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ABSTRACT

This paper describes argument indexation in Hakhun Tangsa, a language variety spoken by one of the Tangsa sub-tribes called Hakhun across the Indo-Myanmar boarder on the Patkai mountain range. Most finite clauses in Hakhun carry an argument index in the verb complex, which codes person and number of the argument it cross-indexes. There are two sets of argument indexes in Hakhun Tangsa – one with a sonorous coda or no coda at all and the other with a stop coda. The choice between these two sets depends on the verbal operator in the verb complex. The typical argument indexation pattern in Hakhun Tangsa is hierarchical, i.e. the verb complex indexes the argument which is higher in person hierarchy irrespective of its grammatical relation. There are, however, certain irregularities in the realization of the argument index when two SAP arguments are involved in a transitive clause. The hierarchical indexation pattern is accompanied by overt direct/inverse coding, which identifies clauses either as direct or inverse with separate sets of verbal operators. Accusative indexation pattern is also found in the language, but only under certain semantic/pragmatic conditions and in certain constructions.

KEYWORDS

Argument indexation, Hierarchical indexation, Accusative indexation, Inverse, Tangsa

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1 Introduction

This paper describes argument indexation in Hakhun Tangsa, a variety of Tangsa or Tangshang Naga (ISO 693-3 nst) mainly spoken in Changlang and Tirap districts of Arunachal Pradesh, India, and in Sagaing Division, Myanmar. Most finite clauses in Hakhun have an argument index on the verb, which is a bound person form referring either to the speech-act participants (SAP), such as the speaker(s) or the addressee(s), or a non-SAP occurring in the shared context, the previous discourse, or in the same clause (cf. Haspelmath 2013). Argument indexation, also known as verb agreement, is a prominent feature of Tibeto-Burman or Trans-Himalayan languages, found across several low-level clades such as Qiangic, West Himalayan, East Bodish, Mizo-Kuki-Chin, and Bodo-Konyak-Jinghpaw (DeLancey 2010, 2017). Closely related languages of Hakhun such as Nocte and Jinghpaw have very similar argument indexation systems (DeLancey 2011; Rahman 2016), and most Tangsa varieties have some form of argument indexation on the verb (Morey 2011, 2017).

The argument indexes in Hakhun code both person (first, second, and third) and number (singular and plural, except in the third person) of the participant they cross-index, which is typical of argument indexation in the Tibeto-Burman languages. There are two sets of argument indexes in Hakhun, like in many Tangsa varieties (cf. Morey 2017). The two sets differ in terms of their coda segment – one set either has no coda or has a sonorous coda (an alveolar nasal), and the other set has a stop coda (a voiceless alveolar stop or a glottal stop). The distribution of these two sets of argument indexes is determined by what I call the **verbal operators** which the argument indexes are attached to. The verbal operators code various verbal categories such as tense, polarity, deixis, inverse, mood, clause chaining, etc. Some verbal operators, such as the past tense or the negative operator, take the indexes with the stop coda, while other operators, such as the present or the future tense operator, take the other set of argument indexes.

Two distinct patterns of argument indexation co-exist in Hakhun – hierarchical and accusative. The typical indexation pattern is hierarchical in which the participant higher in person hierarchy or referential hierarchy gets cross-indexed on the verb irrespective of its grammatical relation. Thus, SAPs are cross-indexed over non-SAP arguments, and first person arguments are cross-indexed over second person arguments, although there are certain irregularities in the latter scenario. In the hierarchical pattern, sentences are also overtly marked for direct/inverse distinction. The accusative pattern is rare, and it is found only under certain semantic/pragmatic conditions and in certain constructions, such as the non-final or medial clause.

This paper has the following structure. §2 provides ethnographic and demographic information of the language, as well as a brief overview of some of the relevant typological features of the language. §3 introduces the argument indexes along with other person forms, such as the

personal pronouns and possessive prefixes. §4 describes the indexation patterns – hierarchical and accusative. §5 discusses indexation in ditransitive clauses. §6 discusses participation of non-core participants in argument indexation, and §7 summarizes the paper.

2 Language background

There are around 80 ethnic groups who call themselves Tangsa in India and Tangshang in Myanmar (Morey 2017). Each ethnic group has their own name and a speech variety. The speech varieties of these ethnic groups seem to form a dialect continuum with greater intelligibility among the speech varieties that have been located close to each other for a long period of time. The term Tangsa primarily refers to an ethnic group, who happens to speak very closely related speech varieties. Other ethnic groups such as Nocte also speak very similar speech varieties as some of the Tangsa groups, such as Hakhun and Phong. More linguistic work is needed to ascertain the nature of the linguistic affiliation of the speech varieties within the Tangsas as well as with the speech varieties of other ethnic groups like Nocte. Morey (2017) provides a preliminary grouping of the Tangsa varieties, such as Tikhak group, Muklom group, Phong, and Pangwa group in India, and Hakhun, Bote/Haidley group, Haqchum/Haqman group, Kotlum/Aasen/Raqnu group, Chuyo/Gaqkat, Kaisan group, Kon group, Sansik group, and Pingku group in Myanmar. The speech varieties of Tangsa, Nocte, Wancho, and Tutsa along with Phom, Konyak and Chang form a low-level clade called Northern-Naga or Konyak group (Bradley 1997; French 1983; Burling 2003). The Northern-Naga or Konyak group, in turn, forms a higher-level clade along with other groups such as Bodo-Garo and Jinghpaw called Bodo-Konyak-Jinghpaw (Burling 2003).

The Hakhuns are a relatively large ethnic group among the Tangsas with an estimated population of around 10,000. They are located on both sides of the Indo-Myanmar border, in the districts of Changlang and Tirap in Arunachal Pradesh in India and in the Sagaing Division in Myanmar. The Hakhuns are also found in a few villages in the Tinsukia district of Assam, India, where they live with other Tangsa sub-groups such as Hacheng. All Hakhun people speak multiple speech varieties, particularly other varieties of Tangsa. They also speak some form of the creole Nagamese. The Hakhuns, especially the young generation living in Assam, also use Assamese and Hindi. The data for this paper mainly comes from two villages – Malugaon or Malupahar located in the Margherita subdivision of the Tinsukia district of Assam, India, and Vanruk located across the border in the Sagaing Division of Myanmar. The data consist of conversations, narratives, and elicited sentences.

