Title

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Peer reviewed

Himalayan Linguistics

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ABSTRACT

South Central (Kuki-Chin) languages often exhibit an alternation in the form of verbal stems based on their morphological or syntactic distribution. This paper surveys characteristics of this phenomenon in three languages (Lai, K'Cho, and Vaiphei) representing distinct branches of the South Central group in order to identify similarities and differences in the factors leading to use of one or another stem form. The study is meant to serve as an introduction to the phenomenon in South Central and hopes to provide a foundation for future investigations treating additional languages of the subgroup and in the surrounding Tibeto-Burman speaking area.

KEYWORDS

Kuki-Chin, South Central, Tibeto-Burman, Trans-Himalayan, stem alternation, ablaut

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1 Introduction

Verb stem alternation refers to morphological variation of verb forms under complex morphosyntactic and pragmatic conditions which is characteristic of Tibeto-Burman languages of the Kuki-Chin (or South Central) subgroup (though not all of them have it). It presents difficulties partly because it affects large numbers of verbs and many aspects of morphosyntactic structure, but also because it involves differences in vowel length and tone, which few orthographies or dictionaries consistently distinguish. This paper will look in detail at verb stem alternation in Lai, which has been most extensively investigated, and also in K'Cho and Vaiphei, in an attempt to see what similarities and differences there may be.[1]

Lai is spoken in and around the town of Hakha, present administrative capital of Chin State, Myanmar. It is often called (Hakha) Chin in the linguistics literature. K'Cho is spoken in and around the town of Mindat in southern Chin State, Myanmar. It is sometimes called Müün. Vaiphei is spoken in and around the town of Churachandpur in southern Manipur State, India. According to *Ethnologue* (Lewis et al. 2013), the total Lai speaking population is 125,000, including a substantial number in Mizoram State, India; the total K'Cho speaking population is 15,000; and the total Vaiphei speaking population is 40,000. All three are Tibeto-Burman

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[1] Stephen Morey rightly points out to us (as noted in Morey 2018) that there are similar phenomena found in other parts of Tibeto-Burman, including Northern Naga, rGyalrongic, and elsewhere. We do not wish to take a stand here as to whether or not these instances of stem alternation are related to the South Central phenomenon treated in this paper.

languages of the Kuki-Chin subgroup.

The majority of the Lai examples in this paper are supplied by the third author and presented insofar as possible in standard Lai orthography. This is supplemented by the representation of contrastive vowel length (doubling of the vowel letters) and tone (in which an acute accent [´] represents rising tone and a grave accent [`] represents falling tone) on the verb forms of interest. Open syllable verb forms have long vowels, verb forms ending in [h] (representing glottal stop) have short vowels, and unmarked verb forms have low level tone. The K'Cho examples are supplied by the second author and are presented in the orthography used in Nolan and Mang (2009). Tones are marked only on lexical categories: an acute accent [´] represents rising tone, a grave accent [`] represents low tone, and unmarked represents high tone. The Vaiphei examples are supplied by the fourth author and are presented in the orthography used in *Pathian Lekhabu Thiangtho* 2006. Tones are marked only on verb forms; the system of marking tones is as in Lai: an acute accent [´] represents rising tone, a grave accent [`] represents falling tone, and unmarked represents low tone. The examples are distinguished as follows: examples marked 'L' are Lai, those marked 'K' are K'Cho, and those marked 'V' are Vaiphei.

2 Verb stem alternation

2.1 Verb stem alternation: Lai

The verb in (1) is *tlung* 'arrive', accompanied by the subject agreement marker *an* and the directional *hung*. The verb in (2) is *it* 'sleep', accompanied by the same agreement marker *an* and the adverbial *tawn*.

(1)   L   *ramvai   pawl   ramlak   in   an   hung   **tlung***
                 hunter   group   jungle   from   3PL   come   **arrive**B
                 'the hunting party returned from the jungle'

(2)   L   *ngakchia   cu   chun   ah an   **it**   tawn*
                 child   that   noon   at   3PL   **sleep**B sometimes
                 'children sometimes sleep during the day'

In (3) and (4), however, these same verbs have a slightly different form. In (3) the verb *tlung* appears as *tlún*, conditioned syntactically by its subordinate clause construction. In (4) the verb *it* appears as *íh*, conditioned morphologically by its compound noun construction.

(3)   L   *ramvai   pawl   ramlak in   an   hung   **tlún**   hlanah,*
                 hunter   group   jungle from 3PL   come   **arrive**D   before.P
                 'before the hunting party returned from the jungle'

(4)   L   ***íh*-*khun***
            sleep_D-?[2]
            'bed'

Variation in verb forms like that between *tlung* and *tlún* or *it* and *íh* constitutes verb stem alternation; the forms which are found in simple clauses like (1) and (2) are called 'stem1' while those found under special conditions, as in (3) and (4), are called 'stem2'. This terminology can be confusing, and we will refer to the variants as "base" and "derived" forms in a sense to be specified in the following discussion. Interlinear glosses include subscripts (_B and _D) to clarify whether the base or derived form of a verb occurs in the example. Relevant verbs and their glosses in examples are bolded for further clarity.

2.2   *Verb stem alternation: K'Cho*

In (5) the verb is *hteit* 'go', accompanied by a quantifier *zop* 'all', the non-future tense marker *ci* and the plural marker *gùi*. In (6) the verb is *ip* 'sleep', accompanied by an adverbial *màn* 'usually' and *ci*.

(5)   K   *hlak'yüh   gùi   bung   ah   **hteit**   zop   ci   gùi.*
            hunter   PL   jungle   P   **go**_B   all   NF   PL
            'all the hunters went into the jungle'

(6)   K   *ak'mó   cu   k'hngüp   yah   ung   **ip**   màn   ci.*
            child   that   day   time   P   **sleep**_B   usually   NF
            'a child usually sleeps during the day'

In (7) the verb *hteit* appears as *hteih*, conditioned syntactically by its subordinate clause construction. In (8) the verb *ip* appears as *ih*, conditioned morphologically by -*nák*, a locative relative suffix.[3]

(7)   K   *hlak'yüh   gùi bung   ah   ami   **hteih** zop   kòn   àh*
            hunter   PL jungle   P   3PL   **go**_D   all   after   P
            'after the hunters all went into the jungle'

(8)   K   ***ih*-*nák***
            sleep_D-LOC.REL
            'bed'

K'Cho verb stem alternation in these examples is very similar to that seen for Lai. K'Cho *ip* in (6) and *ih* in (8) appear cognate with Lai *ít* in (2) and *íh* in (4), and the alternation is reconstructible. But there are also differences. In (7) the third person plural agreement marker *ami* appears before the derived verb *hteih* and no *ci* or *gùi* appears after it. In (5) *ami* does not appear but *ci* and the plural *gùi* follow the verb. There is nothing comparable to this in Lai.

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[2] Ken Van Bik suggests to us that *khun* might be glossed as 'plank' or 'platform', although it doesn't occur independently.
[3] Editor's note: In the literature on South Central, this element is sometimes referred to as a relativizer or nominalizer.

2.3   Verb stem alternation: Vaiphei

In (9) the verb *tung* 'arrive' is accompanied by the third person agreement marker *a*, the directional *húng*, and the plural agreement marker *u* written together with the declarative marker *(h)i* 'this'. In (10) the verb *imú* 'sleep' is accompanied by the same third person *a*, the adverbial particle *sek* 'sometimes', and the declarative marker *hi* 'this'.

(9)   V   *gamvak-te chu gam   apat a hung   túng   ui*
              hunter-PL that jungle from 3 come   **arrive**ᴮ PL.this
              'the hunters arrived from the jungle'

(10)   V   *naupang chu   sun ah   a   imú   sek   hi*
              child   that day in   3   **sleep**ᴮ sometimes this
              'a child sometimes sleeps during the day'

In (11) the verb *túng* appears as *tùn*, conditioned syntactically by its subordinate clause construction. In (12) the verb *imú* appears as *imùt*, conditioned morphologically by *-na*, a locative relative suffix.

(11)   V   *gamvak-te   chu gam   apat   a hung tùn   phat un,*
              hunter-PL   that jungle from   3 come   **arrive**ᴰ time PL.C
              'when the hunters arrived from the jungle'

(12)   V   *imùt-na*
              sleepᴰ-LOC.REL
              'bed'

Vaiphei verb stem alternation in these examples is very similar to Lai and K'Cho. Vaiphei *túng* in (9) and *tùn* in (11) appear cognate with Lai *tlung* in (1) and *tlún* in (3), and the alternation is reconstructible. Vaiphei *-na* in (12) appears to be cognate with K'Cho *-nák* in (8). But there are also differences. In general, the morphological properties of base and derived verb forms in Vaiphei are closer to those in Lai than to those in K'Cho.

2.4   Verb stem alternation: Summary

Table 1 summarizes what we have seen so far:

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
intransitive main	B	B	B	L: 1,2; K: 5, 6; V: 9,10
intransitive subordinate	D	D	D	L: 3; K: 7; V: 11
intransitive nominalization	D	D	D	L: 4; K:8; V:12

Table 1. Verb stem alternation

3 Morphology of verb stem alternation (Lai)

Hyman and VanBik (2002) show that most Lai derived verb forms are predictable from the corresponding base forms by the following processes.

(a) If the base form ends in a sonorant (*m*, *n*, *ng*, *l*, *r*, V*i* or V*u*), then:
(i) if the base form has falling or level tone, the derived form changes to rising tone, or
(ii) if the base form has rising tone, the final sonorant is glottalized: (*mh*, *nh*, *ngh*, *lh*, *rh*, V*ih* or V*uh*) in the derived form.

