cholim has a final glottal stop, and Rinkhu (from Group 4) has final oral stops -t and -k. Final stops have also been recorded in cognate words *kʰət* 'cloth' and *dət* 'fall' in Lungkhi (Group 3), and *kʰat* 'cloth' and *lat* 'fall' in Gaqlun, *kʰat* 'cloth' and *ɖat* 'fall' in Shangthi (Group 4). Recently, Morey (2019) has suggested that this 'marked correspondence set' may have arisen from verb stem alternation sets (see also Morey 2018), where after the alternate stem for nominalized forms has derived following the pattern of this set, the verbal stem is changed by analogy to match the derived nominal stem. Words so far recorded for this set from Group 3 and 4 in Table 1 have stop finals (as Rinkhu in Table 2 and words from Group 1 all carry Tone 1. On the other hand, within Group 2 varieties there is considerable

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[4] We have marked tone category 3 for the open syllables in the future in Hakhun which follows our own initial research on this in 2009 and 2010.

[5] This has been slightly adjusted so that the marking of tone categories and finals are in harmony with the rest of the table, so that rather than using Tone 4 to mark stop finals, we use a glottal stop symbol.

variation (Tone 1, Tone 2, final glottal stop). There are some words that do not follow the correspondence set in Table 2 and these have been marked with shading.

English	Ngai-mong	Mui-shaung	Mungre	Louchäng	Cham-chang	Shecyü	Cholim	Rinkhu	Song Language
	1	1	1	1	2	2	ʔ	stop	stop
blow	mul$_1$	əmui$_1$	moj$_1$	maɯ$_1$	meɪ$_2$	me$_2$	mɔʔ	(pʰɯt)	
fall	dəl$_1$	dəi$_1$	daj$_1$	de$_1$	dɛə$_2$	dia$_2$	djɤʔ	dit	dət
ill	ða$_1$	ʈ̪ɯɯ$_1$	tsa$_1$	di$_1$	tsi$_2$	dzi$_2$	deʔ	rak	
cloth	kʰəl$_1$	kʰəi$_1$	kʰaj$_1$	khe$_1$	kʰɛə$_2$	khia$_2$	kʰjɤʔ	kʰet	kʰət
trample	na$_1$	nɯɯ$_1$	na$_1$		ŋi$_2$ / ni$_2$	ni$_2$	ne ʔ		nak
hear	tal$_1$	tai$_1$	təj$_1$	ti$_1$	təi$_2$	tai$_2$	te$_1$	(i)tat	tat
open up	dəp	dau$_1$	dəj$_1$		di$_2$	di$_2$	de$_1$		dep
fear	hil$_1$	hi$_1$	xaj$_1$	hai$_1$	hai$_2$	hai$_2$	hjɤʔ	(pʰap)	

Table 2. Examples of marked Tone Correspondences between 8 Tangsa-Nocte varieties

Note that the Lungkhi word for 'fear' is *hit*. A deeper study of other languages from Group 3 and Group 4 would be expected to show more final stops for this group of words.

The words in Table 2 have been shown without the nominal prefix; in all examples in this table, there is no stem alternation observed for any of these words, which are verbs except for the word for 'cloth'. This is further evidence suggestive of these words being verbal stems changed by analogy to be identical with the alternate stem. There are some other sets of verbs where the verbal stem carries Tone 1 but the alternate stems pattern like the marked correspondence set. These, we would suggest, are verbs that have not yet fully undergone the change process observed in Table 2 (see Morey 2019 for more details).

	Negative					Past					Future				
	1 Sg	1Pl	2 Sg	2 Pl	3	1 Sg	1Pl	2 Sg	2 Pl	3	1 Sg	1Pl	2 Sg	2 Pl	3
Ngaimong	Σ muk	Σ mi?	Σ mo?	Σ mit	Σ mo?	Σ tək	Σ ti?	Σ to?	Σ tit	Σ ta?	$ə_0$-Σ $əŋ_2$	$ə_0$-Σ $əi_2$	$ə_0$-Σ $əu_2$	$ə_0$-Σ in_2	$ə_0$-Σ
Joglei	Σ mək	Σ məi?	Σ mu?	Σ mit	Σ mu?	Σ tək	Σ təi?	Σ tu?	Σ tit	Σ ta?	$ə_0$-Σ əŋ	$ə_0$-Σ i	$ə_0$-Σ u	$ə_0$-Σ in	$ə_0$-Σ
Muishaung (1)	Σ mauk	Σ mi?	Σ mu?	Σ muɯt	Σ mu?	Σ tauk	Σ ti?	Σ to?	Σ tuɯt	Σ $tɤ_?$	Σ $ʃauŋ_2$	Σ $ʃi_2$	Σ $ʃuɯ_2$	Σ $ʃun_2$	Σ $ʃɤ_2$
(2) intransitive	as (1)					as (1)					Σ $tauŋ_2$	Σ ti_2	Σ $tuɯ_2$	Σ tun_2	Σ $tɤ_2$
Mungre	Σ (i_2) mok	Σ (i_2) mik	Σ (i_2) mok	Σ (i_2) mət	Σ (i_2) mok	Σ ta?	Σ tik	Σ lu?	Σ lət	Σ	me_2 Σ $ŋəŋ_2$	me_2 Σ $ŋai_2$/ i_2	me_2 Σ $ŋoŋ_2$	me_2 Σ $ŋən_2$	me_2 Σ
Maitai	Σ mu? Σ mi?	Σ mu?	Σ mu?	Σ mu?	Σ mu?	Σ $taŋ_3$	Σ tam_3, Σ ti?	Σ tam_3 Σ tu?	Σ tan_3 Σ tap	Σ te_3	Σ $naŋ_2$	Σ ni_2	Σ nu_2	Σ nam_2	Σ le_2
Cholim	Σ $maŋ_2$	Σ mi_2	Σ mu_2	Σ $miŋ_2$	Σ mu?	Σ $kjɔ_3$	Σ ki_3	Σ ku_3	Σ $kiŋ_3$	Σ tu?	me_2 Σ $aŋ_2$	me_2 Σ i_2	me_2 Σ u_2	me_2 Σ $iŋ_2$	me_2 Σ
Longri	Σ maŋ	Σ mi	Σ mu	Σ min	Σ mu?	Σ ko	Σ ki	Σ ku	Σ kin	Σ tə va	ma Σ aŋ	ma Σ i	ma Σ u	ma Σ in	ma Σ
Chamchang	Σ $maŋ_3$	Σ mai_3	Σ $maɯ_3$	Σ man_3	Σ mak	Σ $kaŋ_3$	Σ kai_3	Σ $laɯ_3$	Σ lan_3	Σ to_3	mi_2 Σ ha_2	mi_2 Σ hai_2/ i_2	mi_2 Σ hau_2	mi_2 Σ han_2	mi_2 Σ
Shecyü	Σ $məŋ_3$	Σ mai_3	Σ $maɯ_3$	Σ $mən_3$	Σ mək	Σ $kəŋ_3$	Σ kai_3	Σ $laɯ_3$	Σ $lən_3$	Σ $tɔ_3$	mi_2 Σ ha_2	mi_2 Σ hai_2/ i_2	mi_2 Σ $həɯ_2$	mi_2 Σ $hən_2$	mi_2 Σ
Louchäng	Σ mau_3	Σ mai_3	Σ mau_3	Σ man_3	Σ mok	Σ $keŋ_3$	Σ kai_3	Σ lau_3	Σ lan_3	Σ $tə(və_3)$	mə Σ a_2	mə Σ ai_2	mə Σ au_2	mə Σ an_2	mə Σ
Lungkhi	Σ $bəŋ_3$	Σ bi_3	Σ bu_3	Σ bin_3	Σ ba?	Σ $kəŋ_3$	Σ ki_3	Σ ku_3	Σ kin_3	Σ $kə(wa_3)$	Σ $tɕəŋ_3$	Σ $tɕi_3$	Σ $tɕu_3$	Σ $tɕin_3$	Σ tɕa?
Khalak	Σ bəŋ	Σ bi	Σ bau	Σ biŋ	Σ ba	Σ kaŋ	Σ ki	Σ kau	Σ kiŋ	*	*	*	*	*	*
Yvngban Wvng (1)	mi? Σ $əŋ_2$	mi? Σ i_2	mi? Σ u_2	mi? Σ $ən_2$	mi? Σ	Σ $təŋ_2$	Σ ti_2	Σ tu_2	Σ $tən_2$	Σ to_3	Σ ma-$əŋ_2$	Σ ma-i_2	Σ ma-u_2	Σ ma-$ən_2$	Σ man_2
(2) intransitive	as (1)					Σ $kəŋ_2$	Σ ki_2	Σ ku_2	Σ $kən_2$	Σ ko_3	as (1)				
Shangthi	mi? Σ $aŋ_2$	mi? Σ i_2	mi? Σ u_2	mi? Σ $iŋ_2$	mi? Σ	Σ $daŋ_3$	Σ di_3	Σ du_3	Σ $diŋ_3$	Σ di_3	me Σ $aŋ_2$	me Σ i_2	me Σ u_2	me Σ $iŋ_2$	me Σ
Gaqlun	i_3 Σ $aŋ_3$	i_3 Σ i_3	i_3 Σ $ɯ_3$	i_3 Σ $ən_3$	i_3 Σ	Σ tə $aŋ_3$	Σ tə i_3	Σ tə $ɯ_3$	Σ tə $ən_3$	*	Σ $kiŋ_3$	Σ ki_3	Σ ku_3	Σ $kən_3$	Σ ki?
Rinkhu	mi_2 Σ $əŋ_1$	mi_2 Σ i_1	mi_2 Σ u_1	mi_2 Σ in_1	mi_2 Σ	Σ $kəŋ_1$	Σ ki_1	Σ ku_1	Σ kin_1	Σ $kəwa_3$	Σ $jəŋ_1$	Σ ji_1	Σ ju_1	Σ jin_1	Σ ja?
Rera	mi_2 Σ $laŋ_1$	mi_2 Σ i_1	mi_2 Σ u_1	mi_2 Σ lan_1	mi_2 Σ	Σ $taŋ_2$	Σ ti_2	Σ tu_2	Σ tan_2	Σ to_2	ma_2 Σ $laŋ_1$	ma_2 Σ i_1	ma_2 Σ u_1	ma_2 Σ lan_1	ma_2 Σ
Haqchum	Σ mu?	Σ mu?	Σ mu?	Σ mu?	*	Σ tak	Σ ti?	Σ to?	Σ tit	Σ ta?	Σ kaŋ	Σ ke	*	*	*
Hakhun	Σ mɤ?	Σ mi?	Σ mo?	Σ mat	Σ ma?	Σ tɤ?	Σ ti?	Σ to? / tu?	Σ tat	Σ ta?	Σ $ɤ_3$	Σ e_3	Σ o_3 / u	Σ an_3	Σ a_3
Yongkuk	Σ maŋ	Σ mai	Σ mau	Σ man	Σ mu?	Σ taŋ	Σ tai	Σ tau	Σ tan	Σ ta	Σ caŋ	Σ cai	Σ cau	Σ can	Σ ca
Muklom	Σ $mɔŋ_1$	Σ mi_1	Σ mu_1	Σ min_1	Σ mɔ?	Σ $tʌŋ_1$	Σ ti_1	Σ tu_1	Σ tin_1	Σ ta_1	Σ $nʌŋ_3$	Σ ni_3	Σ nu_3	Σ nin_3	Σ na_3
Phong	Σ muŋ	Σ mʷi	Σ mu?	Σ mun	Σ mu?	Σ taŋ	Σ te	Σ tu?	Σ tan	Σ ta?	Σ aŋ	Σ e	Σ u	Σ an	Σ a