A minimal Hakhun syllable consists of a nucleus vowel and a maximal syllable consists of a nucleus vowel, an onset, and a coda. The onset can be a single or a sequence of a consonant and one of two glides, *w* and *j*. The coda is always a single consonant. There are twenty-four consonant phonemes in Hakhun. All consonant phonemes except for the glottal stop is found as an onset. However, only the unaspirated voiceless stops and the nasals (except for the palatal ones) are found as codas. Hakhun contrasts six monophthong vowels, i.e. *i, e, a, o, u,* and *ɤ,* in an open syllable and four, i.e. *i, a, u,* and *ɤ,* in a closed syllable. Table 1 presents the consonant inventory.

	Bilabial	**Labio-dental**	**Alveolar**	**Post-alveolar**	**Palatal**	**Velar**	**Glottal**
Plosive	p, p^h, b		t, t^h, d		c, c^h	k, k^h, g	ʔ
Nasal	m		n		ɲ	ŋ	
Fricative		v	s	ʒ			h
Trill/Flap			r				
Lateral			l				
Approximant	w				j		

Table 1. Consonant inventory

Hakhun is a tonal language with three contrastive tones, low, high, and falling, in open syllables and syllables with sonorous codas. There is no tonal contrast in the syllables with stop codas. Moreover, grammatical words and affixes are mostly atonal (see Boro 2017: 66-67 for more details). The low tone is characterized by a low pitch and a glottal constriction at the end of the word, especially when the word is produced in isolation. The high tone is characterized by a relatively high pitch and the falling tone is characterized by a falling pitch. Consider the following minimal sets.

Low	**High**	**Falling**
ŋà 'I'	*ŋá* 'mithun'	*ŋâ* 'tasteless'
nà 'paddy field'	*ná* 'ear'	*nâ* 'brother'
apùŋ 'seedling'	*púŋ* 'air, wind'	*apûŋ* 'hair on pig's neck'
ak^{h}ù 'nose'	*ak^{h}ú* 'animal track'	*ak^{h}û* 'head'
sè 'crab'	*asé* 'used tea'	*sê* 'sun'
p^{h}à 'lower belly'	*p^{h}á* 'basket'	*p^{h}â* 'piece'
t^{h}ùŋ 'post'	*t^{h}úŋ* 'large piece of meat'	*t^{h}ûŋ* 'garden'

Table 2. Tone minimal sets

Hakhun is a highly isolating language with very little affixation. Grammatical information is largely coded by particles. Case as well as verbal categories like tense, aspect, polarity, and argument indexation are coded by separate words. The case marking system follows a person-based split. The first person and the second person singular pronouns follow an accusative pattern, whereas the rest of the NPs follows an ergative pattern. Hakhun has a three-way tense distinction in the direct configuration, i.e. present, past, and future, and a two-way tense distinction in the inverse configuration, i.e. past and non-past (configuration types are discussed in §4.1). The open lexical classes in Hakhun are nouns and verbs. The class of 'adjective' mostly behaves like verbs, although it has certain unique properties of its own. Notable closed classes include classifiers and adverbs. Hakhun is a verb-final language, although the word-order is highly variable. Verb serialization is a very prominent feature of Hakhun. Sequences of lexical verbs, with sequential, resultative, or adverbial interpretation, are very common. Moreover, sequences of lexical verb(s) and highly grammaticalized verb(s), which add more abstract meanings such as proximal/distal motion, or benefactive/melafactive interpretation, are also common. Finally, Hakhun largely follows a clause-chaining discourse structure, where multiple clauses are chained together in a sequence.

3 Argument indexes and other person forms

The argument indexes are distinct from other person forms like personal pronouns and possessive indexes, both in terms of their phonological shape and the categories they express. The **personal pronouns** code more semantic categories than the argument indexes or the possessive indexes. For instance, they code dual number, inclusive/exclusive distinction, and gender/honorificity. Personal pronouns are listed in Table 3.

	Singular	**Dual**	**Plural**
1st Person	*ŋà*	*nɤhiʔ* (INC) *cʰəniʔ* (EXC)	*nɤrûm* (INC) *nîrûm* (EXC)
2nd Person	*nɤ̂*	*nuʔcʰuʔ*	*nuʔrûm*
3rd Person	*atî* *atîvà* (MAS.HON) *atîŋù* (FEM.HON)	*hənî mɤ̂ni/vàni* *tânî (mɤ̂ni/vàni)*	*hənîrûm* *târûm*

Table 3. Personal pronouns

We can see in Table 3 that Hakhun has a three-way number distinction, inclusive/exclusive distinction in first person dual and plural, and gender/honorificity distinction in the third person singular forms. It is not entirely clear what distinction is coded by the multiple third person dual and plural forms. The form *hənî* by itself refers to a family as a whole. The forms *mɤ̂ni* and *vàni* are numerals denoting 'two', and they contain the classifiers *mɤ̂* 'CLF.generic' and *và* 'CLF.person' respectively. The form *tânî* 'they two' has an inherent dual reference, and thus the numerals *mɤ̂ni/vàni* are optional. The third person plural form *târûm* 'they' is also used to address a second-person plural addressee to indicate social distance, as shown in (1) and (2) (see Boro 2017: 128-134 for more detail).

In (1) and (2), the third person plural pronoun *târûm* has a second person plural reference, which is what the verbs also index with *an* '2PL' and *at* '2PL'.

(1) *i-cʰù-hɤ̂* *níà* ***târûm*** *cʰəvì-hɤ̂,*
1SG-grand.child-PL and 3PL grandchild.grandmother-PL

nɤʔ *húhá* *an*
PROH worry 2PL
'My grandchildren and you grandmother and grandchildren, don't worry.' [SNR-9-8.25]

(2) *bəʒá* ***târûm*** *cà* *rì* *t-at* *nî*
yesterday 3PL what do PST-2PL Q
'What did you do yesterday?' [Elicited]

The **possessive forms** can be bound or free. The singular and plural possessive forms, except for the third person plural, are all bound, which are prefixed to the modified noun. All dual possessive forms are free forms, and they are identical with the personal pronoun counterparts. The third person form *hənî* as a possessive modifier has a plural reference. The third person plural pronouns *hənîrûm* and *târûm* can also function as possessive modifiers. The second person singular possessive form has a variation in *mə- ~ bə-*, and they seem to be interchangeable. While the first and second person singular possessive forms are unique, the rest of the bound possessive forms are identifiable as parts of the free personal pronoun counterparts. The possessive forms are given in Table 4.