(b) If the base form ends in a vowel (*a*, *i*, *e*, *o*, *u* or *aw*), then:
(i) if the base form has falling or level tone, the derived form changes to rising tone, or
(ii) if the base form has rising tone, a final obstruent (*p*, *t*, *k* or *h*) is added in the derived form.[4]

(c) If the base form ends in an obstruent, then the derived form has its final obstruent replaced by the glottal stop (*h*).

In the case of final *ng* in (a i), there is an additional change to *n*. The glides are written as vowels *i* and *u* following another vowel; the rising diphthongs which occur include *ei*, *ai*, *oi*, *awi*, *ui*, *o*, *au*, *eu* and *iu*. There seem to be no verbs with *iu*. The letter *o* is used both for the short vowel corresponding to *aw* as well as for the short diphthong corresponding to *au*. In case (b ii) there is no way to predict which final obstruent will be added. In case (c), verbs whose base form has a short vowel and ends in a glottal stop generally lack a distinct derived form since syllables of this type are restricted to rising tone. There are also a few verbs which keep a final *p*, *t* or *k*; they, too, lack a distinct derived form. Verbs in (c) with a long vowel change level to rising tone, providing the only cases of syllables of this type without level tone. Verbs whose base form ends in a glottalized sonorant also generally lack a distinct derived form. Hyman and VanBik (2002) count 910 verbs, of which 754 (over 80%) have distinct base and derived forms. K'Cho and Vaiphei verbs have not yet been studied to a comparable level, so we cannot offer an account parallel to Lai; nor can we say how or to what extent K'Cho or Vaiphei derived forms are predictable from the corresponding base forms.

4 Transitive verbs: Agentive

4.1 *Transitive verbs: Agentive, Lai*

The verbs *tlung* in (1) and *tlún* in (3) fall under case (a i), and the verbs *it* in (2) and *íh* in (4) fall under case (c). These verbs are intransitive; transitive and ditransitive verbs work somewhat differently. The verb *laáwm* 'thank' in (13) is transitive and *chút* 'seize' in (14) is ditransitive.

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[4] In fact, there appear to be no instances where a final *p* is added to form the derived form in Lai.

(13)   L   *Nu Khen nih Pa Bik a **laáwm**.*

(14)   L   *ral nih khuami kha phaisa an **chút** hna.*

(13) and (14) seem to both be simple clauses, but they are ungrammatical with the base verb forms *laáwm* and *chút*. In Lai simple transitive and ditransitive clauses, derived verb forms such as *láwmh* and *chúh* must be used, as in (15) and (16).

(15)   L   *Nu   Khen   nih   Pa Bik   a **láwmh***
                        Nu   Khen   BY   Pa Bik   3 **thank**_D
                        'Nu Khen thanked Pa Bik'

(16)   L   *ral   nih khuami kha phaisa   an   **chúh**   hna*
                        enemy   BY villager that money   3PL   **seize**_D   PL
                        'the enemies took money from the villagers by force'

Note that in (15) and (16) the subject is accompanied by the postposition *nih*. *Nih* may appear only with the subject of a transitive or ditransitive verb, and cannot appear in (1) or (2). Therefore, the clause type in (15) and (16) is termed 'agentive'. Base verb forms cannot appear in Lai agentive clauses. We will refer to *nih* as the agentive postposition and gloss it 'BY'. *Hna* in (16) marks number agreement with the indirect object *khuami* 'villagers'.

4.2   *Transitive verbs: Agentive, K'Cho*

       The K'Cho verbs *hteit* in (5), *hteih* in (7), *ip* in (6) and *ih* in (8) are intransitive. Unlike Lai (15) and (16), the K'Cho verbs *èi* 'eat' in (17) and *gut* 'seize' in (18) are transitive and base forms.

(17)   K   *Pái   noh   ng'hài   chang   neh   **èi**   ci*
                        Pai   BY   mango   pick   and   **eat**_B   NF
                        'Pai picked the mango and ate it'

(18)   K   *gà   gùi noh   pìgòk'tu   khoh   **gut**   gùi ci   gùi*
                        enemy PL BY   villagers   belonging   **seize**_B   PL NF   PL
                        'the enemies took the villagers' belongings by force'

(18), like (16), is a simple transitive clause; (17) differs from (15) in containing a conjunction, but the second clause behaves like a simple transitive. In K'Cho, derived forms are also possible in transitive clauses like (19) or (20).

(19)   K   *Pái noh   ng'hài   chang   neh   a   **ei***
                        Pai   BY   mango   pick   and   3S   **eat**_D
                        'Pai picked the mango and ate it'

(20) K *gà   gùi noh   pìgòk'tu   khoh   ami* **guh** *gùi*
          enemy PL BY   villagers   belonging 3PL **seize**ᴅ PL
          'the enemies took the villagers' belongings by force'

That *ei* in (19) and *guh* in (20) are derived is reflected in the presence of third person agreement and the absence of the tense marker *ci*, and (in the latter) the presence of the post-verbal subject plural *gùi*. (17) to (20) contain the K'Cho agentive marker *noh*, and therefore (19) and (20) correspond morphosyntactically to Lai agentive clauses as in (15) and (16). The first *gùi* in (18) and the one in (20) mark number agreement with the indirect object *pìgòk'tu* 'villagers' and correspond to Lai *hna* in (16).

K'Cho thus differs from Lai in the distribution of base and derived verb forms in transitive clauses. In Lai, the use of derived verb forms is obligatory in agentive clauses, while in K'Cho it is an option with pragmatic effects.[5] (17) and (18) are possible in K'Cho with base verb forms, but Lai has no corresponding (13) or (14). That the verbs in (17) and (18) are base forms is reflected in the absence of third person subject agreement and the presence of the non-future tense *ci* and (in the latter) the post-verbal plural subject marker *gùi*. Though (17) and (18) may refer to the same events as (19) and (20), the latter have different pragmatic implications. The former are neutral (and thus correspond pragmatically more closely to (15) and (16)), while the latter carry an implicit contrast on one major constituent (including the subject).

4.3   Transitive verbs: Agentive, Vaiphei

The Vaiphei verbs *túng* in (9), *tùn* in (11), *imú* in (10), and *imùt* in (12) are intransitive. (21) and (22), like (15), (16) and (18), are simple transitive clauses; they contain the Vaiphei agentive marker *in*, and therefore correspond morphosyntactically to Lai and K'Cho agentive clauses as in (15), (16), (17) and (18). The *u* in (22) marks number agreement with the subject *sangamante* 'fishermen'. *Tha* 'kill' in (21) and *lá* 'take' in (22) are transitive and base forms. Vaiphei verbs do not agree with their objects in number.

(21) V *Thangbawi   in   gul   a* **tha**
          Thangbawi   BY   snake 3   **kill**ʙ
          'Thangbawi killed a snake'

(22) V *sangaman-te-'n   khuami-te   bawng   a* **lá-u**
          fisherman-PL-BY   villager-PL cow   3   **take**ʙ-PL
          'the fishermen took the villagers' cow'

Like the Lai verbs in (15) and (16), and the K'Cho ones in (19) and (20), the Vaiphei verbs *thàt* 'kill' in (23) and *lak* 'take' in (24) are transitive and derived forms.

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[5] Our reviewers note that it would be desirable to have a full account of these pragmatic effects. Unfortunately these complicated details are beyond the scope of the present paper. See King 2009 for some discussion of the types of issues which may be involved.

(23)   V   *Thangbawi   in gul   a   **that** hi*
                Thangbawi BY snake 3   **kill**_D this
                'Thangbawi killed a snake'

(24)   V   *sangaman-te-'n   khuami-te   bawng a **lak**   uh*
                fisherman-PL-BY villager-PL cow   3 **take**_D PL
                'the fishermen took the villagers' cow'

Vaiphei resembles K'Cho in allowing base verb forms in agentive clauses as well as derived ones, as in (23) and (24). (21) and (22), with base forms, versus (23) and (24), with derived forms, occur under subtly different pragmatic circumstances. The use of derived verb forms in (23) and (24) has pragmatic effects just as in (19) and (20).

4.4 Transitive verbs: Agentive, summary

Again, Table 2 summarizes the observations made in this section.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
transitive agentive (agent marker)	D (*B)	B/D	B/D	L: 15, 16; K: 17-20; V: 21-4

Table 2. Transitive verbs: Agentive

5 Transitive verbs: Non-agentive

5.1 Transitive verbs: Non-agentive, Lai

Sentences like (15) and (16) do not tell the whole story of Lai transitive clauses; there are also sentences like (25) and (26). These differ from (15) and (16) in two ways: the base form of the verb appears rather than the derived form, and *nih* may not accompany the subject. They are therefore termed "non-agentive".

(25)   L   *Nu Khen Pa Bik   a   **laáwm***
                Nu Khen Pa Bik 3   **thank**_B
                'Nu Khen thanked Pa Bik'

(26)   L   *ral   khuami kha phaisa an **chút**   hna*
                enemy villager that money 3PL **seize**_B PL
                'the enemies took money from the villagers by force'

Pairs like (15) and (25) or (16) and (26) may refer to the same events, but they are not therefore synonymous or interchangeable. Agentive constructions are appropriate in a context where the subject is under consideration and non-agentive constructions are appropriate where something

other than the subject is under consideration.[6] Which version is appropriate is determined by the context. Derived verb forms may not appear in Lai non-agentive clauses:

(27)   L   *Nu Khen Pa Bik a **láwmh***

(28)   L   **ral khuami kha phaisa an **chúh** hna*

5.2   Transitive verbs: Non-agentive, K'Cho

Like Lai (25) and (26), K'Cho has non-agentive transitive clauses as in (29) and (30). Such sentences have subjects not accompanied by the agentive postposition *noh*.

(29)   K   *Pái   ng'hài   chang   neh   **èi**   ci*
                 Pai   mango   pick   and   **eat**_B NF
                 'Pai picked the mango and ate it'

(30)   K   *gà   gùi   pìgòk'tu   khoh   **gut**   gùi ci gùi*
                 enemy PL   villagers belonging **seize**_B   PL NF PL
                 'the enemies took the villagers' belongings by force'

The verbs *èi* in (29) and *gut* in (30) are base forms just as in (17) and (18). But in non-agentive clauses, derived forms may not be used, and no pragmatic effects are implied.