Table 3. Agreement markers in various Tangsa-Nocte varieties (* - not recorded)

Groups 1 and 2 in Table 1 correspond to the Upland Pangva group as suggested by Khan Lann (2017: 8) while group 3 corresponds to Eastern Pangva (A) and group 4 to Eastern Pangva (B). Note that these groupings do not accord with, for example, regular sound correspondences. In the case of the correspondence of (i) /g/ and /h/, and (ii) a range of coronal initials, we find the following:

	Varieties	Initial for 'mother's brother'	Initial for main syllable of 'three'
Group 1	Ngaimong, Joglei, Maitai Mungre Muishaung,	/h/ /h/ /h/ /g/	/ð/ /d/ /ts/ /t̪/
Group 2	Chamchang, Shecyü, Louchäng Cholim, Longri	/h/ /g/	/ð/, /ts/ /d/
Group 3	Lungkhi, Khalak Khalak	/g/ /g/	/z/ /r/
Group 4	Yvngban Vvng (Rangsi), Shangti, Gaqlun, Rinkhu, Rera	/g/	/r/

Table 4. Initial sound correspondences in Pangwa varieties

One way of interpreting the data in Table 4 is that in the case of proto /g/, it was changed to /h/ in some but not all of the northern varieties, Group 1 and Group 2 (Upland Pangva in Khan Lann 2017), while /g/ is retained in all of the the southern varieties. In the case of the initial for the word for 'three', we see a range of coronal stops and affricates (/d/, /ð/, /ts/, /t̪/) in Group 1 and 2, while in Groups 3 and 4 we see fricatives and approximants /r/ and /z/). While more research is needed on the relationship between these groupings and sound correspondences, the current best linguistic criteria for grouping within Pangwa are the morphological categories outlined in this chapter.

The semantic functions of the categories 'past' and 'future' in Table 3 have not been comprehensively studied for every variety. In at least some varieties, such as Cholim, it is clear that the past is a past tense system which is present in the language alongside a perfective aspect (Morey 2011). What we are terming 'future' here, however, may turn out to be more appropriately termed 'irrealis' in at least some varieties when more comprehensive grammars of each of the varieties are completed.

Throughout this paper we will use a version of the name of the sub-tribe that most closely approximates their autonym. Some of these are spelled using an accepted orthography, but that may vary for place to place. So, for example, Chamchang /tɕam₂tɕaŋ₂/ is the spelling generally preferred in Indian for this sub-tribe, whose 'general name' is Kimsing. But in the new orthography,

the Tangshang Naga Unified Orthography (TNUO), being developed in Myanmar (Khämlan and Owen 2018),[6] it will be Cyämcyäng.[7]

In the case of Muishaung, the orthography developed by Rev. Gam Win has spelled the name Mueshaungx /mɤ₂ʃauŋ₂/, where the first syllable was not marked for tonal distinctions due to the lower functional load of those distinctions in that position (see van Dam 2018). However members of the Muishaung community with whom we have worked have indicated that the spelling ought to be Muishaung (/mɯ₂ʃauŋ₂/) with both syllables marked for tone in materials prepared for the community (as Muixshaungx) but with the tone mark dropped in more general publications.

The various Pangwa varieties generally have three tones on open syllables as well as words carrying stop final syllables (-ʔ, -p, -t, -k). A preliminary overview of the tones is contained in Morey (2017a), with a much deeper study in van Dam (2018). For the purposes of this chapter, following the convention in van Dam (2018) we use subscripted numerals to mark the three open tone categories, where tones marked 1 are cognate to each other, whatever the form of their surface realisation. We will also mark toneless syllables such as prefixes with an overt subscripted 0 as /ə₀-/ to clearly state that these are toneless elements. Some analyses would treat words with stop final codas as a fourth tone, such as Rinkhu *dit₄* 'stop', but we have not marked these as Tone 4 here.

3   Overview of agreement marking in Pangwa Tangsa

The feature which is referred to in linguistics as 'agreement', 'indexation', or 'pronominalisation', is the marking of information about person and number on verbs. In the Pangwa Tangsa languages, as in Hakhun (Boro 2019), Muklom (Mulder 2019) and Phong (Dutta 2019), these agreement markers are usually combined with an element that carries information about a range of categories covered by Tense, Aspect, Modality, Polarity (i.e. negative), and which can be termed verbal operators. The combination of the agreement marker and verbal operator is here termed agreement word. In most cases the verbal operators are a single morpheme as in (1) where ʃ- is a verbal operator in Muishaung that is a future marker on transitive verbs.[8]

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[6] Readers will notice that the name of the author is spelled differently from his 2017 thesis. The spelling Khämlan follows the rules of TNUO, which had not fully been developed at the time of the thesis publication.

[7] Khan Lann (2017: 4) gives the phonemic version as /təm₂.təŋ₂/. This uses a different initial consonant and a short schwa /ə/ rather than the longer /a/. My consultants in India were not explicit about the length and quality of this vowel, but when asked about whether it was a long or a short vowel (schwa) indicated that this was not significant.

[8] The orthography used here was devised by Rev. Gam Win (see Morey 2017a).

Muishaung example[9]

1) ... ex-kvruex   waqthux   tuz   tvshanc   vtueq   jauk   shix.
    ... $e_2kər\gamma_2$ $wa\textipa{P}\d{t}u_2$ tu_1 $tə_0\text{-}\textipa{S}an_3$ $ə_0\text{-}t\gamma\textipa{P}$ $\textteshlig auk$ $\textipa{S}\grave{\imath}_2$
    ... that   tree type twigs   CAUS-dry   NMLZ-PST.3   burn   FUT.TR.1PL

'... Having caused some twigs of the *waqthux* tree to dry, we will burn (you).'

The getting of fire, nst-mos_20121101_12_SM_T_Khaunglum_GettingFireStory, No (62)

In example (1), we see that the main verb *tɕauk* 'burn' is combined with an agreement word *ʃìₐ*. There is a second agreement word in this example, *tɣʔ* which is a past 3ʳᵈ person, which is here combined with the nominalizer *ə₀-* and is expressed as a single word. (See Morey 2018 for more discussion of the nominalizer).

Sometimes the verbal operator can itself be complex, as in the Chamchang example (2),[10] where *tə₀kai₃* is a complex morpheme consisting of the 1ˢᵗ plural agreement marker *ai* combined with *k*, which in first person marks past tense, so that *siʔ kai₃* would mean 'we ate' and *kai₃* is a full agreement word. However, in Chamchang, when a past tense agreement word is prefixed by *tə₀-*, it has the habitual reading that we see in (2) (see further §6.4 for a discussion of the habitual/continuous. This multi-morphemic verbal operator, here *tə₀-k-* has only been found in Chamchang and Shecyü habitual/continuous to date.

Chamchang example

2) jamlai wa   maiq   raq   phaq   siq   tiikai.
    $\textipa{Z}am_2lai_2\,\beta a_2$ $mai\textipa{P}$ $ra\textipa{P}$ $p^ha\textipa{P}$ $si\textipa{P}$ $tə_0kai_3$
    what   person   AG   eat (hard foods) eat (soft foods) CONT.1PL

'And what things would we humans eat?'

Famine Story (SDM13-20111101-06_SM_JVC_Kamshey_FamineStory), told by Kiimshey Chamchang, No 7

In the Chamchang orthography, the verbal complex *phaq-siq-tiikai* is usually written as a single word, with or without hyphens, but for consistency we will write all of the agreement words separately. The evidence for prosodic variation in the realisation of agreement words is not discussed further in this chapter, but requires a more substantial study in each of the varieties (See Morey 2011).

The diversity of the form and function of the agreement words is illustrated in examples (3) to (7), which all describe the same incident in a traditional Pangwa Tangsa flood story. At this point in the story, the people and animals have taken refuge on the top of two mountain peaks, and one of these complains to the other that the burden of all these creatures is too great to bear. The core of each of these examples is the phrase, 'I cannot carry them', in the following varieties,

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[9] Many of the examples in this paper are from recorded texts; these have been transcribed by Stephen Morey working with different language consultants. The full name of the recording is given and the sentence number. These recordings are or will be all archived at The Language Archive (https://tla.mpi.nl/).

[10] The orthography used in this example was developed by Rev. Longkhap Yanger Thungwa. This orthography differs to some extent from the Tangshang Naga Unified Orthography (TNUO) (Khämlan and Owen 2018).

Joglei in example (3), Maitai in (4), Cholim in (5), Louchäng in (6) and Rera in (7). We present these examples without orthography (and without tone marking for Maitai).

Joglei example

3) ... ηa_1 ko_1 hul_2 $\textit{tɕi}_2$ mak $\textipa{ʃ}u_1$
    ...   1SG   AG?   carry   able   1SG   fully
    '..."I am not able to carry (them).'
    SDM34-20100126-133559_JS_E_Thakna_FloodStory.wav (15)

Maitai example

4) *eke*   *muk*   *pum*   *eke*   *ŋi-ke*   *ŋa*   *muŋkaŋ*   *miʔsa*
    this   peak   hill   this   say-that   1SG   world   people

    hoi   *dai*   *muʔ*   *so*
    carry   able   NEG.SG   fully
    'And then the *muk pum* (said), "I cannot carry the people of this world".'
    SDM17-20111112-06_SM_JVC_Tonwang_FloodStory (18)

Cholim example

5) ai_3 gui_2 $lɔt_2$ $maŋ_2$ gui_2 $lɔt_2$ $maŋ_2$ ...
    VOC   carry   able   NEG.1SG   carry   able   NEG.1SG   ...

    $\textit{tɕɤ}_2ka_1\textit{βe}_1$ $pəra_2$ $\eta ɔ_2$ $tuʔ$ $\eta ɔ_2$ $\textit{βa}_3$
    old man   that   say   PST.3   say   RL
    '"Ah, I cannot carry them, I cannot carry them," that old man said, it is said.'
    SDM12-20091226-01_SM_T_FloodStory (4)

Louchäng example

6) ηi_1 le_2 $\textgamma ui_2$ dai_2 mau_3 ηu_1 $tə{=}\eta u_1$ $və_3$
    1SG   SAL   carry   able   NEG.1-2SG   say   PST=say   RL
    '"I cannot carry them," she said, it is said.'
    SDM15-20081226-03_SM_T_MountainSpiritStory (13)

Rera example

7) ηa_1 $miʔ$ $kəra_2$ mi_2 gun_2 nok $laŋ_1$
    1SG   person   that   NEG   carry   able   1SG
    'I am not able to carry the people.'
    SDM25-20100106-05_SM_T_FloodStory (9)

These examples all illustrate a 1st person singular negative, but in some cases the 1st person forms are merged with forms that were originally another person. So whereas the Joglei form *mak* in (3) has the 1st person *-ak* ending, the Maitai agreement word *muʔ* in (4) shows a form that can be used for all persons, and which appears to have been originally a 3rd person form now generalised for all other persons, (except for the 1st plural where *miʔ* can also be used).