	Singular	**Dual**	**Plural**
1st Person	*i-*	*nɤhiʔ* (INC) *cʰəniʔ* (EXC)	*nɤ-* (INC) *nî-* (EXC)
2nd Person	*mə- ~ bə-*	*nuʔcʰuʔ*	*nuʔ-*
3rd Person	*a-*	*tânî*	*hənî* *hənîrûm* *târûm*

Table 4. Possessive forms

Some of the possessive forms are illustrated in (3) through (6). In (3) the first person singular possessive index *i-* is prefixed to the possessed noun *púcʰó* 'navel'. In (4) the second person singular possessive index *mə-* is prefixed to the possessed noun *rɤ̀* 'wing'. In (5) the third person singular possessive index *a-* is prefixed to the noun *hìm* 'house'. In (6) the possessor *hənîrûm* 'their' precedes the possessed noun *mərâ* 'sin'.

(3) *arəbə* ***i-****púcʰó* *vaʔ*
this 1SG-navel from
'This (tree) is from my navel.' [SNR-2-2.16]

(4) *irəbə* ***mə-rɤ̀*** *kəmə* *pán* *buʔ* *heʔ* *kà* *l-oʔ*
that 2SG-wing INST blow.away beat keep go IMP-2SG
'Go and drop (the fire) with your wing.' [SNR-6-1.36]

(5) *vàtʰeʔ* *mì* ***a-****hìm* *vaʔ* *kà,* *vàtʰeʔ* *mì* ***a-****hìm*
one.person ADD 3-house from go one.person ADD 3-house

vaʔ *kà,* *lâm* *nɤ́* *rúŋ* *cuʔ-mun* *kà* *t-aʔ*
from go road LOC together meet-RECIP go PST-3
'One person came out from his house, another person came out of his house, (they) met together on the way.' [SNR-6-1.7]

(6) *atîvà* *kəmə* ***hənîrûm*** *mərâ* *hoʔkuʔ* *k-àʔ*
3SG.MAS ERG 3PL sin forgive PRES-3
'He forgives their sin.' [Bib-15-4.8]

The third person singular index *a-* also marks **inalienably possessed nouns,** which include kinship terms, body-part terms, and other terms denoting parts of a whole (see Boro 2017: 109-114). It is replaced by other possessive prefixes and modifiers when there is an overt possessor. The nouns *kûn* 'hole' referring to a dwelling place in (7) and *tʰân* 'face' in (8) are inalienably possessed nouns.

(7) ***a-****kûn* *nɤ́* *inɤ́* *túŋ* *k-àʔ*
3-hole LOC there live PST-3
'They live there in the hole.'

(8) ***a-****tʰân* *vî* *tʰân* *mɤ̂mɤ̂,* *càró* *sit* *ván* *kuʔ* *t-at* *nî*
3-face monkey face FOC why take along give PST-2PL Q
'Their faces are like monkey faces, why did you bring (them)?' [SNR-15-1.24]

Argument indexes are distinct from personal pronouns and possessive forms. The argument indexes form the rhyme of a single syllable grammatical word, which follows the lexical verb or the auxiliary verb, if there is one. The onset (or the lack of one) of this grammatical word codes various verbal categories, such as tense, polarity, mode, deixis, inverse, and so on. Most of these onsets can also occur without the argument indexes with a reduced vowel schwa. These single syllable grammatical words are called **verbal operators** here, which have been called "agreement words" or "sentence final words" elsewhere (see DeLancey 2015; Dai and Diehl 2003). There are two sets of argument indexes in Hakhun: **sonorous argument indexes,** which have no coda or have a nasal coda, and **checked argument indexes,** which have a stop coda. They are given in Table 5 and 6.

	Singular	**Plural**
1st Person	*ɤ*	*e/i*
2nd Person	*o/u*	*an*
3rd Person	*a*	

Table 5. Sonorous argument indexes

	Singular	**Plural**
1st Person	*ɤʔ*	*iʔ*
2nd Person	*oʔ/uʔ*	*at*
3rd Person	*aʔ*	

Table 6. Checked argument indexes

The choice between the two sets of argument indexes depends on the verbal operators, as seen in Table 7. In general, the sonorous indexes are found with future, present, and proximal/inverse operators, whereas the checked indexes are found with past, imperative, and negative operators. There are some deviations to this pattern with respect to the glottal stop. First, a strong glottal constriction is found in the present tense in the second person singular form *kòʔ* and in the third person form *kàʔ*. Second, the glottal stops in the third person form of the past and present tense operators, i.e. *taʔ* and *kàʔ*, disappear when they are followed by other verbal/sentential particles. Moreover, the third person form of the imperative/jussive operator never has a glottal stop.

Index type	**Operators**	**1SG**	**1PL**	**2SG**	**2PL**	**3**
Sonorous Indexes	*zero* 'FUT'	*ɤ*	*e/i*	*o/u*	*an*	*a*
	kə 'PRES'	*k-ɤ̀*	*k-ì*	*k-òʔ/k-ù*	*k-àn*	*k-à(ʔ)*
	rə 'PROX/INV.NON.PST'	*r-ɤ*	*r-i*	*r-o/r-u*	*r-an*	*r-a*
	tʰə 'PROX/INV.PST'	*tʰ-ɤ*	*tʰ-i*	*tʰ-u*	*tʰ-an*	*tʰ-a*
Checked Indexes	*tə* 'PST'	*t-ɤʔ*	*t-iʔ*	*t-oʔ/t-uʔ*	*t-at*	*t-a(ʔ)*
	lə 'IMP/JUS/NF'	*l-ɤʔ*	*l-ʔ*	*l-oʔ/l-uʔ*	*l-at*	*la*
	mə 'NEG'	*m-ɤʔ*	*m-iʔ*	*m-oʔ/m-uʔ*	*m-at*	*m-aʔ*

Table 7. Verbal operators and argument indexes

Moreover, there is a variation in the nucleus vowel of the second person singular index, as seen in Table 7. The **o-nucleus** forms are found in the sentence-final position, whereas the **u-nucleus** forms are found when the operators are followed by other verbal/sentential particles. Similar variation is also found in the first person plural index between *e* and *i* in the future tense paradigm. The form *e* is found in sentence final position, and the form *i* is found when there is some other verbal/sentential particle following the index. The two sets of argument indexes are illustrated in examples (9) through (12). Examples (9) and (10) illustrate the future paradigm, where we find the sonorous argument indexes *ɤ* '1SG' and *e* '1PL'. Examples (11) and (12) illustrate the past tense paradigm, where we find the checked counterparts *ɤʔ* '1SG' and *iʔ* '1PL'.