(31)   K   **Pái ng'hài chang neh a ei*

(32)   K   **Gà gùi pìgòk'tu khoh ami guh gùi*

In Lai the choice of base or derived verb form is linked to the distinction between agentive and non-agentive, but in K'Cho it is partially independent.

5.3   Transitive verbs: Non-agentive, Vaiphei

Like Lai (25) and (26), and K'Cho (29) and (30), Vaiphei has non-agentive transitive clauses as in (33) and (34). Such sentences have subjects not accompanied by the agentive postposition *in*.

(33)   V   *Thangbawi   gul   a   **tha***
                 Thangbawi   snake   3   **kill**_B
                 'Thangbawi killed a snake'

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[6] Editor's note: The sense in which one or another of these participants is "under consideration" may vary from language to language, but whatever the case may be, it would not appear to refer to a status such as "topic". The normal expression of highly topical participants in a language like Lai, for instance, would be by means of verbal participant coding rather than via a full NP.

(34)   V   *sangaman-te   khuami-te   bawng   a   **lá-u***
             fisherman-PL   villager -PL   cow   3   **take**_B-PL
             'the fishermen took the villagers' cow'

The verbs *tha* in (33) and *lá* in (34) are base forms just as in (21) and (22). But unlike K'Cho (29) and (30), derived forms are also possible, as in (35) and (36). The Vaiphei clauses included from (21) to (24) and (33) to (36) have distinct pragmatic effects.

(35)   V   *Thangbawi   gul   a   **that**   hi*
             Thangbawi   snake   3   **kill**_D   this
             'Thangbawi killed a snake'

(36)   V   *sangaman-te   khuami-te   bawng   a   **lak**   uh*
             fisherman-PL   villager-PL   cow   3   **take**_D   PL
             'the fishermen took the villagers' cow'

In Lai the choice of base or derived verb form is linked to the distinction between agentive and non-agentive, and in K'Cho it is partially independent, but in Vaiphei it is completely independent. (35) and (36) are possible in Vaiphei with derived verb forms, but Lai and K'Cho have no corresponding (27) and (31) (for (35)) or (28) and (32) (for (36)).

5.4   Transitive verbs: Non-agentive, summary

Table 3 provides a summary for this section.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
transitive non-agentive (no agent marker)	B (*D)	B (*D)	B/D	L: 25, 26; K: 29, 30; V: 33-6

Table 3. Transitive verbs: Non-agentive

6   Negatives

6.1   Negatives: Lai

(37) to (40) are Lai negative sentences corresponding to (1), (2), (15) and (16). Intransitive verbs as in (37) and (38) appear in negative clauses in their base form. The base forms of transitive verbs also appear if the clause is negative agentive as in (39) and (40).

Note that *laáwm* versus *láwmh* falls under case (a ii) above, and *chút* versus *chúh* falls under case (c) (see discussion in section 3). The Lai negative particle is *lo*, which follows the verb.

(37)   L   *ramvai   pawl   ramlak   in   an   hung   **tlung**   lo*
             hunter   group   jungle   from   3PL   come   **arrive**_B   not
             'the hunting party didn't return from the jungle'

(38) L   *ngakchia   cu   zan   ah   an   **ít**   tawn   lo*
            child   that night at   3PL **sleep**ᴮ sometimes not
            'children sometimes don't sleep at night'

(39) L   *Nu Khen nih Pa Bik   a   **laáwm** lo*
            Nu Khen BY   Pa Bik   3   **thank**ᴮ   not
            'Nu Khen didn't thank Pa Bik'

(40) L   *ral   nih   khuami kha   phaisa   an   **chút**   hna   lo*
            enemy BY   villager that money   3PL **seize**ᴮ PL   not
            'the enemies didn't take money from the villagers by force'

Derived verb forms may not appear in Lai agentive negative clauses.

(41) L   **Nu Khen nih Pa Bik a **láwmh** lo*

(42) L   **ral nih khuami kha phaisa an **chúh** hna lo*

It is sometimes said (originally by Kathol and Van Bik) that in clauses like (39) and (40), the influence of the negative *lo* "overrides" that of the agentive clause structure which otherwise requires a derived verb form. As shown in (25) and (26) versus (43) and (44), no such difference affects non-agentive clauses.

(43) L   *Nu Khen   Pa Bik   a   **laáwm**   lo*
            Nu Khen   Pa Bik   3   **thank**ᴮ   not
            'Nu Khen didn't thank Pa Bik'

(44) L   *ral   khuami kha   phaisa an   **chút**   hna   lo*
            enemy villager   that   money   3PL **seize**ᴮ PL   not
            'the enemies didn't take money from the villagers by force'

Derived verb forms may not appear in Lai non-agentive negative clauses.

(45) L   **Nu Khen Pa Bik a **láwmh** lo*

(46) L   **ral khuami kha phaisa an **chúh** hna lo*

6.2 Negatives: K'Cho

(47) to (50) are K'Cho negative sentences corresponding to (5), (6), (17) and (18). There is no shift from derived to base verb forms in agentive clauses, and so no "override". Note also that the K'Cho negative particle *kä* precedes the verb.

(47)   K   *hlak'yüh gùi bung   ah kä **hteit** ci gùi*
                  hunter PL jungle to not **go**_B NF PL
                  'the hunting party did not go to the jungle'

(48)   K   *ak'hmó cu k'hngǘp yah ung kä **ip**   màn   ci*
                  child   that day   time P not **sleep**_B usually NF
                  'a child usually does not sleep in the day'

(49)   K   *Pái noh ng'hài chang neh kä **èi**   ci*
                  Pai BY mango pick   and not **eat**_B NF
                  'Pai did not pick and eat the mango'

(50)   K   *gà   gùi noh pìgòk'tu khoh   kä **gut**   gùi ci   gùi*
                  enemy PL BY   villagers belonging   not **seize**_B   PL NF   PL
                  'the enemies did not take the villagers' belongings by force'

Derived verb forms may appear in K'Cho negative sentences, as in (51) and (52), with an implied pragmatic contrast on the negated action.

(51)   K   *Pái   noh ng'hài chang neh kä   a   **ei***
                  Pai BY   mango pick   and not 3S **eat**_D
                  'What Pai did not do was pick and eat the mango'

(52)   K   *gà   gùi noh pìgòk'tu khoh   kä ami **guh**   gùi*
                  enemy PL BY   villagers belonging not   3PL **seize**_D PL
                  'what the enemies did not do was take the villagers' belongings by force'

(53) and (54) represent K'Cho non-agentives.

(53)   K   *Pái ng'hài   chang neh kä **èi**   ci*
                  Pai mango pick   and not **eat**_B NF
                  'Pai did not pick and eat the mango'

(54)   K   *gà   gùi pìgòk'tu khoh   kä **gut**   gùi ci gùi*
                  enemy PL villagers belonging   not **seize**_B PL NF PL
                  'the enemies did not take the villagers' belongings by force'

As in Lai, derived verb forms may not appear in non-"derived" negative clauses.

(55)   K   **Pái ng'hài chang neh kä a **ei***

(56)   K   **Gà gùi pìgòk'tu khoh kä ami **guh** gùi*

6.3 Negatives: Vaiphei

     (57), (58), and (59) are Vaiphei negative sentences corresponding to (9), (10), and (21). As in K'Cho there is no "override" in Vaiphei "derived" negatives, but a derived verb form must be used in the negative corresponding to (21), as in (59), and a base verb form in the negative corresponding to (22), as in (60). There are no Vaiphei sentences (61) or (62). The Vaiphei negative particle is *pua*. Like Lai *lo* it follows the verb, but unlike Lai *lo*, it is not always final in the verb complex.

(57)   V   *gamvak-te chu gam apat a hung* **túng** *pua-u*
               hunter-PL that jungle from 3 come **arriveᵦ** not-PL
               'the hunters have not arrived from the jungle'

(58)   V   *naupang chu sun ah a* **imú** *sek pua-i*
               child that day in 3 **sleepᵦ** sometimes not-this
               'a child sometimes does not sleep during the day'.

(59)   V   *Thangbawi in gul a* **that** *pua-i*
               Thangbawi BY snake 3 **killᴅ** not-this
               'Thangbawi did not kill a snake'

(60)   V   *sangaman-te-'n khuami-te bawng a* **lá** *pua-u*
               fisherman-PL-BY villager-PL cow 3 **takeᵦ** not-PL
               'the fishermen did not take the villagers' cow'

(61)   V   **Sangaman-te-'n khuamite bawng a* **lak** *puau*

(62)   V   **Thangbawi in gul a* **tha** *puai*

In Vaiphei non-"derived"s we see the same phenomenon. (63), corresponding to (33), must use a derived form and (64) corresponding to (36) must use a base form. There are no sentences (65) or (66).

(63)   V   *Thangbawi gul a* **that** *pua-i*
               Thangbawi snake 3 **killᴅ** not-this
               'Thangbawi did not kill a snake'

(64)   V   *sangaman-te khuami-te bawng a* **la** *pua-u*
               fisherman-PL villager-PL cow 3 **takeᵦ** not-PL
               'the fishermen did not take the villagers' cow'

(65)   V   ** sangamante khuamite bawng a* **lak** *puau*

(66)   V   **Thangbawi gul a* **tha** *puai*

In Vaiphei there is an interaction between clause type and verb form in negative clauses, but it is quite different from that in Lai.[7]

6.4   Negatives: Summary

Table 4 summarizes our observations on negatives.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
intransitive main negative	B	B	B	L: 37, 38; K: 47, 48; V: 57, 58
transitive main negative agentive	B (*D)	B/D	D (B)	L: 39-42; K: 50-52; V: 59, 60
transitive main negative non-agentive	B (*D)	B (*D)	B/D	L: 43-46; K: 53-56; V: 63, 64

Table 4. Negatives

7   Relative clauses

7.1   Relative clauses: Lai

Lai has two types of relative clauses. Examples (67) to (69) illustrate the head-external type.