In Louchäng, on the other hand, there has been a merger of the 1ˢᵗ and 2ⁿᵈ singular to the 2ⁿᵈ singular form *mau₃*. Both the Cholim and Louchäng examples were also followed by a phrase meaning 'he said, it is said'. In the Louchäng example, the 3ʳᵈ past marker *tə* is prosodically prefixed to the second instance of *ŋu₁* 'say'. We have not marked this *tə* as toneless as there may be an underlying tonal category for this morpheme that is not currently clear.

These examples also show different morphemes carrying the abilitative meaning 'able'.

4 The verbal operators

Within the Pangwa Tangsa varieties, there are a range of forms of the verbal operators, and differences between the functions expressed by them. In Table 5 we have listed all the verbal operators and their functions that have been recorded for four varieties, Muishaung, Cholim, Chamchang and Lungkhi. This table does not include imperatives, nor does it cover the hierarchical forms with past meaning found in Muishuang (see below §6.2). Note that in this table, the agreement markers for Muishaung in the negative and past have stop finals; the remainder in this table are generally open finals (see §4 for more discussion of the agreement markers)

Muishaung	Cholim	Chamchang	Lungkhi
Σ m-AGR(stop.final) 'NEG'	Σ m-AGR 'NEG'	Σ m-AGR 'NEG'	Σ b-AGR 'NEG'
Σ t-AGR(stop.final) 'PST'	Σ k/t-AGR 'PST'	Σ k/l/t-AGR 'PST	Σ k-AGR 'PST'
			Σ kə₀d-AGR 'PST.RECENT'
			Σ d-AGR 'PST.IMMED'
	Σ l-AGR 'HAB/CONT'	Σ- tə+k/l/-AGR 'HAB/CONT'	Σ h-AGR 'HAB/ABILITY'
Σ t-AGR 'FUT' (intr.) Σ ʃ-AGR 'FUT' (tr.)	me₂ Σ AGR 'FUT'	mi₂ Σ AGR 'FUT'	Σ tɕ-AGR 'PRES/IMMED.FUT'
			Σ j- AGR 'DEON'
		Σ l-AGR 'non final'	

Table 5. Function and forms of verbal operators in four Pangwa Tangsa varieties:

Table 5 shows that the number, form and function of the verbal operators varies from variety to variety. In Muishaung, for example, there are three operators, *m-* which combines with stop final agreement markers with the meaning 'negative', *t-* which combines with stop final agreement markers to mean 'past', and with open final agreement markers to mean 'future intransitive' and *ʃ-* which when combined with open final agreement markers means 'future intransitive'.

Our study of Cholim identified four verbal operators, all of which combine with open final agreement markers (except past and negative 3ʳᵈ person which are stop final *-uʔ*). The Cholim operators are *m-* 'negative', *k-* 'past, 1ˢᵗ and 2ⁿᵈ persons', *t* 'past, 3ʳᵈ person', and *l-* 'present progressive'. Note that whereas in Muishaung the function of present progressive is marked not by agreement

words, but by an invariant postverbal marker *jaʔ*, in Cholim the same function is marked with agreement words (see further below §6.4).

Similarly there are the same four operators in Chamchang (*m-, k-, t-* and *l-*) but their function and distribution is somewhat different from Cholim. The negative *m-* has very similar functions, but whereas *k-* in Cholim is a marker of past for 1st and 2nd persons, in Chamchang it is only marker of past for 1st person. Whereas *l-* in Cholim is used for the habitual/continuous, in Chamchang it is used both to mark past for 2nd persons and combines with person markers to form a non-final argeement word. In addition there is a combined form of *tə₀-* with the past to express the continuous in 1st and 2nd persons, as demonstrated in (8)

Chamchang example

8)   *ʒu₂-se₁*   *dəŋ₂*   *mə₀-βa₃*   *ʃi₂-tə₀lau₃*
     who-child   voice   A.AG-RL   sing-CONT.2SG
     'With whose voice are you are singing?'

Explanation of the Love Song (SDM13-20111101-02_SM_JVC_Kamshey_LoveSong), No 5.1

In the third person singular the continuous / habitual form in Chamchang has been recorded as *tə₀lo₃*.

Six different operators have been identified for Lungkhi. Some examples of these are presented in Table 6 with the verb *ka₁* 'go' and the agreement marker *-əŋ* '1st person singular'. With all the verbal operators except the deontic *j-*, the agreement markers carry the 3rd tone, except for the 3rd person forms which have final glottal stop.

Operator	meaning	example	meaning
b-	negative	*ka₁ bəŋ₃*	I am not going / I did not go
k-	past (distal, yesterday and before)	*ka₁ kəŋ₃ wa₃*	I went (yesterday, some time ago)
kəd-	past (recent)	*ka₁ kə₀dəŋ₃*	I went (recently)
d-	past (immediate)	*ka₁ dəŋ₃*	I went (recently)
h-	habitual / ability	*ka₁ həŋ₃*	I can go / I usually go
tɕ-	present continuous / immediate future	*ka₁ tɕəŋ₃*	I am going / I will go (just now)
j-	deontic	*ka₁ jəŋ₁*	I might go / I must go

Table 6. Examples of verbal operators in Lungkhi

Note that in the distal past, the realis marker *wa₃* was always used with the *k-* operator plus person marker. Although our investigations into the Lungkhi language remain at a preliminary level, the meanings of the sentences in Table 6, together with examples with other verbs and with other persons were carefully checked in fieldwork in January 2019.

Unlike in Hakhun, where the verbal operators can occur "on their own (i.e. without the argument indexes) with a reduced vowel schwa" (Boro 2019), there is very little evidence of this in the Pangwa varieties, although it is occasionally possible, such as with the Louchäng 3rd past, which is *tə*, but is most usually found in combination with a realis marker *və₂*.

A fuller study of the verbal operators across all the Pangwa varieties is likely to reveal more variation than what is presented here, but in the following tables we present the operators that are

recorded with meaning of past (Table 7), negation (Table 8) and future (Table 9). As we shall see, in most cases these operators are combined with an agreement marker to form an agreement word, as is the case for all the past tense marking, but in some parts of the future and negative systems, there is a preverbal element in addition to post verbal agreement marking. In most cases this preverbal marker takes the place of the verbal operator and the agreement marker directly follows the verb (as, for example in the Cholim future or the Shangthi negative). However there are cases where there is both a preverbal marker and a postverbal verbal operator to which the agreement marker attaches (e.g. Mungre future).

4.1 Past Operators

The past operators are presented in Table 7:

Form of operator	Language varieties
t-	Group 1 except Mungre (all with stop finals, except Maitai which has both stop and open finals) Yvngvan Wvng (transitive), Gaqlun, Rera (all open finals)
t- (1st person) l- (2nd person)	Mungre
k- and t (3rd person)	Cholim, Longri
k- (1st person), l- (2nd person) and t- (3rd person)	Chamchang, Shecyü, Louchäng
d-	Lungkhi (immediate past), Shangthi
k-	Lungkhi (distal past), Khalak, and Yvngban Wvng (intransitive), Rinkhu

Table 7. Verbal Operators marking Past in Pangwa varieties

In the marking of past tense, most of the varieties have a verbal operator *t-* for most or all of the persons, while two have *d-* which we suggest is a cognate form. In each of the other three Tangsa-Nocte languages treated in this volume, (Hakhun, Muklom and Phong), *t-* is also the verbal operator marking past. This suggests that *t-* is probably the proto form of the operator marking past.

A feature that is particular to the past, found in all the varieties in Group 2 from Table 1 above, as well as Mungre,[11] is the use of different operators with different persons. While all of the Group 2 varieties retain *t-* for 3rd person, Cholim and Longri have *k-* for 1st and 2nd person while Chamchang, Shecyü and Louchäng had *k-* for 1st persons and *l-* for 2nd persons. We are not sure of the origin of *k-*, but it is also found as the operator marking past in several varieties from Groups 3 and 4 in Table 1 (Khalak, Yvngban Wvng for intransitives, Rinkhu) and was also recorded with

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[11] Khan Lann (pers. comm.) said that 'he laughed' in Mungre would be *nai väv* in the orthography /nai₂ və₃/, where *və₃* is perhaps a realis particle, that can also combine with the other persons, as *nai tik väv* /nai₂ tik və₃/, 'we laughed'. This means that there is zero marking of person and TAM in the past 3rd person in Mungre, but the realis is required to be present.

a future meaning in Gaqlun. Lungkhi also has a *k-* operator marking distal past contrasting with a *d-* operator marking more immediate past (see Table 5 and Table 6 above).

The *l-* operator is found in multiple varieties with a range of meanings. In Cholim, as already shown in Table 5 above, it is used in combination with the agreement markers to form agreement words that have the function of progressive or habitual. Several other varieties also employ *l-* in a habitual/continuous function (see below §6.4). In Rera, the habitual/continous agreement words follow the form *saʔ*, which is identical to the lexical verb 'eat (soft foods)' to form the continuous.

In Chamchang, there is an *l-* form that is found reduplicated in sentences like (9),[12] where it is always found in subordinate clauses, such as those marked by a linker *tə₂*.

Chamchang example

9) exkàrä   tai   läxläx   tä
    e₃kərə   *tai₂*   *lə₃lə₃*   *tə₂*
    this   hear   NON.FIN.1SG   LINK
    '(and) and I used to hear this ...'

Famine Story (SDM13-20111101-06_SM_JVC_Kamshey_FamineStory), told by Kiimshey Chamchang, No 38

4.2 Negative Operators

The functions of this l- operator in Chamchang require more research, but as a preliminary analysis in Table 5 we have glossed it 'non final'. Non final markers, but without person marking, are also found in Champang (see below example (43) in §6). Hakhun (Boro 2017: 346) also has an Imperative/Non-Final Operator l- (see also Boro 2019). As we will see below in §6.5, l- is very frequent as an imperative marker in Pangwa varieties, but only in a few of them does it combine with all the agreement markers. The range of forms that are found suggest that perhaps the l- operator was a habitual or imperative in a proto-Pangwa stage

The range of processes recorded for marking negative is given as Table 8:

Form of operator	Language varieties
m-	Group 1 varieties (+ stop finals); Group 2 varieties (+ open finals)
b-	Lungkhi, Khalak (1)
invariant preverbal *n-*	Khalak (2)
preverbal *mV* with agreeement marker directly postverbal	Yvngban Wvng, Shangthi, Rinkhu
preverbal *i* with agreeement marker directly postverbal	Gaqlun
preverbal *mV* with agreeement marker directly postverbal (with operator *l-* in 1sg and 2pl)	Rera

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[12] The orthography for this example was respelled following the TNUO proposal (Khämlan and Owen 2018). This was done because this example was discussed in some detail with Khämlan through the medium of Facebook.