(9) *ŋà* *mə-nâm* *nɤ́* *rí* ***ɤ***
1SG 2SG-with LOC die 1SG
'I will die with you.' [MOV-4-1.35]

(10) *nɤrûm* *ʒerusalem* *nɤ́* *vɤ̀* ***e***
1PL.INC PN LOC come 1PL
'We will go to Jerusalem.' [MOV-3-1.167]

(11) *ŋà* *irə* *lɤ̂* *nɤ́* *mó* *pù* *kà* ***t-ɤʔ***
1SG that reason LOC unintentionally fly go PST-1SG
'Because of that, I flew away unintentionally.' [SNR-6-4.27]

(12) *cʰùŋù* *haʔ* *nɤ́* *kà* ***t-iʔ***
PN land LOC go PST-1PL
'(We) went to Chunyu's place.' [SNR-15-1.6]

4 Argument indexation patterns

Argument indexation in an intransitive clause, such as those in (9) through (12), is straightforward; the verb cross-indexes the S argument. Argument indexation in a transitive clause, however, is more complex. We can distinguish two distinct patterns of argument indexation – **hierarchical indexation** and **accusative indexation**. The hierarchical indexation pattern seems to be the more basic one in that it does not require any special context to elicit this pattern and this pattern is much more frequent than the accusative indexation pattern in spontaneous speech. The hierarchical pattern is described in §4.1 and the accusative pattern is described in §4.2.

4.1 Hierarchical indexation

Hierarchical argument indexation is prominent in Tibeto-Burman languages (DeLancey 1981,2017,2018). Closely related languages, such as Nocte and Jinghpaw, also have hierarchical argument indexation (DeLancey 2011; Rahman 2016). Hierarchical argument indexation pattern refers to the pattern of indexing an argument which is higher in **person hierarchy** than the other argument of a transitive clause irrespective of its grammatical relation. In Hakhun, a first person argument outranks a second or third person argument, and a second person argument outranks a third person argument. While existence of such a ranking can be inferred from argument indexation

and inverse marking, such a ranking alone does not determine the actual realization of an index. Other factors, such as what has been called **Sociopragmatic** effects, i.e. the socially delicate nature of utterances involving both the SAPs, also play a role in the actual realization of an index, often partially[1] obscuring the role of person hierarchy (see DeLancey 2018; Heath 1998, 1991).

Hierarchical indexation is best illustrated in the mixed domain, where the argument configurations involve an SAP acting on a non-SAP argument or vice versa. The SAP argument is always indexed on the verb in these configurations, and direct/inverse distinction is coded by the verbal operators. Table 8 presents the past tense paradigm of the indexes in the mixed domain. Note that the direct configurations, i.e. where a higher participant acts on a lower participant, carry the past tense operator *t,* whereas the inverse configurations, i.e. where a lower participant acts on a higher participant, carry the inverse past tense operator *tʰ*. [2]

	1SG	**1PL**	**2SG**	**2PL**	**3**
1SG					*t-ɤʔ* 'PST-1SG'
1PL					*t-iʔ* 'PST-1PL'
2SG					*t-oʔ/t-uʔ* 'PST-2SG'
2PL					*t-at* 'PST-2PL'
3	*tʰ-ɤ* 'INV.PST-1SG'	*tʰ-i* 'INV.PST-1PL'	*tʰ-u* 'INV.PST-2SG'	*tʰ-an* 'INV.PST-2PL'	

Table 8. Hierarchical indexation in the mixed domain (Past tense)

Examples (13) through (16) illustrate some of the mixed configurations. Notice that the SAP arguments, which are A arguments in (13) and (14) and O arguments in (15) and (16), are indexed over the non-SAP arguments in all these examples. The sentences in (13) and (14) are marked as **direct** with the past tense operator *t,* and those in (15) and (16) are marked as **inverse** with the past tense inverse operator *tʰ*.

(13) *ŋà* *bə* .... *mó* *sám* *heʔ* ***t-ɤʔ***
1SG DEF … by.mistake cut keep PST-1SG
'I cut (the tree) by mistake.' [SNR-6-4.34]

[1] It is partial because inverse marking is not affected by these factors. Only argument indexation is affected.

[2] Historically *h* is the inverse marker, as attested in the closely related languages like Nocte and Phong (see DeLancey 2010). I decided not to separate the *h* from the past tense marker for two reasons: (i) *h* occurs only with *t,* and (ii) the past inverse *tʰ* contrasts with non-past inverse *r*.

(14) *nɤ̂ bə i-cʰà kʰû càró lú nɤʔ* ***t-uʔ*** *nî*
2SG DEF 1SG-child head why hole tread PST-2SG Q
'Why did you tread and break my child's head?' [SNR-6-4.18]

(15) *tîsû kəmə ŋà rán* ***tʰ-ɤ***
God ERG 1SG choose INV.PST-1SG
'God chose me (for preaching).' [MOV-1-1.215]

(16) *mə-kâmlâm kəmə mɤ̂ tʰik* ***tʰ-u***
2SG-faith ERG cure CAUS INV.PST-2SG
'Your faith has healed you.' [MOV-3-1.139]

Table 9 presents the future or non-past paradigm of the indexes in the **local domain**, where both relevant arguments are SAPs. Indexation in this domain differs from that in the mixed domain in two ways. First, there is variation in indexation in some of the configurations, notably in 1SG > 2PL and 2PL > 1SG. Second, the typical indexes found in some of these configurations do not refer to any of the arguments involved. For instance, a third person index is typical in 1SG > 2PL and 2PL > 1SG, and a first person plural index is typical in 1SG > 2SG. This kind of variation and irregularity seems to be characteristic of the local domain cross-linguistically and are ascribed to the socially delicate nature of utterances involving both the speaker and the addressee (DeLancey 2018; also see Heath 1998, 1991). According to DeLancey (2018), such irregularities arise particularly due to a tendency of languages to avoid direct reference to an SAP A argument acting on the other SAP. In Hakhun, the third person index is considered polite and the first person index more direct in a configuration like 2PL > 1SG. The direct/inverse distinction is, however, maintained as expected. The direct configurations are unmarked for tense in the future, and the inverse configurations are marked with *r*.