(67)   L   *ramlak in   a   hung   **tlung-***mi*   *ramvai   pawl*
             jungle from   3   come   **arrive**_B-REL   hunter   group
             'the hunting party that returned from the jungle'

(68)   L   *Pa Bik   a   **laáwm-***mi*   *ngaknu*
             Pa Bik   3   **thank**_B-REL   girl
             'the girl that thanked Pa Bik'

(69)   L   *Nu   Khen   nih   a   **láwmh-***mi*   *tlangval*
             Nu   Khen   BY   3   **thank**_D-REL   boy
             'the boy that Nu Khen thanked'

In Lai a head-external relative clause precedes its head noun and is missing one argument understood to be headed by that noun. In (67) and (68), where the head noun represents the clause subject, a base verb form appears, while in (69), where the head noun represents a clause object, a derived verb form appears. To form a relative clause whose head is the subject a non-agentive construction is used; to form a relative clause whose head is the object (or in general a non-subject) an agentive construction is used, and the verb, whether a base or derived form, takes the relative marker -*mi*.

Examples (70) to (73) illustrate the head-internal type of Lai relative clause.

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[7] Accounting for why *kill* behaves one way and *take* behaves the other way in these contexts will need to be the subject of future research on the stem alternation in Vaiphei.

(70) L *ngakchia chun   ah a **it**   tawn-mi   hna*
child   noon at 3 **sleep**_B sometimes-REL PL
'children that sometimes sleep in the day'

(71) L *ral   khuami kha phaisa   a **chút-**mi   hna*
enemy villager that money   3 **seize**_B-REL PL
'the enemies that took money from the villagers by force'

(72) L *ral   nih   khuami that   phaisa   a **chúh-**mi   hna*
enemy BY villager that   money   3 **seize**_D-REL PL
'the villagers that the enemies took money from by force'

(73) L *ral   nih khuami kha phaisa   a **chúh-**mi*
enemy BY villager that money   3 **seize**_D-REL
'the money that the enemies took from the villagers by force'

In a head-internal relative clause the head noun is located in its natural position within the clause. The verb is marked with *-mi*, but there is no following overt head noun. Nevertheless, either the subject or an object is understood to be the head noun, and the corresponding head-external and head-internal clauses are equivalent. The agentive versus non-agentive distinction applies in head-internal clauses just as in head-external ones. *Hna* in (70), (71) and (72) is not inside the clause, but marks the head noun as plural. Note also that in a relative clause, the person agreement of the clause verb is neutralized to third singular. Plurality may be indicated on the external head.

It is possible for the head noun position in a head-external relative to be empty; in that case the relative clause has no overt head. Examples are as in (74) to (77).

(74) L *chun ah a **it**   tawn-mi*
noon at 3 **sleep**_B sometimes-REL
'one that sometimes sleeps in the day'

(75) L *khuami   kha phaisa   a **chút-**mi   hna*
villager that money   3 **seize**_B-REL PL
'the ones that took money from the villagers by force'

(76) L *ral   nih   phaisa   a **chúh-**mi   hna*
enemy BY   money   3 **seize**_D-REL PL
'the ones that the enemies took money from by force'

(77) L *ral   nih   khuami kha a **chúh-**mi*
enemy BY   villager that 3 **seize**_D-REL
'what the enemies took from the villagers by force'

The distribution of base and derived verb forms is the same as in head-external or head-internal relative clauses.

7.2   *Relative clauses: K'Cho*

K'Cho has head-external relative clauses as illustrated in (78) to (80). Just as in Lai, if the head of the relative clause is its subject, the verb is in the base form as in (78) and (79). If the head of the relative clause is an object, the verb is in the derived form as in (80).

(78)   K   *bung   ah **hteit** zop ci   gùi ah hlak'yüh gùi*
                jungle P **go**_B all NF PL P hunter PL
                'the hunters that all went into the jungle'

(79)   K   *ng'hài   chang neh **èi**   ci ah k'hngumihtá*
                mango   pick   and **eat**_B NF P girl
                'the girl that picked and ate the mango'

(80)   K   *Pái noh chang neh   a **ei**   ah ng'hài*
                Pai BY pick   and 3S **eat**_D P mango
                'the mango that Pai picked and ate'

The final plural marker *gùi* in (78) does not belong to the relative clause but marks the number of the external head. The *ah* at the end of these relative clauses (the second one in (78)) is not a relative marker like Lai *-mi*, but a postposition serving to link a modifier to the head noun.

K'Cho does not have head-internal relative clauses; thus there are no examples (81) to (84).

(81)   K   **ak'hmó cu k'hngǘp yah ung ip màn ci*
                'a child that usually sleeps during the day'

(82)   K   **gà gùi noh pìgòk'tu khoh gut gùi ci gùi*
                'the enemies that took the villagers' belongings by force'

(83)   K   **gà gùi noh pìgòk'tu khoh ami guh gùi*
                'the villagers whose belongings the enemies took by force'

(84)   K   **gà gùi noh pìgòk'tu khoh ami guh gùi*
                'the villagers' belongings that the enemies took by force'

These phrases are ungrammatical only in the relative clause readings. Because K'Cho has no relative marker (the use of *ah* requires an overt head noun) they are grammatical as main clauses; (81), (82), and (83) have already appeared as (6), (18) and (20).

K'Cho does have headless relative clauses, in which the external head noun position is empty, as illustrated in (85) to (88). The distribution of base and derived verb forms here is the same as in head-external relative clauses, and the distribution in K'Cho is the same as in Lai.

(85)   K   *k'hngǘp yah ung **ip**   màn ci   cuh*
                day   time P **sleep**_B usually NF   that
                'one that usually sleeps during the day'

(86) K   *pìgòk'tu   khoh   **gut**   gùi ci gùi cuh*
           villagers   belonging   **seize**_B   PL NF PL that
           'the ones that took the villagers' belongings by force'

(87) K   *gà   gùi noh   khoh   ami **guh**   gùi cuh*
           enemy PL BY   belonging   3PL **seize**_D   PL that
           'the ones whose belongings the enemies took by force'

(88) K   *gà   gùi noh   ami **guh**   gùi cuh*
           enemy PL BY   3PL **seize**_D   PL that
           'what the enemies took by force'

Because K'Cho noun phrases may be freely omitted in context, headless relatives are indistinguishable out of context from main clauses. A main clause reading can be excluded by using *cuh*, a deictic particle. The reading given for (86) is clear without *cuh* in a full sentence such as: *(K'hngǘp yah ung ip màn ci) ka hmat ci.* 'I know (one that usually sleeps during the day)'.

7.3   *Relative clauses: Vaiphei*

Vaiphei has head-external relative clauses as illustrated in (89) to (91). If the head of the relative clause is the subject of an intransitive verb, the verb appears in the base form as in (89); this is the same as in Lai and K'Cho. If the head of the relative clause is the subject of a transitive verb, the verb appears in the derived form as in (90). If the head of the relative clause is an object as in (91), the verb may appear either in the base or derived form. The behavior of base and derived verb forms in transitive relative clauses is thus quite different from Lai or K'Cho. Vaiphei has no relative clause marker like Lai *-mi*, and does not use any linker like K'Cho *ah*.

(89) V   *gam   apat (a) hung   **túng**   gamvak-te*
           jungle from (3) come   **arrive**_B   hunter-PL
           'the hunters that have arrived from the jungle'

(90) V   *gul   (a) **that**   naupang*
           snake   (3) **kill**_D   boy
           'the boy that killed a snake'

(91) V   *Thangbawi   (in) (a) **tha(t)**   gul*
           Thangbawi   (BY) (3) **kill**_{B(D)}   snake
           'the snake that Thangbawi killed'

Further differences appear in (89) to (91). In all three clauses, the third person subject agreement marker may be omitted in casual speech, and in (91) the agentive postposition *in* may also (and independently) be omitted. The choice of base or derived form in (91) has pragmatic effects as in earlier examples.

Like Lai and unlike K'Cho, Vaiphei has head-internal relatives illustrated in (92) to (95).

The choice of verb forms and omission of agreement and/or the agentive postposition are the same in head-internal as in head-external relative clauses.

(92)　V　　　*chapang sun　ah　(a)* **imú**　*sek*　　　*kha*
　　　　　　　child　　day　in　(3) **sleep**~B~ sometimes　that
　　　　　　　'a child that sometimes sleeps during the day'

(93)　V　　　*sangaman-te (-'n)*　　*khuami-te　bawng (a)* **lak**　*uh　chu*
　　　　　　　fisherman-PL(-BY)　villager-PL　cow　(3) **take**~D~　PL　that
　　　　　　　'the fishermen that took the villagers' cow'

(94)　V　　　*sangaman-te (-'n)*　　*khuami-te　　bawng (a)* **lá(k)**　*u(h)　(chu)*
　　　　　　　fisherman-PL(-BY)　villager-PL　cow　(3) **take**~B(D)~ PL　　that
　　　　　　　'the villagers whose cow the fishermen took'

(95)　V　　　*sangaman-te (-'n)*　　*khuami-te　　bawng (a)* **lá(k)**　*u(h)　(chu)*
　　　　　　　fisherman-PL(-BY)　villager-PL　cow　(3) **take**~B(D)~ PL　　that
　　　　　　　'the villager's cow that the fishermen took'

Sets of examples like (93) to (95) can be recognized as relative clauses and distinguished only by context; particularly with (94) and (95) judgements are difficult. A following deictic *kha* 'that (near you)' or *chu* 'that' will exclude a main clause reading as with K'Cho (85) to (88). *Chu* can be used in (94) and (95) only if the verb shows a derived form. Note that the variation in the plural marker between *u* and *uh* is an orthographic matter rather than an independent parameter.