Table 8. Verbal Operators marking Negation in Pangwa varieties

Unlike the past system in Table 7, we can see from Table 8 a clear divide between the varieties listed as Group 1 and 2, and those listed as Group 3 and 4 in Table 1 above. The Group 1 and 2 varieties all have postverbal agreement words marking negation with a verbal operator *m-*. Two varieties that we have listed as Group 3, Lungkhi and Khalak, similarly have a postverbal agreement word but with a verbal operator *b-*.

Group 4 varieties, on the other hand, can be distinguished from the others by the use of preverbal negative markers, usually of the form *mV* (both /miʔ/ and /mi₂/ have been recorded), although in Gaqlun it is simply *i₂*. This preverbal form is invariant and is combined with postverbal agreement markers, where, with no verbal operator, the agreement marker directly follows the verb. In Rera, however, 1ˢᵗ singular and 2ⁿᵈ plural argeement words have an initial *l-*.

In Table 8 there are two negative constructions reported for Khalak, only one of which was given above in Table 3. The *b-* form was elicited in Zeephyugone village, Khamti, Myanmar, but earlier an elderly Khalak speaker in India had volunteered that negation would be expressed by an invariant *n* preverbally, and person marking. When researching the use of negatives in the Tangsa Wihu song, the late Ranlim Latam, a Chamchang speaker, had mentioned that negation was differently expressed in singing from speaking, because the Wihu song had its origins with some Khalak speakers. In the Wihu song, negation is expressed by a preverbal *n* and no postverbal agreement word. We therefore interviewed Mr. Lamsham Khilak,[13] who indicated that 'I did not go' would be spoken *ŋa n-ke baŋ* '1SG NEG-go NEG.1SG', where both the preverbal and postverbal elements are present. We were not able to elicit other persons in the negative from Mr. Lamsham Khilak, but suspect that they would all have had preverbal *n*.

4.2 Future Operators

The future system is the most diverse in the Pangwa varieties, both in terms of its structure and the forms of the verbal operators, as we see in Table 9:

Form of operator	Language varieties
NMLZ prefix + AGR	Ngaimong/Joglei
ʃ-	Muishaung (tr)
t-	Muishaung (intr)
n-	Maitai
preverbal *mV* with *ŋ-* + agreement marker	Mungre
preverbal *mV* with agreement marker directly post-verbal	Cholim, Longri, Louchäng; also Shangthi, also Rera (with the additional *l-* in 1SG and 2PL)
preverbal *mV* with h- + agreement marker	Chamchang, Shecyü

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[13] He spells his name Khilak since he lives in Chamchang village, and this is the Chamchang pronunciation of Khalak. He is the last speaker of Khalak in that village.

tɕ-	Lungkhi (immediate future / present continuous)
m-	Yvngban Wvng
k-	Gaqlun
j-	Rinkhu

Table 9. Verbal Operators marking Future in Pangwa varieties

In the future, most varieties have a postverbal agreement word with a verbal operator. The form of these verbal operations varies considerably, with *ʃ-, t-, n-, ŋ-, h-, tɕ-, m-, k-* and *j-* all recorded, a range of forms that seems to hold little in common (stops, nasals, fricatives and semivowels, including bilabial, dental, palatal and velar).

It is a particular features of the languages that form Group 2 in Table 1 above that all have a preverbal element, *mV* (where the vowel is realised variously) in combination with postverbal agreement marking. In Cholim, Longri and Louchäng, this postverbal agreement marking consists of the agreement marker directly following the verb (and if written is often written together with the verb stem as a single word). In Chamchang and Shecyü, on the other hand, there is verbal operator *h-* which forms agreement words with the agreement markers.

However, it is not only Group 2 varieties that have preverbal elements as part of their future system. In Group 1, Ngaimong and Joglei both use a verbal stem combined with an *ə₀-* prefix that is formally identical to the nominalizer followed directly by the agreement marker to indicate future. Mungre has a preverbal *me₂* and a following agreement word with the verbal operator *ŋ-*. Shangthi and Rera, like Cholim, Longri and Louchäng, have a perverbal *mV* and agreement markers directly following the verb stem – except that in Rera, as with the negative, with 1st singular and 2nd plural there is an operator *l-*.

5 The agreement markers

To form the agreement words, the verbal operators discussed in §3 are combined with a set of agreement markers which mark the following five categories of person and number, shown in (10):

10)   1st person singular
        1st person plural
        2nd person singular
        2nd person plural
        3rd person

There are no examples of dual marking recorded in the Pangwa varieties, although this is found in Phong (Dutta 2019) and to some extent in Muklom (Mulder 2019). Mungre, Chamchang and Shecyü all appear to have a distinction between inclusive and exclusive 1st plural in the future (see below §5.4).

In Table 10, we present the suggested proto-Pangwa forms for the agreement markers in two systems, open finals and closed finals. We do not make any suggestion for the proto form of

the 3ʳᵈ person. Note that Boro (2019) terms these two respectively sonorous agreement markers and checked agreement markers.

		1		2		3
		Sg	**Pl**	**Sg**	**Pl**	
		-Cvelar	-Vhigh front	-Vhigh back	-Calveolar	unknown
open final		-(a)ŋ	-i	-u	-(a)n	
closed final		-(a)k	-iʔ	-uʔ	-(a)t	

Table 10. Suggested proto forms of the agreement markers

We suggest that the closed finals are likely the older form for the past and negative, and thus perhaps the proto form of the past was *t-* initial with final closed syllables. This accords with DeLancey's observation about the distinction between nasal (i.e. open) and denasalised (i.e closed) finals in Jinghpaw, that "the devoiced alternant has a perfective or punctual sense relative to the nasal" (2011:65)

The closed finals are now found mostly in the varieties that are grouped together as Group 1 in Table 1 above, and they are found in both the past and negative. The open finals are found in the future in all languages, and in most parts of the past and negative systems for the languages in Groups 2, 3 and 4.

Since open final syllables will carry one of the three tones that are possible in such syllables, the tone marking of agreement words is an important issue to research. In Table 3 above, we have not marked tone in those varieties for which our consultants were not confident of tone categories. Thus tone is generally not marked for Longri, Khalak, Haqchum and Yongkuk.

In the varieties that are part of Groups 1 and 2 in Table 1, the forms of the agreement markers are summarised in Table 11:

Varieties	agreement marker forms: past and negative	agreement marker forms: future
Group 1: Ngaimong, Joglei, Muishaung, Mungre, Maitai	closed syllables *m-* negative *t-* past	open syllables, tone 2
Group 2: Cholim, Longri, Chamchang, Shecyü, Louchäng	open syllables, tone 3 (tone 2 for Cholim negatives) *m-* negative *k-, l-, t-* past	preverbal *mV-* open syllables, tone 2 (with *h-* in Chamchang and Sheycü)

Table 11. Forms of agreement markers in the varieties from Group 1 and Group 2

The general conclusion of Table 11 is that in the past and negative, tone 3 is used on open syllables for varieties from Group 2 (except the Cholim negatives which carry tone 2), and closed syllables for varieties from Group 1. By contrast all varieties use open syllables in the future and all of those are marked by tone 2. Note that the form of the tones varies from variety to variety (Morey

2017, van Dam 2018), and it is cognate tonal categories that are marked here, not their phonetic realisation.

These generalisations, however, do not apply across the board. Firstly, all varieties in group 2 have stop finals for the 3rd person negative, in the case of Chamchang, Shecyü and Louchäng this is final -*k*, which we would have expected to be a proto 1st singular form. Secondly, in Cholim, final glottal stop also remains for the 3rd person past. We suggest that these stops are retentions of an earlier stop final system that has been replaced by on open final system marked by tone 3. This regular pattern of the use of tone 3 in the past and negative does not apply to all Group 2 varieties. In the negative, one of our Cholim consultants, Mr. Yan Linn Aung, said that the tone category was actually tone 2, the same as in the future, rather than tone 3 which he confirmed as the category for the agreement words marking the past.[14]

Tone sandhi processes also affect the tone categories of argeement markers. In Louchäng, for example, in the future, agreement words that combine with verbs roots carrying tone 3 were also found to carry tone 3. This is a result of some kind of tone sandhi process that requires further investigation, and we suggest that it is probably a recent development.

In the past in Louchäng, we found that a small number of verb stems that carry tone 2 also have tone 2 for past markers. These include $kja\eta_2$ 'fall', $\int i_2$ 'sing', $bju\dotplus_2$ 'speak', $\eta a\eta_2$ 'drink', $t\varepsilon^h a u \eta_2$ 'cook rice', lam_2 'cook dishes' and $\int am_2$ 'hold'

In Maitai, which is grouped as part of Group 1, and thus has stop finals in both past and negative, consultants both in India and Myanmar gave forms for the past which were both stop final and open final. One consultant suggested that the 2nd person forms with open syllables were used in declaratives, and those with stop syllables in questions. Given that the research on Maitai is not yet very far advanced, we may find a more comprehensive and nuanced explanation of this in the future.

The finals of the agreement markers in Groups 1 and 2 are more variable than the tones, due to various mergers (see §5.1) and sound changes (see §5.2 for a discussion of this relating to the 1st singular).

As for the languages in Groups 3 and 4, the finals in the 1st person are quite regular, -*aŋ* for the singular and -*i* for the plural. In the 2nd person there is more diversity, with -*u*, -*ɯ* and -*au* found in the singular and -*an*, -*ən*, -*in* and -*iŋ* found in the plural (see further below §5.3).

All the languages in Groups 3 and 4 have open finals on the agreement markers listed in Table 3,[15] but the tones that these argeement words are marked by vary considerably, with Tones 1, 2 and 3 being found in each of the past, negative and future paradigms. We do not at this stage know what is signified by this.

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[14] We have found a number of places in the grammar where Cholim words carry Tone 2 that would otherwise be Tone 3 in most other varieties. This occurs with some lexical items and with some alternate stems (see Morey 2019). Further research is needed to establish the motivation for this.

[15] Except for the 3rd person in Lungkhi, Gaqlun and Rinkhu. These are the only examples of stop finals on future agreement words that have been found so far. In the case of Lungkhi, which we have been able to investigate in a little more depth, the 'future' form covers both present continuous and immediate future, and the agreement markers carry the same tone as the past and negative and other markers (except the deontic *j-*). This perhaps suggests that the Lungkhi *tɕ-* operator is part of the Past/Negative system rather than part of the Future system.

5.1 Merged forms

Several varieties have merged the forms of the negative in the singular: in Ngaimong, Joglei and Muishaung this is a merger of 2nd and 3rd person singular forms. If our suggested proto form in Table 10 is correct, then this is a merger to the original 2nd person singular form *-uʔ*. However, we see this as the coda for 3rd person past in Cholim and the assumption there has been that this is a 3rd person form that did not undergo change to the open finals.

In Mungre all persons have merged in the singular to the form *mok*, which has a final expected for a 1st singular but a vowel more typical of a 2nd singular. In Maitai, it seems to be possible to use an invariant form *muʔ* in all persons and numbers, but there is also a form *miʔ* recorded for 1st plural. Haqchum, a non-Pangwa variety, has also merged the negative forms to *muʔ*.

In Louchäng, the 1st and 2nd singular forms have merged to the 2nd singular form *mau₃*. It is only in the negative that mergers of this type have been recorded.