	1SG	**1PL**	**2SG**	**2PL**
1SG			*e/i* '1PL'	*a* '3', *e/i* '1PL'
1PL			*e/i* '1PL'	*e/i* '1PL'
2SG	*r-ɤ* 'INV.NON.PST-1SG'	*r-i* 'INV.NON.PST-1PL'		
2PL	*r-a* 'INV.NON.PST-3', *r-ɤ* 'INV.NON.PST-1SG'	*r-i* 'INV.NON.PST-1PL'		

Table 9. Hierarchical indexation in the local domain (Future/Non-past)

Examples (17) through (20) illustrate some of the local configurations. Example (17) illustrates a 1SG > 2SG configuration, where the verb complex takes a first person plural index *e*. Example (18) illustrates a 1SG > 2PL configuration, where the verb complex takes a third person index *a* (following the verb 'tell'). Both (17) and (18) illustrate a direct configuration, which have no

overt tense operator. Example (19) illustrates a 2SG > 1SG configuration, where the verb complex indexes the first person O argument. Example (20) illustrates a 2PL > 1SG configuration, where the verb complex takes a third person index. Examples (19) and (20) illustrate inverse configurations, which are marked with the non-past inverse operator *r*.

(17) *ŋà* *bə* *a-ŋè* *lweʔ* *rì* ***e***
1SG DEF NMLZ-be.able hold AUX 1PL
'I will be able to hold you (singular).' [SNR-12-1.21]

(18) *ŋà* *tʰûkuʔ* ***a*** *a-kəmə* *lôpô* *e*
1SG tell 3 3-INST play 1PL
'I will tell you (pl) that we will play with this.' [MOV-4-1.132]

(19) *a-sân* *sərâ* *ŋâmə* *càró* *rám* ***r-ɤ*** *nî*
NMLZ-good sir COMP why call INV.NON.PST-1SG Q
'Why are (you (singular)) calling (me) 'Good Sir'?' [MOV-3-1.72]

(20) *nuʔrûm* *kəmə* *sú* ***r-a*** *bə* *alîŋ* *ŋâ*
2PL ERG see INV.NON.PST-3 DEF true say
'What you (plural) see of me is real.' [MOV-4-1.187]

There is no hierarchy involved in the non-local domain, where both relevant arguments are non-SAPs. The verb always takes a third person index. Moreover, there is no direct/inverse distinction. Examples (21) and (22) illustrate this domain.

(21) *kʰiʔhî* *kəmə* *kʰûkʰup* *ʒwénám* ***t-aʔ***
deer ERG tortoise insult PST-3
'A deer insulted a tortoise.' [SNR-4-2.2]

(22) .... *atîvà* *bə* *ván* *pʰɤʔ* ***m-aʔ***
… 3SG.MAS DEF cut eat NEG-3
'(The ghosts) did not cut and eat him.' [SNR-11-1.36]

4.2 Accusative indexation

Accusative indexation pattern, where the grammatical subject is indexed on the verb, is also attested in the language, although it is rare and semantic/pragmatically more marked. This pattern is also found in some of the Tangsa varieties, such as Cholim and Lochhang, and some Tibeto-Burman languages, such as Darma (West Himalayan), and Hmar (Kuki-Chin) (Morey 2011; DeLancey 2017). There seems to be at least three separate conditions under which we find the accusative pattern in Hakhun. The first condition is semantic/pragmatic. Under certain semantic/pragmatic conditions, discussed later in this section, it is possible to index the subject irrespective of its ranking in person hierarchy. The second condition has to do with the subject argument itself. Accusative indexation is preferable to hierarchical indexation when the subject is a second person plural argument. Thus, in elicitation of configurations like 2PL > 1SG/1PL, speakers usually index the A argument. The third

condition is syntactic. The non-final clauses marked with the non-final operator *lə* do not allow hierarchical argument indexation. They index only the subject argument.

Difference between the two indexation patterns, i.e. hierarchical and accusative, does not arise in direct configurations, especially in the mixed domain, since either pattern would lead to the same surface indexation, i.e. indexation of the A argument. However, in some of the direct configurations in the local domain the difference between the two patterns is still observable due to the variations and irregularities present in those configurations discussed in §4.1. For example, a third person index in a configuration like 1SG > 2PL as in (23) points to a hierarchical pattern, whereas a first person singular index for the same configuration as in (24) points to an accusative pattern. Thus, speakers have a choice between the two indexation patterns even in the direct configurations.

(23) *ŋà* *kəmə* *mì* *nuʔrûm* *hə* *iruʔ* *kuʔ* ***a***
1SG ERG ADD 2PL DAT like.that give 3
'I will give you (plural) (the same right) like that.' [MOV-3-1.286]

(24) *abə* *i-ŋə̀m* *nuʔrûm* *hə* *kuʔ* *heʔ* ***k-ɤ̀***
this 1SG-flesh 2PL DAT give keep PRES-1SG
'I give you (plural) this flesh of mine.' [MOV-3-1.265]

The difference between the two indexation patterns is more obvious in the inverse configurations since they lead to the indexation of different arguments. Examples (25) and (26) have the same verb *lán* 'beat' and the same argument configuration, i.e. 3 > 1SG. Example (25) follows the accusative pattern and indexes the third person A argument over the first person O argument. This sentence takes the direct past tense operator *t* since there is no ranking involved. Example (26), on the other hand, follows the hierarchical pattern and indexes the first person O argument over the third person A argument. This sentence takes the inverse past-tense operator *tʰ*.