Like Lai and K'Cho, Vaiphei has headless relative clauses, illustrated in (96) to (99). Like head-internal relatives, headless relatives lack any marking as such; they may be distinguished from main clauses by a deictic like *kha* or *chu.*

(96)　V　　　*sun　ah　(a)* **imú**　*sek*　　　*kha*
　　　　　　　day　in　(3) **sleep**~B~ sometimes that
　　　　　　　'one that sometimes sleeps during the day'

(97)　V　　　*khuami-te　bawng (a)* **lak**　*uh　chu*
　　　　　　　villager-PL cow　(3) **take**~D~ PL　that
　　　　　　　'the ones that took the villagers' cow'

(98)　V　　　*sangaman-te(-'n)*　　　*bawng　(a)* **lá(k)**　*u(h)　(chu)*
　　　　　　　fisherman-PL(-BY)　　cow　(3) **take**~B(D)~ PL　　that
　　　　　　　'the ones whose cow the fishermen took'

(99)　V　　　*sangaman-te(-'n)*　　*(a)* **lá(k)**　*u(h)　(chu)*
　　　　　　　fisherman-PL(-BY)　(3) **take**~B(D)~　PL　　that
　　　　　　　'what the fishermen took'

The choice of verb form in headless relatives is the same as in head-external or head-internal relatives. In (98) and (99) *chu* cannot follow *lá u*.

7.4   Relative clauses: Summary

Table 5 summarizes the observations made in this section.

phenomenon/construction		Lai	K'Cho	Vaiphei	illustrative examples
head-external relative	**S**	B	B	B	L: 67; K: 78; V: 89
	A	B	B	D	L: 68; K: 79; V: 90
	P	D	D	B/D	L: 69; K: 80; V: 91
head-internal relative	**S**	B	n/a	B	L: 70; V: 92
	A	B	n/a	D	L: 71; V: 93
	P (non-S/A)	D	n/a	B/D	L: 72, 73; V: 94, 95
headless relative	**S**	B	B	B	L: 74; K: 85; V: 96
	A	B	B	D	L: 75; K: 86; V: 97
	P (non-S/A)	D	D	B/D	L: 76, 77; K: 87, 88; V: 98, 99

Table 5. Relative clauses[8]

8   Polar questions

8.1   Polar questions: Lai

Lai polar questions, formed by placing the interrogative marker *maw* after the verb, are illustrated in (100) to (106). Just as in negative sentences like (37) to (40), Lai verbs appear in their base form whether transitive or intransitive.

(100) L *Ngakchia cu   chun   ah   an **ít**   tawn   maw?*
           child   that noon at 3PL **sleep**_B sometimes Q
           'do children sometimes sleep in the day?'

And transitive verbs may take an agentive construction as in (101) or a non-agentive construction as in (102).

(101) L *Nu Khen   nih   Pa Bik   a **laáwm**   maw?*
           Nu Khen   BY   Pa Bik   3 **thank**_B   Q
           'did Nu Khen thank Pa Bik?'

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[8] In this and later tables, following conventions proposed in Payne 1997, S refers to the single participant associated with an intransitive verb. A is the more active or more agent-like participant in a transitive event, while P is the less active or less agent-like participant in a transitive event.

(102) L   *Nu Khen Pa Bik   a **laáwm**   maw?*
            Nu Khen   Pa Bik   3 **thank**ᴮ   Q
            'did Nu Khen thank Pa Bik?'

The interrogative marker *maw*, like the negative *lo*, "overrides" the requirement of a derived verb form in agentive constructions.

   Maw is not confined to final position, but may instead be attached to noun phrases or postpositional phrases to focus the interrogation. (103) to (106) illustrate this possibility. If *maw* is attached to an intransitive subject, the verb appears in its derived form as in (103); if it is attached to anything other than the subject within the clause, the verb appears in its base form as in (104).[9]

(103) L   *ramvai   pawl   maw ramlak in   an   hung   **tlún?***
            hunter   group Q   jungle from   3PL   come   **arrive**ᴅ
            'was it the hunting party that returned from the jungle?'

(104) L   *ramvai   pawl   ramlak in   maw an   hung   **tlung?***
            hunter   group jungle from Q   3PL   come   **arrive**ᴮ
            'was it from the jungle that the hunting party returned?'

If *maw* is attached anywhere within a transitive clause, the verb will appear in its derived form, as in (105) and (106).

(105) L   *ral   nih maw khuami   kha phaisa   an   **chúh**   hna?*
            enemy BY Q   villager that money   3PL   **seize**ᴅ PL
            'was it the enemies that took money from the villagers by force?'

(106) L   *ral   nih   khuami   kha maw phaisa   an   **chúh**   hna?*
            enemy BY   villager that Q   money   3PL   **seize**ᴅ PL
            'was it the villagers that the enemies took money from by force?'

Thus *maw* seems to have a reverse "override" effect in (105) and (106) versus (104). The behavior of *maw* within questions has been overlooked in the literature.

8.2 Polar questions: K'Cho

   K'Cho has polar questions like (107) to (113), and just as in Lai, they are formed by placing a marker at the end, and the verb appears in its base form. The K'Cho marker is *ang* and it is not restricted to polar questions.

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[9] Editor's note: Some Lai speakers prefer to use the base form in (103) and the derived form in (104). Although variation for a given language in terms of the distribution of stem alternants is not a consideration in this paper, it seems unlikely that stem alternation is immune to variation, just as most, if not all, other aspects of language are subject to it.

(107) K   *ak'hmó cu   k'hngǔp yah ung **ip**   mǎn   ci   ang?*
                child   that   day   time P   **sleep**_B usually NF Q
                'does a child usually sleep in the day?'

And transitive verbs may take an agentive construction as in (108) or a non-agentive construction as in (109).

(108) K   *Pái noh ng'hài chang neh **èi**   ci   ang?*
                Pai BY mango pick   and **eat**_B NF Q
                'did Pai pick the mango and eat it?'

(109) K   *Pái ng'hài chang neh **èi**   ci   ang?*
                Pai mango pick   and **eat**_B NF Q
                'did Pai pick the mango and eat it?'

Like Lai *maw*, K'Cho *ang* may be attached within a clause, as illustrated in (110) to (113). The verb in such clauses always appears in a derived form, even (111), corresponding to a Lai base form.

(110) K   *hlak'yüh   gùi ang bung   ah ami **hteih** zop?*
                hunter   PL Q   jungle P 3PL **go**_D all
                'was it the hunters that all went into the jungle?'

(111) K   *hlak'yüh gùi bung   ah ang ami **hteih** zop?*
                hunter   PL jungle P   Q   3PL **go**_D all
                'was it into the jungle that the hunters all went?'

(112) K   *gà   gùi noh ang pìgòk'tu khoh   ami **guh**   gùi?*
                enemy PL BY Q   villagers belonging   3PL **seize**_D PL
                'was it the enemies that took the villagers' belongings by force?'

(113) K   *gà   gùi noh pìgòk'tu   ang khoh   ami **guh**   gùi?*
                enemy PL BY villagers Q   belonging   3PL **seize**_D PL
                'was it the villagers whose belongings the enemies seized by force?'

8.3 *Polar questions: Vaiphei*

Vaiphei has polar questions like (114) to (120), and as in Lai and K'Cho, they are formed by placing a marker after the verb. Intransitive verbs appear in the base form as in (114). One such Vaiphei marker is *em*, and as with K'Cho *ang*, it is not restricted to polar questions.

(114) V   *naupang chu sun ah a **imú**   sek   em?*
                child   that day P 3 **sleep**_B sometimes Q
                'does a child sometimes sleep during the day?'

Transitive verbs may take an agentive construction as in (115) or a non-agentive construction as in (116), but in either case, unlike Lai or K'Cho, the verb appears in the derived form.

(115) V   *Thangbawi in gul a **that** em?*
    Thangbawi BY snake 3 **kill**_D Q
    'did Thangbawi kill a snake?'

(116) V   *Thangbawi gul a **that** em?*
    Thangbawi snake 3 **kill**_D Q
    'did Thangbawi kill a snake?'

Like Lai *maw* and K'Cho *ang*, Vaiphei *em* may be attached within a clause, as illustrated in (117) to (120). But in such cases, it takes the form *ahem*, which appears to contain the copula *ahi*.

(117) V   *gamvak-te ahem gam apat a hung **túng** uh?*
    hunter-PL Q jungle from 3 come **arrive**_B PL
    'was it the hunters that arrived from the jungle?'

(118) V   *gamvak-te gam apat ahem a hung **túng** uh?*
    hunter-PL jungle from Q 3 come **arrive**_B PL
    'was it from the jungle that the hunters arrived?'

(119) V   *sangaman-te-'n ahem khuami-te bawng a **lá(k)** u(h)?*
    fisherman-PL-BY Q villager-PL cow 3 **take**_{B(D)} PL
    'was it the fishermen that took the villagers' cow?'

(120) V   *sangaman-te-'n khuami-te bawng ahem a **lá(k)** u(h)?*
    fisherman-PL-BY villager-PL cow Q 3 **take**_{B(D)} PL
    'was it the villagers' cow that the fishermen took?'

Attachment within a clause has no effect on the verb form in Vaiphei. *Ahem* cannot be attached to *khuamite* 'villagers', perhaps because it must be understood as genitive rather than an indirect object as in (106) and (113).