5.2 Coda of 1st singular forms

The coda of the 1st singular forms is quite varied. While it is generally velar nasal *-ŋ* or the stop equivalent *-k*, there are some exceptions. Some of these, like final *-au* in the Louchäng 1st person singular negative, are due to mergers (in this case with the 2nd person singular negative) that we must assume are relatively recent in the history of the language. Still others appear to be due to sound changes that apply unevenly to the agreement markers.

For example, Louchäng and Chamchang 1st person singular future markers both have *-a₂* finals. This is due to a regular sound change from *-aŋ to -a* in those varieties. Compare the word *maŋ* 'dream' which is realised as *maŋ₁* in Cholim and *mauŋ₁* in Muishaung, but *ma₁* in both Louchäng and Chamchang (see van Dam 2019 for more discussion of this sound change).

In Cholim and Longri, on the other hand, the 1st person singular past marker has final *-jɔ*. This does appear to be a regular sound change between a putative proto -*jaŋ and -jɔ* in these two varieties, for example the negative existential *əₒgjɔ₁* in Cholim is *əₒɣjaŋ₁* in Louchäng. A possibly analogous sound change has occurred in Hakhun (see Boro 2019), where first persons are marked by *-ɤ* and *-ɤʔ*.

5.3 Forms of 2nd plural agreement marker

We have suggested above in Table 10 that the proto form of the 2nd plural was *-(a)t or *-(a)n with a low vowel. Variation in the vowel for this marker is considerable. In the non-Pangwa varieties discussed here, Haqchum has an *i* vowel, as in the 2nd plural past *tit*, and Muklom has a centralised *ɨ* as in the past *tɨn₁* (Mulder 2019) but the other varieties, Hakhun, Longchang and Phong all have *a*. The Pangwa varieties are also divided on this, between varieties with high vowels and those with low. These are spread across the four groups of varieties identified in Table 1 above, and summarised in Table 12:

Group	Varieties with /i/, or /ɯ/	Varieties with /a/ or /ə/
Group 1	Ngaimong, Joglei, Muishaung	Mungre, Maitai
Group 2	Cholim, Longri	Chamchang, Shecyü, Louchäng
Group 3	Lungkhi, Khalak	
Group 4	Shangthi, Rinkhu	Yvngban Wvng, Gaqlun, Rera

Table 12. Vowels in 2nd plural forms

In Phong (Dutta 2019), the *i* vowel occurs in the dual, usually in combination with *s-*, whereas in the past and future at least, the vowel of the 2nd plural is *a*. Since the dual is probably a more marked form, we are suggesting that, given the considerable variation between high vowels and low vowels in the 2nd plural, perhaps the low vowel is the more likely proto form.

A possible argument for **-in / *-it* is that in the 1st singular, where the proto vowel is clearly **a*, this is reflected in almost almost all the varieties (except where there is merger). If there were regular sound changes occuring to a proto **-aŋ / *-ak*, we might expect the same changes for **-an/ *-at* in the 2nd plural, but in fact the changes are quite different and many varieties have high vowels.

One irregularity in the marking of 2nd person seems to be a very recent innovation. In Cholim (and Khalak and Shangthi), the form is *-iŋ* throughout the paradigm. Even the closest variety to Cholim, Longri, does not exhibit this change to a final velar nasal, and for this reason we suggest this is a very recent innovation[16] at least in Cholim.

5.4 Inclusive and exclusive

All Tangsa-Nocte varieties have different pronouns for inclusive and exclusive, but only in Chamchang, Shecyü and Mungre is this distinction marked in the agreement system, and only in the future. This distinction in marking between inclusive and exclusive 1st person plural seems to have arisen quite recently. Consider (11) and (12) from Mungre, and (13) and (14) from Shecyü, all of which were given when the sentence 'Tomorrow we will go to the field' was elicited[17]:

Shecyü examples

11) ànap   nei   nä   me   keiz   i
     ənap   nəi₂   nə₂   me₂   kəi₁   i₂
     tomorrow field   at   FUT   go   1PL.INCL

12) ànap   nei   nä   me   keiz   ngai
     ənap   nəi₂   nə₂   me₂   kəi₁   ŋai₂
     tomorrow field   at   FUT   go   1PL.EXCL

---

[16] There is a salutory lesson here. Cholim was the first variety that I studied and if I had not investigated the other varieties, I might easily have concluded that the final velar nasal was the typical 2nd plural form for Tangsa varieties. Clearly it is not.

[17] These were elicited from Khan Lann via a Facebook chat on 20180816, using the updated Shecyü orthography, for which <à> is now used for the prefixal *ə*. The form he gave for example (13) was actually *ànap ni nä mi kiz raongx i*, including a form *rauŋ³*, which conveys general plurality and is also seen in Table 18 with some imperatives.

13) | ànap | ni | nä | mi | kiz | i |
| --- | --- | --- | --- | --- | --- |
| *ənap* | *ni₂* | *nə₂* | *mi₂* | *ki₁* | *i₂* |
| tomorrow | field | at | FUT | go | 1PL.INCL |

14) | ànap | ni | nä | mi | kiz | hai |
| --- | --- | --- | --- | --- | --- |
| *ənap* | *ni₂* | *nə₂* | *mi₂* | *ki₁* | *hai₂* |
| tomorrow | field | at | FUT | go | 1PL.EXCL |

Shecyü sentences elicited from Bynn Kham Lann (pers. Comm.)

Khan Lann (pers. comm.) explained this distinction for Shecyü (examples (13) and (14) as follows: "*mi₂ ki₁ hai₂* would be used when one group of people is speaking to another and saying 'we will go – implying you will not'; on the other hand *mi₂ ki₁ i₂* would be talking to someone and saying, now we will go, and including them".

This inclusive form has arisen from a hortative 'let's do X', which is marked by *i₂* as for example *saʔ i₂* 'eat' HORT' meaning 'let's eat' in Muishaung. An example from a recorded text is given in (15)

Muishaung example

15) | exkvruex | vtueq | kvyuq | kvruex kvkuex | ngoz | ix | naz | ... |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *e₂kərɤ₂* | *ə₀-tɤʔ* | *kəjuʔ* | *kərɤ₂ kəkɤ₂* | *ŋo₁* | *i₂* | *na₁* | ... |
| that | NMLZ-PST.3 | here | that | say | HORT | POL | ... |

'It was like that, let us say that ...'

About songs (nst-mos_20121111_04_SM_T_Wintu_AboutSongs), spoken by Wintu Mossang, No (7)

In Chamchang, Shecyü and Mungre, the hortative has been re-interpreted as a marker of 1st plural inclusive in the future, and the hortative function is covered by a person marked form with the verbal operator *pʰ-*, as shown in (16) and (17), elicited examples from Shecyü[18]:

Shecyü examples

16) | kiz | phai |
| --- | --- |
| *ki₁* | *pʰai₂* |
| go | HORT.PL |

'Let's go / let us go'

17) | kiz | pha |
| --- | --- |
| *ki₁* | *pʰa₂* |
| go | HORT.SG |

'Let me go'

Shecyü examples elicited from Bynn Kham Lann (pers. comm.)

The operator *pʰ-* is found in many of the Pangwa Tangsa varieties with a range of meanings. We will see that it is used as an inverse marker to indicate hierarchical marking in Muishuang (see

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[18] There are *ph-* hortatives in other Pangwa varieties. These are not discussed in this chapter.

below §6.2, in Joglei to show hierarchical marking in the imperative (see below §6.5) and is also found in Muklom as an inverse marker (Mulder 2019).

6 Other functions of agreement words

In this section we will deal with a range of features relating to agreement marking. In §6.1, we discuss the marking of tense and aspect categories together with negation, while in §6.2 we will review the evidence for hierarchical marking in the Pangwa varieties. §6.3 examines the marking of transitivity distinctions in several Pangwa varieties. This section is rounded off by §6.4 which deals with the habitual / continuous and §6.5 which examines the imperative and related systems.

6.1 Marking tense and aspect with negation

In general, negation as exemplified in Table 3, and discussed in more detail in Table 8, is used to mark negation without the marking of tense and aspect distinctions. Thus a verb combined with the negative in Cholim may either have a future reading as in (18) or a past reading as in (19):

Cholim examples

18) $\mathfrak{z}\mathfrak{r}_2 t\mathfrak{c}^h ik$ $lj\mathfrak{r}_2$ $du\eta_1$ ta_2 $\mathfrak{z}\mathfrak{r}\mathfrak{l}lj\mathfrak{r}_2\ le_2$ a_2 p^hak
    female   SAL   born   LINK   if   EXCLAM   eat

    mu?   *ə₀pi?*
    NEG.3   3SG
    "'But, if a female is born, he will not eat (her).'"
    Naga Story (SDM12-2008Tascam-074), spoken by Lukam Cholim, No (183)

19) a_3 $ə_0\text{-}\mathfrak{n}u_1$ $l\mathfrak{r}i_3$ $ə_0\text{-}\beta e_1$ le_2 $k^h\mathfrak{o}_3$ ke_1
    VOC   1SG-mother   VOC   1SG-father   SAL   see   go

    mi₂
    NEG..1PL
    "'Oh mother, we did not see our father.'"
    Naga Story (SDM12-2008Tascam-065), spoken by Lukam Cholim, No (48)

Explicit expression of past time in negation is achieved in at least some varieties by this kind of structure: Σ-NEG.AGR LV- PST.AGR, as in the following Joglei example, (20), where the negative marks the main verb, in this case ka_1 'go' and the past is marked on the light auxiliary verb rə$_0$-

Joglei example

20) $ni_1ha\textipa{P}$ $nokku_2$ $n\textschwa_2$ ka_1 $m\textschwa i\textipa{P}$ $r\textschwa_0\text{-}t\textschwa i\textipa{P}.$
    1PL   church   at   go   NEG.1PL   LV–PST.1PL
    'We did not go to church.'
    Joglei example, elicited from Rev. Ranjung Joglei

A more complex and comprehensive system of marking tense/aspect in negative sentences can be seen in Muklom (Mulder 2019).

6.2 Hierarchical marking in Pangwa varieties

Hierarchical marking occurs when the object is higher on the animacy hierarchy than the subject. This is a salient feature in each of Hakhun (Boro 2019), Muklom (Mulder 2019) and Phong (Dutta 2019). In each of these varieties, the hierarchical marking indicates tense, but in Muishaung, the hierarchical marking is non-specific of tense.

Table 13 presents the hierarchical marking that has been recorded in Muishaung. In the case of all persons acting on 3rd person objects, and 3rd persons acting on 2nd person objects, hierarchical marking is not used. These cases are shown here with an asterisk *, and the form chosen will agree with the A only, depending on tense / aspect (past, negative, future), and, in the case of the future, on whether the verb is transitive or intransitive (the forms are given above in Table 3).