(25) *atî* *kəmə* *ŋà* *lán* *t-aʔ*
3SG ERG 1SG beat PST-3
'He beat me.' [Elicited]

(26) *atî* *kəmə* *ŋà* *lán* *tʰ-ɤ*
3SG ERG 1SG beat INV.PST-1SG
'He beat me.' [Elicited]

The semantic/pragmatic condition(s) underlying the choice of one indexation pattern over another is yet to be understood. One potential factor seems to be **affectedness** of the O argument or the **significance** of the event to the O argument. Indexation of the A argument instead of the O argument in an inverse configuration has been described by my consultants as indicating that the O argument is not affected by the event or the event is not significant to the O argument. Thus, the indexation of the third person A argument in (25) instead of the SAP O argument indicates that the referent of the O argument is not affected by the event of 'beating' or the event of 'beating' is not significant to her. On the other hand, the indexation of the SAP O argument in (26) is interpreted as indicating that the referent of the O argument is affected by the event, which would be the typical interpretation.

Non-final or medial clauses allow only the accusative pattern. In (27), the non-final verb *ləpkʰì* 'see' indexes the third person A argument over the first person O argument. In (28), the non-final verb *buʔ* 'beat' indexes the third person A argument over the second person O argument.

(27) *[atî ŋà ləpkʰì l-ə-mə] cʰwé t-aʔ*
3SG 1SG see NF-3-NF run PST-3
'He saw me and then ran away.' [Elicited]

(28) *[atî kəmə nɤ̂ buʔ l-ə-mə] cʰwé t-aʔ*
3SG ERG 2SG beat NF-3-NF run PST-3
'He beat you and ran away.' [Elicited]

It is not possible to index the O arguments in (27) and (28) as shown in (29) and (30).

(29) *[*ati ŋà ləpkʰì l-ɤʔ-mə] cʰwé t-aʔ*
3SG 1SG see NF-1SG-NF run PST-3

(30) *[*ati nɤ̂ buʔ l-uʔ-mə] cʰwé t-aʔ*
3SG 2SG beat NF-2SG-NF run PST-3

5 Indexation in ditransitive constructions

The typical indexation pattern in ditransitive constructions is also hierarchical in that the A argument is ranked either with the T or with the R argument. Direct/inverse distinction is also marked just like in the transitive. But, how do we choose between the T or the R argument to rank with the A argument? There are two scenarios. First, the R and the T arguments are ranked with each other, and then whichever outranks is ranked with the A argument. This in fact is the true hierarchical indexation pattern in a ditransitive construction. The other scenario involves simply choosing the R argument and ranking it with the A argument. The T argument is not relevant for indexation and inverse marking in this scenario. Thus, the second pattern is partially grammatically constrained, where the R argument gets a special treatment, and it is not hierarchical as far as the two objects are concerned.

Examples (31) and (32) illustrate the first scenario. In (31) the R argument outranks the T argument and participates in ranking with the A argument. The relevant configuration is 1SG > 2SG, where 2SG refers to the R. We know from §4.1 that this configuration typically takes a first person plural index. In (32), on the other hand, the T argument outranks the R argument and participates in ranking with the A argument. The relevant configuration is 1SG > 2SG, where 2SG refers to the T. Thus, either the T or the R can be ranked with the A depending on which one of them is higher in person hierarchy.

(31) *ŋà kəmə tʰúmlà pʰúŋ aŋó ku-ʔ e*
1SG ERG all power give 1PL
'I will give (you) all the power.' [MOV-1-1.196]

(32) *ŋà* *bə* *nɤ̂* *atîvà* *hə* *kuʔ* *k-ì*
1SG DEF 2SG 3SG DAT give PRES-1PL
'I gave you to him (in marriage).' [Elicited]

Examples (31) and (32) represent a direct configuration where the A argument is higher than the R or the T argument. Examples (33) and (34) represent the inverse configuration. In (33) the R argument outranks the T argument and participates in ranking with the A argument, giving us the 3 > 2PL configuration, where 2PL refers to the R. The verb complex indexes the R argument and takes the inverse operator *r*. In (34) the T argument outranks the R argument and participates in ranking with the A argument, giving us the 3 > 2SG configuration, where 2SG refers to the T. The verb complex indexes the T argument and takes the inverse operator *tʰ*.

(33) *tîsû* *múŋtân* *bə* *nuʔrûm* *hə* *kuʔ* *gó* *r-an*
God heaven DEF 2PL DAT give plan INV.NON.PST-2PL
'God is planning to give the heaven to you.' [MOV-3-1.47]

(34) *atîvà* *kəmə* *nɤ̂* *atîvà* *hə* *kuʔ* *tʰ-u*
3SG.MAS ERG 2SG 3SG.MAS DAT give INV.PST-2SG
'He gave you to him.' [Elicited]

Examples (35) and (36) illustrate the second scenario, where the R argument is ranked with the A argument to the exclusion of the T argument. In (35), the third person R argument, although it is lower than the SAP T argument, gets ranked with the A argument, leading to configuration 1SG > 3. The verb indexes the first person A argument. Similarly, in (36) the third person R argument, which is lower than the SAP T argument, gets ranked with the A argument, resulting in configuration 3 > 3. The verb takes a third person index. It is clear in (35) and (36) that the T argument is not taking part in indexation. Thus, the R argument carries a special grammatical status in the language.

(35) *ŋà* *kəmə* *nɤ̂* *atî* *hə* *kuʔ* *k-ɤ̀*
1SG ERG 2SG 3 DAT give PRES-1SG
'I gave you to him.' [Elicited]

(36) *atî* *kəmə* *nîrûm* *atî* *hə* *kuʔ* *k-àʔ*
3 ERG 1PL.EXC 3 DAT give PRES-3
'He gave us to him.' [Elicited]

6 Indexation beyond core arguments

Core arguments such as the subject or the object are not the only functions which play a role in argument indexation. Some non-prototypical core functions also take part in argument indexation. These include the beneficiary of a benefactive construction, the addressee of an utterance verb predicate, and the possessor modifier of a core argument, especially of the O argument. Examples

(37) and (38) illustrate the **benefactive construction,** where the beneficiary participate in indexation. Example (37) contains an intransitive verb, *asâncut* 'pray', and the serial verb *kuʔ* 'give', which indicates that the event 'pray' is done for a beneficiary, which in this case is the addressee. The first-person plural index suggests that beneficiary is ranked with the S argument, resulting in a 1SG > 2 configuration. Similarly, in (38) the beneficiary is a second person, and the first person plural index suggests that it is ranked with the first person A argument, resulting in a 1SG > 2SG configuration.