8.4 Polar questions: Summary

Table 6 provides a summary on polar questions.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
polar question with final particle	B	B	B/D	L: 100-2; K: 107-9; V: 114-6
polar question, non-final particle S	D	D	B	L: 103; K: 110; V: 117
A	D	D	B/D	L: 105; K: 112; V: 119
P[10]	D	D	B/D	L: 106; K: 113; V: 120
non-S/A	B	D	B	L: 104; K: 111; V: 118

Table 6. Polar questions

9 Content questions

9.1 Content questions: Lai

Lai content questions are illustrated in (121) to (132). Such questions contain an interrogative word or phrase such as *ahodah* 'who?' or *zeidah* 'what?'. These are composed of an interrogative *aho* or *zei* and a separable scope marker *dah*. The base form of an intransitive verb is used when the subject is questioned, as in (121) and (122).

(121) L   *ahodah   ramlak in   an   hung   **tlung**?*
         who.QS   jungle from   3PL   come   **arrive**_B
         'who returned from the jungle?'

(122) L   *ahodah   chun   ah   an   **it**   tawn?*
         who.QS   noon   at   3PL   **sleep**_B sometimes
         'who sometimes sleeps in the day?'

(123) L   **ahodah ramlak in an hung **tlún**?*

(124) L   **ahodah chun ah an **íh** tawn?*

In transitive sentences like (125) and (126), where it is the subject which is questioned, a derived verb form appears; in (129) and (130), where it is an object which is questioned, a base verb form appears. To question the subject an agentive construction is used; to question an object (or in general a non-subject) a non-agentive construction is used. In the former case the agentive marker *nih* is enclosed by the interrogative *aho ... dah*.

(125) L   *aho   nih dah   Pa   Bik   a   **láwmh**?*
         who   BY   QS   Pa   Bik   3   **thank**_D
         'who thanked Pa Bik?'

---

[10] In the examples cited here, there is another P-like participant present in the clause; the pattern shown here holds for the animate P participant in each instance.

(126) L   *aho nih dah khuami   kha phaisa an **chúh**   hna?*
            who BY QS villager that money 3PL **seize**_D PL
            'who took money from the villagers by force?'

(127) L   **aho nih dah Pa Bik a **laáwm**?*

(128) L   **aho nih dah khuami kha phaisa an **chút** hna?*

(129) L   *Nu Khen   ahodah   a   **laáwm**?*
            Nu Khen who.QS 3   **thank**_B
            'who did Nu Khen thank?'

(130) L   *ral   ahodah phaisa   an   **chút**   hna?*
            enemy who.QS money 3PL **seize**_B PL
            'who did the enemies take money from by force?'

(131) L   **Nu Khen ahodah a **láwmh**?*

(132) L   **ral ahodah phaisa an **chúh** hna?*

9.2 *Content questions: K'Cho*

        K'Cho content questions are illustrated in (133) to (144). They contain an interrogative word or phrase such as *u* 'who?' or *i* 'what?' and a scope marker *ang*. Like Lai *dah*, *ang* is located at the end the interrogative noun phrase or postpositional phrase. When the subject of an intransitive verb is questioned the verb may appear in the base form as in (133) and (134).

(133) K   *u   gùi ang bung   ah **hteit** ci gùi?*
            who PL Q   jungle to **go**_B NF PL
            'who went to the jungle?'

(134) K   *u   cun ang k'hngǘp yah ung **ip**   màn   ci?*
            who that Q   day   time   P **sleep**_B usually NF
            'who usually sleeps in the day?'

But unlike Lai, the derived form may also appear as in (135) and (136).

(135) K   *u   gùi ang bung ah ami **hteih**?*
            who PL Q   jungle to 3PL **go**_D
            'who went to the jungle?'

(136) K   *u   cun ang k'hngǘp yah ung   a   **ih**   màn?*
       who that Q   day   time P   3S **sleep** usually
       'who usually sleeps in the day?'

In these examples, as in some earlier ones, the use of the derived verb form has pragmatic effects.
    When the subject of a transitive verb is questioned, the verb appears in its derived form as in (137) and (138).

(137) K   *u   noh ang ng'hài   chang neh   a   **ei**?*
       who BY Q   mango pick   and 3S **eat**
       'who picked and ate the mango?'

(138) K   *u   gùi noh ang pìgòk'tu   khoh   ami **guh**   gùi?*
       who PL BY Q   villagers   belonging 3PL **seize** PL
       'who took the villagers' belongings by force?'

If a base form appears, the subject cannot be understood as an interrogative, but as indefinite.

(139) K   *u noh ang ng'hài chang neh   èi ci*
       'someone picked and ate the mango'

(140) K   *u gùi noh ang pìgòk'tu khoh gut gùi ci gùi*
       'some people took the villagers' belongings'

Notice that in cases like (137) to (140), the interrogative *u … ang* 'who?' encloses the plural marker and the agentive postposition.
    When an object of a transitive verb is questioned, the verb also appears in the derived form as in (143) and (144). (141) and (142) are not possible as content questions, though they can have an indefinite reading.

(141) K   *Pái noh i ang chang neh èi ci*
       'Pai picked and ate something'

(142) K   *gà gùi noh i ang gut gùi ci gùi*
       'the enemies took something by force.

(143) K   *pái noh i   ang chang neh a   **ei**?*
       Pai BY   what? QS   pick   and 3   **eat**
       'what did Pai pick and eat?'

(144) K   *gà   gùi noh i   ang ami **guh**   gùi?*
       enemy PL BY   what? QS   3PL **seize** PL
       'what did the enemies take by force?'

9.3 Content questions: Vaiphei

Vaiphei content questions are illustrated in (145) to (156). They contain an interrogative word or phrase such as *kua* 'who?' or *bang* 'what?' and a scope marker *ahem*. Like Lai *dah* and K'Cho *ang*, *ahem* is located at the end the interrogative noun phrase or postpositional phrase. When the subject of an intransitive verb is questioned the verb may appear in the base form as in (145) and (146), but the derived form may also appear with pragmatic effects, as in (147) and (148).

(145) V *kua ahem gam ah a **túng**?*
who QS jungle P 3 **arrive**$_B$
'who arrived in the jungle?'

(146) V *kua ahem sun ah khan a **imú** sek?*
who QS day P that 3 **sleep**$_B$ sometimes
'who sometimes sleeps during the day?'

(147) V *kua ahem gam ah a **tùn**?*
who QS jungle P 3 **arrive**$_D$
'who arrived in the jungle?'

(148) V *kua ahem sun ah khan a **imùt** sek?*
who QS day P that 3 **sleep**$_D$ sometimes
'who sometimes sleeps during the day?'

When the subject of a transitive verb is questioned, the verb appears in its derived form as in (149) and (150).

(149) V *kua(-'n) ahem gul (a) **thàt**?*
who-(BY) QS snake (3) **kill**$_D$
'who killed a snake?'

(150) V *kua-te(-'n) ahem khuami-te bawng (a) **lak** (uh)?*
who-PL-(BY) QS villager-PL cow (3) **take**$_D$ (PL)
'who took the villagers' cow?'

(149) and (150) may be shortened as shown, but the base form cannot appear.

(151) V **Kua('n) ahem gul (a) **tha**?*

(152) V **Kuate('n) ahem khuamite bawng (a) **lá(u)**?*

When an object of a transitive verb is questioned, the verb may appear in the base form as in (153) and (154), but it may also appear in the derived form as in (155) and (156).

(153) V   *Thangbawi (in) bang ahem a **tha**?*
         Thangbawi (BY) what QS   3   **kill**ᴮ
         'what did Thangbawi kill?'

(154) V   *sangaman-te(-'n)   bang a **lá**-u   em?*
         fisherman-PL-(BY)   what 3 **take**ᴮ-PL   Q
         'what did the fishermen take?'

(155) V   *Thangbawi (in)   bang ahem a **thàt**?*
         Thangbawi (BY)   what QS   3   **kill**ᴅ
         'what did Thangbawi kill?'

(156) V   *sangaman-te(-'n)   bang ahem a **lak** uh?*
         fisherman-PL-(BY) what QS   3   **take**ᴅ PL
         'what did the fishermen take?'

The Vaiphei scope marker *ahem*, unlike Lai *dah* or K'Cho *ang* may also appear as *em* at the end of a content question. In that case, as in K'Cho (139) to (142), *kua* or *bang* will have an indefinite reading, but not an interrogative one. There are pragmatic differences depending on where *ahem* appears, but this does not affect the choice of verb form.

9.4 Content questions: Summary

A summary regarding content question formation is given in Table 7.

phenomenon/construction		Lai	K'Cho	Vaiphei	illustrative examples
content question	S	B (*D)	B/D	B/D	L: 121-124; K: 133-6; V: 145-8
	A	D (*B)	D	D (*B)	L: 125-128; K: 137-8; V: 149-152
	P	B (*D)	D	B/D	L: 129-132; K: 143, 144; V: 153-6

Table 7. Content questions

10 Imperatives

10.1 Imperatives: Lai

In Lai, imperative sentences (including first and third person "imperatives") have a verb in its base form, whether intransitive or transitive, as in (157) to (160). With transitive verbs, this is another instance of "override".

(157) L   *Pa Bik **laáwm** tuah*
         Pa Bik **thank**ᴮ do
         'please thank Pa Bik'

(158) L   *Pa Bik*   **laáwm**   *u*   *sih*
             Pa Bik   **thank**_B   PL   IMP
             'let's thank Pa Bik'

(159) L   *khuami*   *kha*   *phaisa* **chút**   *hna*   *hlah*   *u*
             villager   that   money   **seize**_B   PL   don't   PL
             'don't take money by force from the villagers'

(160) L   *ral*   *nih*   *khuami*   *kha*   *phaisa* **chút**   *hna*   *hlah*   *seh*
             enemy   BY   villager   that   money   **seize**_B   PL   don't   IMP
             'let the enemies not take money by force from the villagers'

In (157) *tuah*, itself the base form of a verb meaning 'do', makes a command into a request. In (158) *u sih* is a first person plural imperative marker. In (159) and (160) *hlah* is a negative imperative (i.e., prohibitive) marker. In (159) (and, actually, in (158)) *u* is the imperative subject number agreement marker. And in (160) *seh* is a third person imperative marker. Lai imperatives do not use the subject person and number agreement markers seen in declarative sentences or questions.