A \ P	1SG	1PL	2SG	2PL	3
1SG			Σ pʰauŋ₂	Σ pʰauŋ₂	*
1PL			Σ pʰi₂	Σ pʰi₂	*
2SG	Σ pʰu₂	Σ pʰu₂			*
2PL	Σ pʰɯn²	Σ pʰɯn²			*
3	Σ pʰɤ²	Σ pʰɤ²	*	*	*

* indicates that hierarchical form is not used;

Table 13. Hierarchical agreement in Muishaung (non-specific of tense)

The agreement is with the A in all cases where the hierarchical form is used; so the function of the inverse marker *pʰ-* is to mark that the P is higher on the hierarchical scale than the A. Examples of the hierarchical marking in use are given in (21a) and (21b), with 1st person singular subject (A) and 2nd person object (P). As can be seen the agreement marker which agrees with the subject is the same in both examples, and the meaning can be either in future or past time.

Muishaung examples

21a) ngaz   rueq   mznaungz   muex   wungx   phaungx.
      ηa_1 $r\gamma\textipa{?}$ $m_1nau\eta_1$ $m\gamma_2$ $\beta u\eta_2$ $p^hau\eta_2$
      1SG   AG   2SG   for   hit   1SG>2
      'I will hit you (singular).' / 'I did hit you (singular).'

21b) ngaz   rueq   nuimzhez   muex   wungx   phaungx.
      ηa_1 $r\gamma\textipa{?}$ num_1he_1 $m\gamma_2$ $\beta u\eta_2$ $p^hau\eta_2$
      1SG   AG   2PL   for   hit   1SG>2
      'I will hit you (plural).' / 'I did hit you (plural)'
      Muishaung examples, elicited from Wanglung Mossang

An example from one of the Muishaung texts, of a 3rd person subject (A) acting on a 1st person object (P) is given as (22). In this case the meaning is inferred to be past, by the context of the sentence.

Muishaung example
22)   lungz   kuiux   rueq   tok   phuex.
      $lu\eta_1$ kuu_2 $r\gamma\textipa{?}$ tok $p^h\gamma_2$
      stone   CLF   AG   break   3>1
      '"... The stone broke my (leg)."'

Story of the getting of fire, nst-mos_20121101_12_SM_T_Khaunglum_GettingFireStory, No (32),

Our principal Muishaung consultant, Wanglung Mossang, explained that there were two ways of saying the sentence 'my father will hit me, the first with the transitive future agreement word $\int\gamma_2$, as in (23a), and the second with the inverse marker $p^h\gamma_2$ as in (23b):

Muishaung examples
23a) izwaz   rueq   ngaz   muex   thvt   shuex.
      $i_1\text{-}\beta a_1$ $r\gamma\textipa{?}$ ηa_1 $m\gamma_2$ $\textsubdot{t}\partial t$ $\int\gamma_2$
      1SG.POSS-father   AG   1sg   for   hit   FUT.TR.3
      'My father will hit me.'

23b) izwaz   rueq   ngaz   muex   thvt   phuex.
      $i_1\text{-}\beta a_1$ $r\gamma\textipa{?}$ ηa_1 $m\gamma_2$ $\textsubdot{t}\partial t$ $p^h\gamma_2$
      1SG.POSS-father   AG   1sg   for   hit   3>1
      'My father will hit me.'
      Muishaung examples, elicited from Wanglung Mossang

Wanglung Mossang explained that in (23b), when marked $p^h\gamma^2$, the speaker is concentrating on himself (*will hit me*), whereas $t^h\partial t \int\gamma_2$ in (23a) is pragmatically neutral.

When we attempted to elicit forms which had 3rd person subjects and 2nd person objects, Wanglung Mossang gave only examples not using the inverse marker p^h-. Another speaker, Rev. Gam Win, however, gave an examples as in (24):

Muishaung example

24)	miqwaz	saz	rueq	mznaungz	kuex	thvt	kvphux.
	mi$\mathit{P}$ma$_1$	*sa$_1$*	*r$\gamma\mathit{P}$*	*m$_1$nauη_1*	*kγ_2*	*$\mathfrak{t}$ət*	*kə$_0$-p^{h}u$_2$*
	male human	child	AG	2SG	that	hit	REFL-3>2SG

'The boy will hit you.'

Muishaung example, elicited from Wanglung Mossang

In addition to the inverse marker *p^h-*, there is an additional prefix *kə$_0$-*, which is formally similar to the reflexive prefix in Muishaung. Further research is needed to establish whether the reflexive prefix is always employed when a clause exhibits a 3rd person subject (A) acting on a 2nd person object (P) marked with a *p^h-* form. In the case of (24), the P argument is singular, and we have not recorded any equivalent sentences with a P argument in the plural (where we might expect the form to be *p^{h}un^2*. The function of the reflexive in combination with the hierarchical *p^h-* may be to allow agreement to be with the P argument.

In Table 18 below, we will see that there is some hierarchical marking in the imperative (recorded for Joglei), also with the verbal operator *p^h-*.

6.3   Marking of transitivity distinctions

Two varieties of Pangwa have been found to exhibit transitivity distinctions in the agreement marking, Muishaung in the future and Yvngban Wvng in the past. Contemporary Muishaung distinguishes two forms of the future, depending on whether the verb is intransitive (*t-* operators) or transitive (*ʃ-* operators). Some examples of verbs in both 1st singular future and nominalized form are given in Table 14 using both Muishaung orthography and phonemic transcription. This table includes both verbs that exhibit stem alternation and those that do not (see Morey 2018, 2019 for further discussion of verb stem alternation).

Gloss	1st person future form		Nominative form	
weep	khoarz-taungx	*k^{h}ɔər$_1$-tauη_2*	vkhoarc	*ə$_0$-k^{h}ɔər$_3$*
laugh	nueyz-taungx	*nui$_1$-tauη_2*	vnueyz	*ə$_0$-nui$_1$*
die	thueyc-taungx	*θui$_3$-tauη_2*	vthueyc	*ə$_0$-θui$_3$*
go	kaz-taungx	*ka$_1$-tauη_2*	vkaiz	*ə$_0$-kai$_1$*
eat	phauk-shaungx	*p^{h}auk-ʃauη_2*	vphuiuz	*ə$_0$-p^{h}ɤi$_1$*
drink	nuingx-shaungx	*nɤη_2-ʃauη_2*	vnuingc	*ə$_0$-nɤη_3*
give	kuq-shaungx	*ku$\mathit{P}$-ʃauη_2*	vkuyz	*ə$_0$-kui$_1$*
sell	shaungz-shaungx	*ʃauη_1-ʃauη_2*	vshaungc	*ə$_0$-ʃauη_3*

Table 14. Future markers in Muishaung

This distinction in future marking between transitive and intransitive appears to be a relatively recent innovation. Muishaung is the only Pangwa Tangsa variety for which we have substantial historical records dating back more than a short time. Needham (1897:10) recorded the following two sentences, suggesting that the future was marked by verbal operator *k^h-* used for

both transitive and intransitive. (This example employs Needham's spelling and translation with gloss added).

Muishaung examples

25) *Ngâ   kâ   khâung*
     1SG   go   FUT.1SG
     'I will go.'

26) *Ngâ   shong   khâung*
     1SG   sell   FUT.1SG
     'I will sell.'

     Muishaung examples from Needham (1897: 10)

Yvngban Wvng (also known as Rangsi), distinguishes transitivity as well, in this case in the past. In discussions with John Ingga, our consultant, he indicated that *t-* past was used with transitive verbs like *saʔ* 'eat', *niŋ₂* 'drink' *koʔ* 'give', whereas *k-* past was more frequently used with intranstives. However, he gave examples such as (27a) and (27b), where both the *k-* and *t-* verbal operators are employed to convey past time. Further research is needed to establish whether these two verbal operators are available for use on all verbs, or whether this is a paradigmatic categorial distinction similar to the marking of transitivity in the Muishaung future.

Yvngban Wvng examples

27a) yup saq   ki   wy
      jup saʔ   ki₂   βə₁
      sleep   PST.1SG   RL
      'We slept.'

27b) yup saq   ti   wy
      jup saʔ   ti₂   βə₁
      sleep   PST.1SG   RL
      'We slept.'

      Yvngban Wvng examples, elicited from John Ingga

Note that in (27a) and (27b), the verb includes the morpheme *saʔ* that means 'eat' when standing independently. A number of verbs such as *jup saʔ* 'sleep' and *ni₂ saʔ* 'laugh' incorporates this morpheme in their citation forms. Forms based on *saʔ* 'eat' are also found in Rera where it combines with agreement words based on verbal operator *l-* conveying the meaning of habitual/continuous (see Table 15 in §6.4 below).

John Ingga added that with the verb *de₂* 'speak', (28a) was possible, but (28b) is more common. We are not presently clear whether (28b) occurs when some form of speech is reported.

Yvngban Wvng examples

28a)   dè   kvnġ   wγ
       de₂   *kə₂*   *βə₁*
       speak   PST.INTR.1SG   RL

       'I said.'

28b)   dè   tvnġ   wγ
       de₂   *tə₂*   *βə₁*
       speak   PST.TR.1SG   RL

       'I said.'

Yvngban Wvng examples, elicited from John Ingga

6.4   The habitual / continuous

Of the Tangsa-Nocte varieties that use agreement marking, in the varieties that we have investigated so far, the future, past and negative are found employing agreement markers in all cases. Many Pangwa varieties also have agreement marking in a further category, covering the functions of habitual and continuous. Table **15** 15 presents examples of the habitual/continuous in Ngaimong, Joglei, Cholim, Chamchang, Louchäng and Rera, where this function is marked by agreement markers that mostly include a verbal operator with initial *l-*. These forms may be cognate with the Yongkuk and Phong present (Dutta 2019) that have initial *r-*, but whose function is probably similar.

	Habitual/Continuous					Past				
	1SG	1PL	2SG	2PL	3	1SG	1PL	2SG	2PL	3
Ngaimong	Σ lak	Σ liʔ	Σ loq	Σ lit	Σ laʔ	Σ tɐk	Σ tiʔ	Σ toʔ	Σ tit	Σ taʔ
Joglei	Σ lak	Σ ləiʔ	Σ luʔ	Σ lit	Σ	Σ tak	Σ təiʔ	Σ tuʔ	Σ tit	Σ taʔ
Cholim	Σ laŋ₃	Σ li₃	Σ lu₃	Σ liŋ₃	Σ lu₃	Σ kjo₃	Σ ki₃	Σ ku₃	Σ kiŋ₃	Σ tuʔ₁
Chamchang	Σ tə₀kaŋ₃	Σ tə₀kai₃	Σ tə₀laɯ₃	Σ tə₀lan₃	Σ tə₀lo₃	Σ kaŋ₃	Σ kai₃	Σ laɯ₃	Σ lan₃	Σ to₃
Louchäng	Σ tə₀keŋ₃	Σ tə₀kai₃	Σ tə₀lau₃	Σ tə₀lan₃	Σ tə₀lə(və₃)	Σ keŋ₃	Σ kai₃	Σ lau₃	Σ lan₃	Σ tə(və₃)
Rera	Σ saʔlaŋ₁	Σ saʔli₁	Σ saʔlu₁	Σ saʔlan₁	Σ saʔlo₁	Σ taŋ₂	Σ ti₂	Σ tu₂	Σ tan₂	Σ to₂
	Present					Past				
Yongkuk	Σ raŋ	Σ rai	Σ rau	Σ ran	Σ ra	Σ taŋ	Σ tai	Σ tau	Σ tan	Σ ta
Phong	Σ raŋ	Σ re	Σ ru	Σ ran	Σ ra	Σ taŋ	Σ te	Σ tuʔ	Σ tan	Σ taʔ

Table 15. Comparison of Continuous and Past forms in eight Tangsa-Nocte varieties

Note that the Chamchang forms in Table 15 are formally the same as the past markers with a further prefix *tə₀-*. This double verbal operator is unusual in the Pangwa varieties, and the additional prefix requires an epenthetic vowel *ə*. Note that we have marked this prefix as toneless.