(37) *ŋà* *asâncut* *kuʔ* *k-ì* *...*
1SG pray give PRES-1PL …
'I pray for you…' [MOV-3-1.293]

(38) *càlì* *rì* *kuʔ* *i* *nî* *nɤ̂* *hə*
what do give 1PL Q 2SG DAT
'What can I do for you?' [MOV-3-1.136]

Examples (39) and (40) illustrate utterance verb predicate clauses where the locative marked addressee participates in argument indexation.[4] In (39) the addressee is second person singular, and the first person plural index indicates that the addressee is ranked with the A argument, which is understood to be the speaker in this context, resulting in a 1SG > 2SG configuration, where 2SG refers to the addressee. In (40) the addressee is first person singular, and the third person index and the inverse operator indicates that the first person addressee is ranked with the second person plural A argument, leading to a 2PL > 1SG configuration, where 1SG refers to the addressee.

(39) *nɤ̂* *nɤ́* *tʰûnsânmə* *cʰín* ***k-ì***
2SG LOC nicely ask PRES-1PL
'I am asking you nicely.' [SCN-2-3.1]

(40) *nuʔrûm* *kəmə* *ŋà* *nɤ́* *mì* *ŋâ* *r-a*
2PL ERG 1SG LOC ADD say INV.NON.PST-3
'You will also ask me.' [MOV-1.226]

Examples (41) and (42) illustrate possessor modifiers being involved in argument indexation. In (41) the O argument has a second person singular possessor modifier, and the first person plural index indicates that the possessor is ranked with the first person singular A argument, giving us the configuration 1SG > 2SG, where 2SG refers to the possessor. In (42) the verb indexes the non-overt first person singular possessor of the O argument 'wrist' over the second person singular A argument. A possessor modifier may not be involved in the indexation. For instance, in (43) the first person possessor of the O argument 'leg' does not participate in argument indexation, resulting in a 3 > 3 configuration rather than a 3 > 1SG configuration, as indicated by the third person index and the non-inverse past tense operator.

[4] The O argument of some other verbs, such as the cognition verbs, also takes the locative marker optionally.

(41) *bə-dàsì* *lù* *k-ì*
2SG-leg hold PRES-1PL
'I hold your leg.' [MOV-2-1.188]

(42) *dɤʔsì* *lù* *tʰə* *rə* *m-ɤʔ*
wrist hold INV.PST INV.NON.PST NEG-1SG
'(you (singular)) did not hold (my) hand.' [MOV-2-1.96]

(43) *atîŋù* *kà* *l-ə-mə* *i-dàsì* *lù* ***t-aʔ***
3SG.FEM go NF-3-NF 1SG-leg hold PST-3
'She came and hold my leg.' [MOV-2-1.97]

Other participants, such as comitatives and locatives, do not seem to participate in argument indexation at all. In (44) the verb indexes the first person S argument, and the second person singular comitative indexed on the relator noun *nâm* has no effect on argument indexation. Similarly, in (45) the verb indexes the first person S argument, and the second person locative participant indexed on the relator noun *tʰɤʔ* 'top' has no effect on argument indexation.

(44) *ŋà* *mə-nâm* *nɤ́* *a-rótó* *rì* *k-ɤ̀*
1SG 2SG-with LOC NMLZ-be.happy AUX PRES-1SG
'I am happy with you.'[MOV-1-1.183]

(45) *ŋà* *bə-tʰɤʔ* *nɤ́* *túŋ* *k-ɤ̀*
1SG 2SG-top LOC sit PRES-1SG
'I am sitting on top of you.' [Elicited]

7 Summary

Most finite Hakhun clauses have an argument index on the verb, which cross-indexes one of the arguments of the clause. The argument indexes are attached to morphemes denoting other verbal categories, such as tense, polarity, deixis, and direct/inverse, called verbal operators. The argument indexes code person and number distinction (singular and plural, except in the third person). There are two sets of argument indexes – one with a sonorous rhyme and the other with a checked rhyme. The choice between these two sets of indexes is determined by the operator to which the indexes are attached to. In general, the sonorous argument indexes are found with the future, present, and proximal deixis/inverse operators, whereas the checked argument indexes are found with the past, imperative/jussive and negative operators.

Two indexation patterns co-exist in Hakhun: hierarchical and accusative. The hierarchical pattern with overt direct/inverse distinction is the typical indexation pattern, where an argument higher in person hierarchy is indexed on the verb irrespective of its grammatical relation. Thus, SAP arguments outrank non-SAP arguments, and get indexed on the verb. Within SAPs, the first person arguments outrank the second person arguments, which is reflected by the inverse marking but not so well by the argument indexes, since other factors such as sociopragmatic considerations also play

a role in determining the surface form of the indexes. When both SAPs are involved in the ranking, we see a tendency to avoid indexation of the first person singular arguments. The typical indexes are either a third person index or a first person plural index, even though they do not or may not refer to any of the relevant arguments of the clause. The accusative pattern is attested but only under certain conditions. This pattern is semantic/pragmatically marked, and thus found only under certain semantic/pragmatic conditions, which are yet to be fully understood. This pattern is preferred when the A argument is a second person plural argument, and it is obligatory in non-final or medial clauses.

The typical indexation pattern in ditransitive clauses is also hierarchical in the sense that either the R or the T argument is ranked with the A argument. The involvement of the R or the T argument in the indexation is determined in one of two ways. First, they are ranked, and whichever outranks is chosen to be ranked with the A argument. The second pattern involves simply choosing the R argument for ranking with the A to the exclusion of the T argument. In addition to the core arguments, a few non-prototypical arguments participate in argument indexation. They include the beneficiary of a benefactive construction, the locative marked addressee of an utterance verb predicate, and the possessor of a core argument, especially that of the O argument. The involvement of the possessor modifier is relatively rare and optional.