10.2 Imperatives: K'Cho

     K'Cho has "direct" imperatives which always appear with the base form of the verb, as in (161) to (164).

(161) K   **hteit**   *ä*
             go_B   IMP
             '(you) go!'

(162) K   *ip*   *vä*
             sleep_B   PL.IMP
             '(you) go to sleep!'

(163) K   *bung*   *ah*   **hteit** *zop*   *vä*
             jungle   P   **go**_B   all   PL.IMP
             'all of you go into the jungle!'

(164) K   *pìgòk'tu*   *khoh*   *kä*   **gut**   *u*   *hlä*
             villager   belonging   not   **take**_B   PL   3.IMP
             'let them not take the villagers' belongings'

In these imperatives there is an imperative marker *ä* which takes a plural *u* in (162) to (164). The negative marker in imperatives is the same as in other moods.[11]

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[11] Editor's note: It would seem that the *u* plural marker manifests itself as the *v* in *vä* 'PL.IMP'. The imperative marker is presumably absent in (164), which contains a dedicated prohibitive marker, *hlä*, known from cognate morphology in other South Central languages (e.g., Lai *hlah*.)

There is also a K'Cho "indirect" imperative with the particle *vai* 'must' and the verb in the derived form, as in (165) to (168).

(165) K   *na* **hteih** *vai*
            2S **go**_D must
            'you must go'

(166) K   *kä*   *na* **ih**   *vai*
            not 2S **sleep**_D must
            'you must not go to sleep'

(167) K   *hlak'yüh*   *gùi*   *bung*   *ah*   *ami*   **hteih** *zop vai*
            hunter   PL   jungle   P   3PL   **go**_D   all   must
            'the hunters must all go into the jungle'

(168) K   *gà*   *gùi noh*   *pìgòk'tu*   *khoh*   *kä*   *ami* **guh**   *gùi vai*
            enemy PL BY   villager   belonging   not   3 PL   **seize**_D   PL   must
            'the enemies must not take the villagers' belongings by force'

These imperatives have the usual person agreement seen with derived forms.

10.3 Imperatives: Vaiphei

Vaiphei has an imperative marker *in* seen in (169), (171), and (172), which loses its vowel in (171) and (172).

(169) V   **chia** *in*
            go_B IMP
            'go!'

(170) V   *va-***imú**   *hiti*
            DIR-**sleep**_B   1PL.IMP
            'let's go to sleep'

(171) V   *gul*   **that**   *kin*
            snake   **kill**_D   not.IMP
            'don't kill snakes!'

(172) V *khuami-te   bawng **lá-u**   hen*
       villager-PL   cow   **take**ᵦ-PL   3.IMP
       'let them take the villagers' cow'

Vaiphei imperatives are in the base form except for the negative, which requires a derived form as in (171). There is a different imperative marker for the first person plural, *hiti*, as in (170). The usual subject person agreement markers are not used.

10.4 Imperatives: Summary

Table 8 summarizes our observations on imperatives and prohibitives.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
imperative	B	B (D)	B	L: 157-8; K: 161-3; V:169-70
prohibitive	B	B	D	L: 159; K: 164; V: 171

Table 8. Imperatives

11   Reflexives and reciprocals

11.1 Reflexives and reciprocals: Lai

In reflexive and reciprocal constructions, Lai transitive verbs appear in the base and not the derived form, as illustrated in (173) to (176).

(173) L *Nu Khen   aa   **laáwm***
      Nu Khen   3.RR   **thank**ᵦ
      'Nu Khen thanked herself'

(174) L *Nu Khen   amah le amah   aa   **laáwm***
      Nu Khen   herself   3.RR **thank**ᵦ
      'Nu Khen thanked herself'

(175) L *Nu Khen   leh   Pa Bik   an   i   **laáwm***
      Nu Khen   and   Pa Bik   3PL   RR   **thank**ᵦ
      'Nu Khen and Pa Bik thanked each other'

(176) L *ral   leh   khuami   phaisa   an   i   **chút***
      enemy   and   villager   money   3PL   RR   **seize**ᵦ
      'the enemies and the villagers took money by force from each other'

Lai reflexives and reciprocals are formed with a reflexive and reciprocal marker *i*, located in the object agreement marker position. It combines with the *a* of a preceding subject agreement marker into *aa*, as in (173) and (174). It may seem that the exclusive use of base stem forms could be

explained by taking reflexives and reciprocals to be intransitive. This is consistent with the absence of the agentive *nih*, but it is not consistent with reflexive and reciprocal pronouns like *amah leh amah* 'herself' in (174), which appear in an object position. Reflexive and reciprocal constructions (like English) are morphosyntactically transitive even if semantically intransitive. But the verb form might be attributed to such clauses being non-agentive.

11.2 *Reflexives and reciprocals: K'Cho*

K'Cho reflexives and reciprocals as in (177) to (180) are quite different from those in Lai. The basic marker is a nasal prefix *ng'-* on the verb, which always appears in the base form.

(177) K   *k'hngumihtá   cu   a k'khéi ung   gui   òn   ng'-khit   ci*
           girl   that   3 waist   LOC   rope   with   self-**tie**$_B$ NF
           'the girl tied a rope around her (own) waist'

(178) K   *k'pámihtá   lah   k'hngumihtá gui   òn   ng'-khit   tu   kyu   ci goi*
           boy   and   girl   rope with self-**tie**$_B$ also   RECIP   NF D
           'the boy and the girl tied each other up with a rope'

(179) K   *hlak'yüh   cu   amät   ah hlehnget òn   ng'-káp   ci*
           hunter   that himself of gun   with   self-**shoot**$_B$ NF
           'the hunter shot himself with his own gun'

(180) K   *gàkáp gùi   lah   gà   gùi   cu   ng'-káp   ci gùi*
           soldier PL   and   enemy PL   that self-**shoot**$_B$ NF PL
           'the soldiers and the enemy shot one another'

The derived forms of *khit* 'tie' and *káp* 'shoot' are *khih* and *kah*, but neither may take *ng'-*. Nor do they take a reflexive pronoun, which shows that in K'Cho, unlike Lai, reflexive and reciprocals are morphosyntactically intransitive. The *tu kyu* sequence in (178) specifies the sentence as reciprocal rather than reflexive. Without it, the sentence could also be glossed 'the boy and the girl tied themselves up with a rope'.

There is an alternative K'Cho reflexive or reciprocal construction, illustrated in (181) to (184). In these, there is no prefix *ng'-*, but there is a reflexive or reciprocal pronoun (*amät* and *tumat*, respectively).

(181) K   *k'hngumihtá   cu   a k'khéi ung   gui   òn   amät noh amät **khit** ci*
           girl   that 3 waist   LOC   rope with her   BY   her   **tie**$_B$ NF
           'the girl tied a rope around her (own) waist'

(182) K   *k'pámihtá   lah   k'hngumihtá   gui   òn   tumat noh   tumat **khit** ci*
           boy   and   girl   rope with one   BY   one   **tie**$_B$ NF
           'the boy and the girl tied each other up with a rope'

(183) K   *hlak'yüh*   *cu*   *hlehnget* *òn*   *amät* *noh*   *amät*   ***káp***   *ci*
           hunter   that   gun   with him   BY   him   **shoot**ₐ NF
           'the hunter shot himself with a gun'

(184) K   *gàkáp* *gùi* *lah*   *gà*   *gùi*   *cu*   *tumat* *noh*   *tumat*   ***káp***   *hleih …*
           soldier PL and   enemy PL   that one   BY   one   **shoot**ₐ and
           'the soldiers and the enemy shot one another, and …'

These examples use the base form, but derived forms are also possible.

11.3 *Reflexives and reciprocals: Vaiphei*

       Vaiphei reflexives and reciprocals are illustrated in (185) to (188). It has a reflexive and reciprocal marker *ki-* which is prefixed to the verb.

(185) V   *ama leh ama*   *meithal* *in*   *a*   *ki-**thàt***   *hi*
           himself   gun   with   3   RR-**kill**ᴅ   this
           'he killed himself with a gun'

(186) V   *kei*   *a*   *ding*   *ka*   *va*   *ki-**lak***   *ahi*
           I   GEN   for   1   DIR   RR-**take**ᴅ   3-be
           'I took it for myself'

The verb may have a derived form as in (185) and (186), or a base form as in (187) and (188). There are reflexive and reciprocal pronouns (*ama leh ama* and *amau leh amau*, respectively, as illustrated in (185) and (188).

(187) V   *gamvak-te*   *chu*   *gam*   *ah*   *a*   *ki-**mú**-tua*   *ui*
           hunter-PL   that jungle in   3   RR-**meet**ₐ-RECIP   PL-this
           'the hunters met each other in the jungle'

(188) V   *amau leh amau*   *van*   *a*   *ki-**lá**-tu-u*
           each other   things   3   RR-**take**ₐ-RECIP-PL
           'they took things from each other'

Reciprocals may be distinguished from plural reflexives by the marker *-tu(a)* suffixed to the verb in (187) and (188).

11.4 *Reflexives and reciprocals: Summary*

       Table 9 summarizes.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
reflexive and reciprocal	B	B(B/D)	D or B	L: 173-6; K: 177-80ff.; V: 185-8

Table 9. Reflexives and reciprocals

12 Adverbial clauses

12.1 Adverbial clauses: Lai

Examples (3) and (189) to (192) illustrate Lai adverbial clauses. There are several types of such clauses, of which the most common are postpositional phrases containing a noun phrase whose head noun is relational. These include (3) with the head noun *hlan* 'before' and (189) with the head noun *tik* 'time'.