The Rera continuous includes an invariant partical *saʔ-* (a bleached verb that is formally equivalent to 'eat') not found in other varieties. There are three possibilites for expressing the continuous in Rera: (i) The nominalized verb stem with nominalizer (see 29a), (ii) The nominalized stem followed by the light /auxiliary verb combined with the markers as shown in Table 15, an exemplified in (29b) and (iii) the nominalized verb stem followed by the nominalized stem of *saʔ* which is *sat*, as in (29c).

Rera examples:
29a) *ŋa₁*   *i-jup*
      1SG   NMLZ-sleep

29b) *ŋa₁*   *i-jup*   *rə₀-saʔ*   *laŋ₁*
      1SG   NMLZ-sleep   LV-EAT   AGR.1

29c) *ŋa₁*   *i-jup*   *sat*
      1SG   NMLZ-sleep   EAT.NMLZ
      'I am sleeping.'

Rera examples, elicited from Simon Ronrang

The Continuous/habitual is exemplified in the Cholim example (30):

Cholim example

30) $\partial_0 re_2$ $mi\Im\beta e_1$ $\partial_0 gj\Im_1$ $ma\Im_1$ $p\partial_0 ra_2$ re_2 $\textltailn im_1 dim_2$
     so   male   NEG.have   A.AG   that   SEQ   2PL

     $\partial_0\text{-}se_1$ k^he_1 du_2 lap $li\eta_3$
     child   WH   at   get   CONT.2PL
     'The boy said, "And so, there being no men, where are you getting your children from?"'

     Cholim Naga Story, told by Lukam Cholim, No (162)

In Yvngban Wvng, two forms of the present continuous have been recorded. One involves an invariant *a* added to the verbal stem, with a nasal homorganic with the final element of the verb being inserted (except after vowels and the glottal stop). The combination of this *a* with a range of verbs is exemplified in Table 16: [19]

Verb root		Present continuous form		Gloss
joq	/ʤoʔ/	joq-a:	/ʤoʔ a₃/	'sitting'
ka	/ka/	ka̧a:	/ka₁ a₃/	'going'
sat	/sat/	sat na:	/sat na₃/	'waking'
yon:	/jon₃/	yon: nà	/jon₃ na₂/	'going down'
suk	/suk/	suk nga:	/suk ŋa₃/	'coughing'
dvnģ	/dəŋ₁/	dvnģ nga:	/dəŋ₁ ŋa₃/	'going up'
svp	/səp/	səp ma:	/səp ma₃/	'standing'
kam:	/kam₃/	kam: mà	/kam₃ ma₂/	'burning'

Table 16. Marking of present continuous in Yvngban Wvng

The present continous can be marked for person, as shown in the examples for the word *səp* 'stand' in Table 17:

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[19] The orthography used here is that developed by Mr. John Ingga. The tones are marked by diacritics. These tone categories are cognate to other Pangwa varieties. Tone 1 in Yvngban Wvng is low and written with a dot under the final letter of the word. Tone 2 is a level tone, with dot written above the final letter in the orthography; and Tone 3 is a rising tone, marked by a final colon in the orthography. See van Dam (2018) for a more detailed description of these tones.

Person	Form		Gloss
1st singular	svp mavng:	/səp maəŋ₃/	'I am standing'
1st plural	svp mai:	/səp mai₃/	'we are standing'
2nd singular	svp mau:	/səp mau₃/	'you (sg) are standing.'
2nd plural	svp mavn:	/səp maən₃/	'you (pl) are standing.'
3rd	svp ma:o̩	/səp mao₃/	'he is standing'

Table 17. Person marking of present continuous in Yvngban Wvng, on the verb *səp* 'stand'

Yvngban can also employ the nominal stem to indicate present continuous. The verb *ka₁* 'go' has a nominal stem *kaʔ*, which can be used with all persons to indicate this:

Yvngban Wvng examples:
31) nga̩   baṅ   nvnġ   kaq
     ŋa₁   *ban₂*   *nəŋ₂*   *kaʔ*
     1SG   field   to   go.NMLZ

     'I am going to the field.'

32) nvngruṁ   baṅ   nvnġ   kaq
     nəŋ₁rum₂   *ban₂*   *nəŋ₂*   *kaʔ*
     1PL   field   to   go.NMLZ
     'We are going to the field.'

     Yvngban Wvng examples, elicited from John Ingga

Unlike the other Pangwa varieties discussed here, Muishaung does not have agreement for the habitual and continous. The present continuous can be expressed simply by the nominalized verb stem form, in the same way as the Rera example (29a). Alternatively, the habitual/present are expressed with an invariant *jaʔ* at the end of the clause, regardless of person and number. This is demonstrated in (33).

Muishaung example
33) Kvruex   kuex   vkhoc   phvnx   yaq.
     kərɤ₂   *kɤ₂*   *əkʰo₃*   *pʰən₂*   *jaʔ*
     this   that   thus   tell   IS

     'It is narrated in this way.'

     Yam Story (nst-mos_20140304_03_SM_H4n_Wanglung_YamStory), told by Wanglung Mossang, No (3)

The word *jaʔ* can also be used in combination with the light verb *rə*, in which case the verb carrying the content will be nominalized as in (34). This is a similar structure to the Joglei past negative example in (20) above.

Muishaung example

34) noxyox saz vkhuemc rvyaq.
no_2jo_2 sa_1 $ə_0\text{-}k^hɤm_3$ $rə_0\text{-}jaʔ$
boy child NMLZ-walk LV-IS
'The boy is walking.'

Muishaung example, elicited from Wanglung Mossang

There is a non-final counterpart of *jaʔ*, which takes the form *laʔ* and is found in non-final and subordinate clauses. The use of *l-* for non-final was already noted in connection with Chamchang in (9) in §4 above, and is also present in Hakhun (Boro 2019).

6.5 Imperatives and Prohibitives

The imperatives in a range of Tangsa-Nocte varieties are shown in Table 18. There are two basic imperative systems, those which have an *l-* form in the imperative, some of which have singular-plural distinctions and others not, and those which use agreement markers to convey imperative meaning. In this table * means not recorded; n/f means the function is not specifically marked in this variety.

Variety	2SG.IMP	2PL.IMP	2>1SG	2>1PL	2SGPROH	2PLPROH
l systems						
Joglei	Σ luʔ	Σ lit	Σ pʰɐu	*	nak Σ	nak Σ in
Muishaung	Σ loʔ	*	see below	see below	nak Σ ka_1	
Mungre	Σ luʔ	Σ lat	n/f	n/f	noʔ Σ keʔ	
Cholim	Σ laʔ	Σ laʔ	n/f	n/f	nak Σ ke_1	nak Σ ke_1
Longri	Σ laʔ	Σ laʔ	n/f	n/f	nak Σ ka	nak Σ ka
Chamchang	Σ laʔ	Σ $roŋ_3$ laʔ	n/f	n/f	nak_2 Σ ki_1	nak_2 Σ ki_1
Louchäng	Σ laʔ	Σ $reŋ_3$ laʔ	n/f	n/f	naʔ Σ ki_1 / kiʔ	
Rinkhu	Σ laʔ	Σ laʔ	*	*	nak Σ ka	nak Σ ka
Rera	Σ laʔ	Σ pan	n/f	n/f	nak Σ ka	nak Σ pan ka
Song Language	Σ lo	*	*	*	nak Σ	
Merged systems						
Phong	Σ u	Σ an	*	*	nak Σ u	nak Σ an
Muklom	Σ u_3	Σ in_2	Σ $pʰu_3$	Σ $pʰin_2$	nak Σ (u_3)	nak Σ (in_2)
Muishaung transitive	Σ $ʃɤu_1$	Σ $ʃɤn_1$	Σ koʔ	Σ kɯt	(see above)	(see above)
Mueshuang intransitive	Σ $kɤu_1$	Σ $kɤn_1$	*	*	(see above)	(see above)

Table 18. Imperatives in Tangsa-Nocte varieties

The simplest systems are those in Cholim, Longri and Rinkhu which have a single imperative with no marking of plural and a single form for the prohibitive (shown by grey shading). The most complex is Muishaung, which has both an *l-* form and also employs person marked forms to cover the imperative function, which use the same verbal operator as the future for transitive verbs, but with a different tone category on the agreement marker, which using a different verbal operator for intransitive verbs.

Muishaung also marks non-3rd person objects in the imperative (a form of hierarchical marking, see Boro (2019), Mulder (2019) and Dutta (2019). In the hierarchical marking languages (columns headed 2>1SG and 2>1PL), agreement is with the subject (in this case second person). Interestingly Muishaung employs the open final agreement makers (with Tone 1) where there is no object marking, but in the hierarchical marking (2>1), the closed final system is used.

Muishaung imperatives are exemplified in (35) and (36):

Muishaung examples

35)   vpiq   muex   kuq-shuiuz
        əpiʔ   *muu₂*   *kuʔ-ʃʁuu₁*
        3SG   to   give-2SG.FUT/IMP.TR
        'Give it to him!'

36)   mnaungz   kaz-kuiuz
        m₂nauŋ₁   *ka₁-kuu₁*
        2SG   go-2SG.IMP.INTR
        'You, go!'

Muishaung Wvng examples, elicited from Wanglung Mossang

The hierarchical imperative is exemplified in (37) and (38):

Muishaung examples

37)   ngaz   muex   kuq-koq
        ŋa₁   *muu₂*   *kuʔ-koʔ*
        1SG   to   give-2>1IMP.TR
        'Give it to me!'

38)   mznaungz   lvmx   maq   bvmc   koq   ...
        m₁nauŋ₁   *ləm₂*   *maʔ*   *bəm₃*   *koʔ*   ...
        2SG   road   A.AG   wait   2SG   ...
        'You wait for me at the road ...'

Story of the origin of yeast, told by Tangthan, nst-mos_20130219_51_SM_T_Tangthan_OriginOfYeast, No. 10

In Muishaung, a second imperative particle, *loʔ*, which is clearly cognate with the general *l-* imperatives in other Pangwa varieties and with the imperative *lo* in song language, has a cislocative reading in Muishaung , meaning 'do something towards the speaker', as we see in (39):

Muishaung examples

39) *waungz loq* /βauŋ₁ loʔ/ 'come up here' (calling from down to up)
     kaz loq /ka₁ loʔ/ 'come down here'

Muishaung Wvng examples, elicited from Wanglung Mossang

Dual marking in the imperative is possible both in Muklom and in Phong. In Muklom dual is marked only in the second person, set off by an operator /-, but in a range of functions (see Mulder 2019). In Phong the dual is more pervasive, in both second and third person, and with different vowels (-i / -in for the dual (1st and 2nd persons), -e / -an in the plural). It is often also marked by an *s-* operator (Dutta 2019)

There are two forms in Muishaung that appear to be 1st person 'imperative' or hortatives, *kʰauŋ₂* and *pʰauŋ₂*, both exemplified in (40a) and (40b). The first of these is the same form that was reported as the 1st singular future marker in Needham (1897) (see above (25) and (26)).