Abbreviations

1	First person
2	Second person
3	Third person
ADD	Additive focus
AUX	Auxiliary verb
CAUS	Causative
COMP	Complementizer
DAT	Dative case
DEF	Definite
DL	Dual
DP	Discourse particle
ERG	Ergative case
EXC	Exclusive
FEM	Feminine
FOC	Focus particle
FUT	Future tense
HON	Honorific
IMP	Imperative mood
INC	Inclusive
INST	Instrumental case
INV	Inverse
JUS	Jussive
LOC	Locative case
MAS	Masculine
NEG	Negative
NF	Non-final marker
NMLZ	Nominalizer
NON-PST	None-past tense
PL	Plural
PN	Personal name
PRES	Present tense
PROH	Prohibitive
PROX	Proximal motion
PST	Past tense
Q	Question word
RECIP	Reciprocal
SG	Singular

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Appendices

A. List of verbal person indexation forms

A.1 Equational sentences

ŋà	*Shebet*	'I am Shebet'
nɤ̂	*Shebet*	'You sg. are Shebet'
atî	*Shebet*	'S/he is Shebet'
cʰəniʔ	*Shebet*	'We 2 (exclusive = without you) are Shebet'
nîrûm	*Shebet*	'We pl (exclusive = without you) are Shebet'
nɤhiʔ	*Shebet*	'We 2 (you and I) are Shebet'
nɤrûm	*Shebet*	'We pl (you and I and others) are Shebet'
nuʔcʰuʔ	*Shebet*	'You two are Shebet'
nuʔrûm	*Shebet*	'You pl are Shebet'
tânî	*Shebet*	'Those two are Shebet'
hənîrûm	*Shebet*	'They pl. are Shebet'

A.2 Ditransitive forms

kuʔ kì	'I give you (sg) to him'
kuʔ kɤ̀	'I give him to him'
kuʔ ri	'you (sg) give me to him'
kuʔ kòʔ	'you give him to him'
kuʔ ri	'you give him to us'
kuʔ ri	'you give us to him'
kuʔ rɤ	'he gives me to him'
kuʔ ro	'he gives you to him'
kuʔ kàʔ	'he gives him to him'
kuʔ kì	'we (you and I (and others) give him to him'
kuʔ kì	'we (excluding you) give him to him'
kuʔ kì	'we give you to him'
kuʔ kì	'we give him to you'

kuʔ kì 'I give him to you'
kuʔ rɤ 'he gives me to you'
kuʔ ro 'he gives him to you'
kuʔ rɤ 'you give him to me'
kuʔ rɤ 'he gives you to me'
kuʔ rɤ 'he gives him to me'
kuʔ ri 'he gives him to us (you and me (and others))'
kuʔ ri 'he gives him to us (excluding you)'
kuʔ ri 'he gives you to us'
kuʔ ri 'he gives us to you'

B. Transitive paradigms

		1st person		**2nd person**		**3rd person**
		SG	**PL**	**SG**	**PL**	**SG/ PL**
1	SG			*lán e/i*	*lán a* *lán e/i*	*lán ɤ*
	PL			*lán e/i*	*lán e/i*	*lán e/i*
2	SG	*lán rɤ*	*lán ri*			*lán o/u*
	PL	*lán ra* *lán rɤ*	*lán ri*			*lán an*
3	SG/ PL	*lán rɤ*	*lán ri*	*lán ru*	*lán ran*	*lán a*

Table 1. Future/Non-past transitive paradigm of *lán* 'beat'

		1st person		**2nd person**		**3rd person**
		SG	**PL**	**SG**	**PL**	**SG/ PL**
1	SG			*lán kì*	*lán kà(ʔ)* *lán kì*	*lán kɤ̀*
	PL			*lán kì*	*lán kì*	*lán kì*
2	SG	*lán rɤ*	*lán ri*			*lán kò/kù*
	PL	*lán ra* *lán rɤ*	*lán ri*			*lán kàn*
3	SG/ PL	*lán rɤ*	*lán ri*	*lán ru*	*lán ran*	*lán kà(ʔ)*

Table 2. Present/Non-past transitive paradigm of *lán* 'beat'

		1st person		**2nd person**		**3rd person**
		SG	**PL**	**SG**	**PL**	**SG/ PL**
1	SG			*lán tiʔ*	*lán taʔ* *lán tiʔ*	*lán tɤʔ*
	PL			*lán tiʔ*	*lán tiʔ*	*lán tiʔ*
2	SG	*lán tʰɤ*	*lán tʰi*			*lán toʔ/tuʔ*
	PL	*lán tʰa* *lán tʰɤ*	*lán tʰi*			*lán tat*
3	SG/ PL	*lán tʰɤ*	*lán tʰi*	*lán tʰu*	*lán tʰan*	*lán ta(ʔ)*

Table 3. Past transitive paradigm of *lán* 'beat'

		1st person		**2nd person**		**3rd person**
		SG	**PL**	**SG**	**PL**	**SG/ PL**
1	SG			*lán miʔ*	*lán maʔ* *lán miʔ*	*lán mɤʔ*
	PL			*lán miʔ*	*lán miʔ*	*lán miʔ*
2	SG	*lán rə mɤʔ*	*lán rə miʔ*			*lán moʔ/muʔ*
	PL	*lán rə maʔ* *lán rə mɤʔ*	*lán rə miʔ*			*lán mat*
3	SG/ PL	*lán rə mɤʔ*	*lán rə miʔ*	*lán rə muʔ*	*lán rə mat*	*lán maʔ*

Table 4. Negative non-past transitive paradigm of *lán* 'beat'

		1st person		**2nd person**		**3rd person**
		SG	**PL**	**SG**	**PL**	**SG/ PL**
1	SG			*lán tə miʔ*	*lán tə maʔ* *lán tə miʔ*	*lán tə mɤʔ*
	PL			*lán tə miʔ*	*lán tə miʔ*	*lán tə miʔ*
2	SG	*lán tʰə rə mɤʔ*	*lán tʰə rə miʔ*			*lán tə moʔ/muʔ*
	PL	*lán tʰə rə maʔ* *lán tʰə rə mɤʔ*	*lán tʰə rə miʔ*			*lán tə mat*
3	SG/ PL	*lán tʰə rə mɤʔ*	*lán tʰə rə miʔ*	*lán tʰə rə moʔ*	*lán tʰə rə mat*	*lán tə maʔ*

Table 5. Negative past transitive paradigm of *lán* 'beat'