Muishaung examples
40a) kaz   khaungx
      ka₁   *kʰauŋ₂*
      go   1SG.HORT
      'Let me go!'

40b) kaz   phaungx
      ka₁   *pʰauŋ₂*
      go   1SG.HORT
      'Let me go!'

Muishaung examples, elicited from Wanglung Mossang

The prohibitives in Table 18 are generally marked with a preverbal particle *nak* which in may of the Pangwa varieties is followed by *ka₁ / ke₁ / ki₁* which is the verb 'go (in a downwards direction)' that is largely bleached of its meaning. Thus in Muishaung, one can say *nauk βauŋ₁ ka₁* (PROH come GO), meaning 'don't come upward, don't move in an upward direction', but when specifically forbidding someone to come towards you, a special form is used, *nauk βauŋ₁ əkɤʔ*.

In Joglei, and also in Hakhun (Boro 2017: 331, 2019), Phong (Dutta 2019) and Muklom[20] (Mulder 2019), there is optional person marking of the prohibitive.

7 A Tangsa-Nocte variety with no agreement marking - Champang

Some varieties that are included under Tangsa-Nocte do not carry agreement marking at all[21]. One such variety, not in the Pangwa group, is Champang. Although we have not investigated this variety to the same extent as some of the others, there appear to be two types of verb markers, those that occur in main clauses (marking the end of what speakers identify as a sentence), seen in Table 19, and those that occur in subordinate clauses (marking the end of what speakers insist is

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[20] Note that in Muklom the 2nd plural agreement word carries Tone 2 in the imperative and the present, which differs from other persons which all carry Tone 3. See Mulder (2019) for further details).

[21] Most of these varieties are spoken in Myanmar, but some, like Champang, have speakers that have migrated more recently to India

not the end of a sentence), seen in Table 20. There is no person agreement at all. Note that we have not marked tones for the Champang data in this chapter. See van Dam (2018) for a more detailed discussion of this.

PRESENT	a- ∑
FUTURE	a- ∑ -kaʔ
PAST	∑ -wa
DID	∑ -kəwa
NEG	∑ -la
IMP.SG	∑ -laʔ
IMP.PL	∑ -paʔ
PROH	∑ -kaʔ
PROH	∑ -kəŋo
QN	∑ -təla
TAG.QN	∑ -sa
QN	∑ -ni
AFF	∑ -sik
DEON	∑ -tiŋ

Table 19. Verbal markers in Champang – main clauses

Some examples of main clauses as given by Ranjung Champang:

Champang examples
41)   *Jo juk-laʔ* 'drink water!'
         Jo juk-kaʔ-sa 'will you drink water?' (this could also mean 'will he drink water?')
         Piʔ ŋeʔ jo juk-kəwa. 'He drank water.'
         Piʔ ŋeʔ jo juk-la. 'He did not drink water.'

Champang examples, elicited Ranjung Joglei

The 'subordinate' system is given in Table 20. Note that several of these subordinate clause markers, here glossed as 'conjunction' have an *l-* operator, already mentioned in connection with non-final clauses in Chamchang (see above example (9) in §3), and also found in Hakhun (Boro 2017: 346).

CONTINUOUS	/ ∑ -təna/
SUBORDINATE	/ ∑ -te/
CONJUNCTION	/ ∑ -ləʔ-na/
CONJUNCTION	/ ∑ -ləʔ-ŋaʔ/
CONJUNCTION	/ ∑ -ləʔ-o/
PURPOSE	/ ∑ -m/

Table 20. Verbal markers in Champang – subordinate clauses

In (42) we see an example of marking of subordinate (with *təna*) and main clauses (with *kəwa*). In (43), we see the subordinate clause marking *laʔ-na*, one of the non-final forms with the *l-* operator.

Champang examples

42) *hən-təna*   *əŋe*   *ŋan-kə(ʔ)wa*
     do-CONT   thus   finish-DID
     'And doing like this, it would be finished.'
     About festivals (SDM37-20120212-01_SM_JVC_AboutFestivals), told by Montu, (37)

43) *ja-man*   *miʔma*   *ho-niŋ*   *na-ne*   *gam-laʔ na*
     that-also   self   MO.EL.BR-MARR.REL   EL.SIS-YO.SIS   gather-CONJ

     hən-təna   *hən*
     make-CONT   make
     'And then, after gathering our own uncles and marriageable relatives and sisters, and making (it), made it.'
     About festivals (SDM37-20120212-01_SM_JVC_AboutFestivals), told by Montu, (34)

8 The historical development of the markers

The ubiquitous nature of agreement marking in a wide range of Tangsa varieties suggests that we can reconstruct it at least for some form of proto-Tangsa/Nocte. That said, we will still need to explain the following features

1)   Why do some varieties have hierarchical marking and others not?
2)   Why is there no person marking at all in Champang?
3)   What is the historical explanation of the stop-final ~ nasal/open-final alternation
4)   How did the prefixal / prepositional future develop?
5)   How did a prefixal / prepositional negative develop in Rera?
6)   Why are k- forms found in the past in some varieties?
7)   What might the hierarchical system have looked like?

Koch (1996) proposed a methodology for analysing morphological forms as follows:

1)   Match tentative morphs
2)   Assess the relative likelihood of each of the compared forms as being archaic or innovative
3)   Posit an appropriate protoform

Following this methodology, we have already matched the agreement words in Table 3.
The second stage of Koch's methodology is to try and assess what may be innovative features. Overwhelmingly these TAM/AGR morphemes are postpositional or post-clitic, and in

many varieties all of the forms are of this type. Preverbal forms are rarely found, in a few varieties in the future and the negative.

On the other hand, in the case of the negative, we know that preverbal negation was present in earlier stages of Tibeto-Burman, a form in which it still ɒccurs in the Tangsa Wihu song language. Given that negative marking was originally, the postverbal *m-* forms marked by agreement are likely to be a later innovation.

On the other hand, since the past is most frequently marked with *t-*, and the presence of a category of past marking is found in all the varieties discussed here, we suggest that *t-* past is an archaic feature, retained in many varieties either for all persons, or in some cases just for 3rd persons (Group 2 varieties, Cholim, Longri, Chamchang, Shecyü and Louchäng). Retention of archaic features in 3rd persons, which are encountered more frequently in speech than the 1st an 2nd persons, is not surpising (consider the retention of English *-s* in *thinks*).

The use of final *-n* for 2PL seems to be ubiquitous (and present in related languages like Nocte), with only Cholim, Khalak and Shangthi as exceptions. We therefore conclude that *-iŋ* final for 2PL at least in Cholim, is an innovation, and a relatively recent one.

The distinction between open finals in futures and stopped finals in other TAM categories is suggestive that this might be the archaic feature, and that the varieties that have open/nasal finals in parts of the negative and past categories might be innovative. This analysis appears to be confirmed in the Group 2 varieties, where, for example in the negative, stop final is retained in the 3rd person, but the 1st and 2nd persons are open finals.

We list these archaic features in (44):

44)   *past in t-
        *-n 2PL
        *-open syllables FUT
        *-closed syllables PST and NEG

And for those varieties that have preverbal future particle, the most archaic form of this would appear to be:

45)   *ma 'preverbal future particle'

The preverbal particle in Cholim, Longri, Louchäng, Chamchang and Mungre probably arises from a form *ma-*, because there is a regular pattern of sound change from *a > /e/ in Cholim, /i/ in Louchäng and Chamchang and /ei/ in Mungray, as exemplified for the word 'ear' *na₃* (Longri and Rera) *ne₃* (Cholim), *ni₃* (Louchäng and Chamchang), *nei₃* (Mungray).

The proto forms for the agreement markers were given above in §4, reproduced here as Table 21:

	1		2		3
	Sg	**Pl**	**Sg**	**Pl**	
	-Cvelar	-Vhigh front	-Vhigh back	-Calveolar	unknown
open final	*-(a)ŋ*	*-i*	*-u*	*-(a)n*	
closed final	*-(a)k*	*-iʔ*	*-uʔ*	*-(a)t*	

Table 21. Suggested proto forms of the agreement markers

Of all the varieties Chamchang and Louchäng appear then to be the most innovative. They have the changed all of the archaic forms listed in (44), and have a particularly complex past system. The past in these two varieties can be explained as

46)   adoption of *k-* initials in the non3 past (in common with Cholim and Longri)
       adoption of *l-* initials (perhaps taken from a historical continuous) in 2nd person forms
       creation of a new continuous by prefixing a *t-*, incidentally the historical past form.
       3past retains *t-*, as the most conservative of the person endings

Returning to the negative marking, we will suggest that the form found in Wihu Song language, preverbal nasal *n- with no agreement, appears to be the most conservative, and perhaps the preverbal *mi₂ / miʔ* forms, found in the Group 4 languages are a medium stage between the conservative preverbal *n- form (still found in Khalak, but combined with agreement marking) and the rest of the Tangsa varieties.

9 Conclusion

This chapter has surveyed and summarized some of the diversity of agreement marking in the Tangsa varieties, in terms of the forms and functions of the verbal operators and the agreement markers than combine with them.

Much more detailed grammatical descriptions are needed in all of the Tangsa varieties in order to fully comprehenend the considerable diversity that we find. But already at this stage of the research, I believe that we can propose linguistic grounds for grouping the Pangwa Tangsa varieties (as presented in Table 1 above), and we can also establish that at least some of the morpho-syntactic diversity is of relatively recent development (for example the Muishaung distinction between transitive and intransitive in the future, discussed in §6.3).

Some preliminary findings relating to the historical development of the agreement word can also be made, such as the proto forms of the agreement markers (Table 21).

It is to be hoped that as the various Tangsa varieties are more comprehensively described, a more nuanced analysis of the whole agreement system will develop.

ABBREVIATIONS

A.AG	anti-agentive
AG	agent
AGR	agreement
BR	brother
CAUS	causative
CLF	classifier
CONJ	conjunction
CONT	continuous
DEON	deontic
DID	marker of past tense in Champang, see example (42)
EAT	grammaticalization of the nominalized stem of 'eat' used in Rera to express the continuous, see example (29c)
EL	elder
EXCL	exclusive
EXCLAM	exclamation
FUT	future
HAB	habitual
HORT	hortative
IMMED	immediate
IMP	imperative
INCL	inclusive
INTR	intransitive
IPFV	imperfective
IS	invariant marker of present tense in Muishaung, translated as 'is' by Wanglung Mossang
LINK	linker
LV	light verb
MARR	married
MO	mother
NEG	negative
NMLZ	nominalizer
NON.FIN	non final
PL	plural
POL	politeness
PRS	present
PST	past
REFL	reflexive

REL	relative
RL	realis
SAL	salient
SEQ	sequential
SG	singular
SIS	sister
TR	transitive
VOC	vocative
YO	younger

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