(189) L   *ramvai   pawl   ramlak in   an   hung **tlún**   tik-ah,*
               hunter   group   jungle from   3PL   come **arrive**_D   time-P
                'when the hunting party returned from the jungle'

(190) may also belong to this type, though the nominal status of *ca* is less clear.

(190) L   *Nu Khen   nih   Pa Bik   a **láwmh**   caah,*
               Nu Khen BY   Pa Bik   3 **thank**_D   because
               'because Nu Khen thanked Pa Bik'

Clausal complements to a relational noun have a derived form of the verb. Other types of adverbial clauses may use the base verb form, as in (192), or the derived form, as in (191), depending on the particular conjunction.

(191) L   *Nu Khen   nih   Pa Bik   a **láwmh**   nain,*
               Nu Khen BY   Pa Bik   3 **thank**_D   although
               'although Nu Khen thanked Pa Bik'

(192) L   *ral   nih   khuami kha phaisa   an   **chút**   hna   ahcun,*
               enemy BY   villager that money   3PL **seize**_B PL   if
               'if the enemies took money from the villagers by force'

12.2 Adverbial clauses: K'Cho

Examples (7) and (193) to (196) illustrate K'Cho adverbial clauses. K'Cho has clauses complement to a relational noun as in (7), with the noun *kòn* 'after'. Like Lai, these have a postposition *àh* and use the derived verb form. Others use the postposition *ung*, as in (192) and (194), also with the derived verb form.

(193) K   *ak'hmó cu   kä   a   **ih**   pha   ung*
             child   that   not   3S **sleep**_D yet   PL
             'before the child goes to sleep'

(194) K   *gà   gùi noh   pìgòk'tu   khoh   ami   **guh**   gùi ung*
             enemy PL BY   villagers   belonging 3PL **seize**_D PL   P
             'if the enemies took the villagers' belongings by force'

Note the contrast between the conditional in Lai (192) with a base form, and (194) with a derived form.

     K'Cho has a type of clause not found in Lai, illustrated in (195) and (196). These clauses are not clearly adverbial, and might be glossed as English participial clauses: 'the hunters having all gone into the jungle' or 'the child having gone to sleep'.

(195) K   *hlak'yüh gùi cu   bung   ah   **hteit** zop u   netah*
             hunter   PL that jungle P   **go**_B   all   PL   C
             'after the hunters had all gone into the jungle'

(196) K   *ak'hmó   cu   **ip**   chütah*
             child   that   **sleep**_B C
             'after the child goes to sleep'

The conjunction *netah* in (195) is used when the subject of the following clause is the same as the subject of the preceding one, and the conjunction *chütah* in (196) is used when it is different. In either case the base form of the clause verb is used. Compare (195) with (7).

12.3 Adverbial clauses: Vaiphei

     (11) and (197) to (200) illustrate adverbial clauses in Vaiphei. *Phat* 'time' in (11), *masang* 'before' in (197), and *ziak* 'because' in (199) are Vaiphei relational nouns which are followed by the postposition *in* and preceded by a derived verb form.

(197) V   *gul   in   ei **chùk**   masang   in*
             snake   BY   1   **bite**_D   before   P
             'before the snake bit me'

(198) V   *gul   in   ei   **chú**   leh*
             snake   BY   1   **bite**_B   C
             'if the snake bites me'

(199) V   *sangaman-te-'n   khuami-te   bawng   a **lak**   ziak   u-n*
             fisherman-PL-BY   villager-PL   cow   3 **take**_D because   PL-P
             'because the fishermen took the villagers' cow'

(200) V   *sangaman-te-'n   khuami-te   bawng   **lá**   male-u   le*
               fisherman-PL-BY   villager-PL   cow   **take**_B   although-PL   P
               'although the fishermen took the villagers' cow'

As seen in (198) and (200), different conjunctions and relational nouns may instead require a base verb form.

12.4 *Adverbial clauses: Summary*

Table 10 provides a summary.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
adverbial clause	D/B	D/B	D/B	L: 189-92; K: 193-6; V: 197-200

Table 10. Adverbial clauses

13   Derivatives and compounds

13.1 *Derivatives and compounds: Lai*

Derivatives are words formed by affixing a stem, and compounds are words formed by combining stems. When a verb participates in one or the other, there is a choice to be made between the base and derived forms. (201) and (202) illustrate Lai causative verbs. The Lai causative suffix *-ter* must attach to a derived verb form, but the resulting causative verb does not distinguish base and derived forms.

(201) L   **tláwn-***ter*
               visit_D-CAUS
               'make/let visit'

(202) L   **tláih-***ter*
               catch_D-CAUS
               'make/let catch'

(203) to (206) illustrate two types of Lai compound nouns which contain a verb form. When the resulting compound refers to the subject of the verb (a so-called agentive nominal) the verb is in its base form as in (203) and (205). When the resulting compound refers to the content of the verb (a so-called action nominal) the verb is in its derived form as in (204) and (206).

(203) L   *khual-***tlawng**-*mi*
               journey-**visit**_B-er
               'traveller'

(204) L *khual-**tláwn***
         journey-**visit**$_\text{D}$
         'travelling'

(205) L *nga-**tlai**-tu*
         fish-**catch**$_\text{B}$-er
         'fisherman'

(206) L *nga-**tláih***
         fish-**catch**$_\text{D}$
         'fishing'

In (203) and (205) there are suffixes *-mi* and *-tu* which resemble the Lai relative clause markers.

13.2 Derivatives and compounds: K'Cho

(207) and (208) illustrate K'Cho causative verbs. Like the Lai causative suffix *-ter*, the K'Cho causative suffix *-hlak* must attach to a derived verb form, but the resulting causative verb does not distinguish base and derived forms.

(207) K ***hteih**-hlak*
         go$_\text{D}$-CAUS
         'make/let go'

(208) K ***shui**-hlak*
         search$_\text{D}$-CAUS
         'make/let search'

(209) to (212) illustrate two types of K'Cho compound nouns which contain a verb form. When the resulting compound refers to the subject of the verb (a so-called agentive nominal) the verb is its base form, as in (209) and (211). When the resulting compound refers to the content of the verb (a so-called action nominal) the verb is in its derived form, as in (210) and (212).

(209) K *lam-k'**hteit***
         road-**go**$_\text{B}$
         'traveller'

(210) K *lam-**hteih***
         road-**go**$_\text{D}$
         'travelling'

(211) K *ngá-k'**shùi***
         fish-**search**$_\text{B}$
         'fisherman'

(212) K   *ngá-**shui***
           fish-**search**_D
           'fishing'

(209) and (211) have a prefixed glottal stop before the base verb form (represented by *k'* in the orthography).

13.3 *Derivatives and compounds: Vaiphei*

(213) and (214) illustrate one type of Vaiphei causative formation. Like the Lai causative suffix *-ter* and the K'Cho causative suffix *-hlak*, the Vaiphei causative suffix *-sak* must attach to a derived verb form, but the resulting causative verb does not distinguish base and derived forms.

(213) V   ***zin**-sak*
           visit_D-CAUS
           'make/let visit'

(214) V   ***mat**-sak*
           catch_D-CAUS
           'make/let catch'

(215) to (218) illustrate two types of Vaiphei compound nouns which contain a verb form. When the resulting compound refers to the subject of the verb (a so-called agentive nominal) the verb is its base form as in (215) and (217). When the resulting compound refers to the content of the verb (a so-called action nominal), unlike in Lai or K'Cho, the verb remains in its base form as in (216) and (218).

(215) V   *la-**sa**-mi*
           song-**sing**_B-er
           'singer'

(216) V   *la-**sa***
           song-**sing**_B
            'singing'

(217) V   *sanga-**mán**-tu*
           fish-**catch**_B-er
           'fisherman'

(218) V   *sanga-**mán***
           fish-**catch**_B
           'fishing'

(215) and (217), like Lai (203) and (205), have the suffixes *-mi* and *-tu*, though Vaiphei does not use them in relative clauses.

13.4 Derivatives and compounds: Summary

Table 11 summarizes the observations of this section.

phenomenon/construction	Lai	K'Cho	Vaiphei	illustrative examples
derivative	D	D	D	L: 201-2; K: 207-8; V: 213-4
compound	D/B	D/B	B	L: 203-6; K: 209-12; V: 215-8

Table 11. Derivatives and compounds

14 Summary

Table 12 compiles each of the summary tables from previous sections in one location for ease of reference. We hope that the examples and discussion provided here will give some impression of the importance the stem alternation may have in South Central languages, and will provide a guide to the types of morphosyntactic environments and constructions which should be considered when investigating the phenomenon for a given language. It is important to note that since sometimes stem alternation only affects a subset of verbs in a language, it is important to test these different conditions with a large selection of verbs in order to avoid missing instances of it.[12]

phenomenon/construction		Lai	K'Cho	Vaiphei	illustrative examples
intransitive main		B	B	B	L: 1,2; K: 5, 6; V: 9,10
intransitive subordinate		D	D	D	L: 3; K: 7; V: 11
intransitive nominalization		D	D	D	L: 4; K:8; V:12
transitive agentive (agent marker)		D (*B)	B/D	B/D[13]	L: 15, 16; K: 17-20; V: 21-4
transitive non-agentive (no agent marker)		B(*D)	B (*D)	B/D	L: 25, 26; K: 29, 30; V: 33-6
intransitive main negative		B	B	B	L: 37, 38; K: 47, 48; V: 57, 58
transitive main negative agentive		B (*D)	B/D	D (B)	L: 39-42; K: 50-52; V: 59, 60
transitive main negative non-agentive		B (*D)	B (*D)	B/D	L: 43-46; K: 53-56; V: 63, 64
head-external relative	**S**	B	B	B	L: 67; K: 78; V: 89
	A	B	B	D	L: 68; K: 79; V: 90
	P	D	D	B/D	L: 69; K: 80; V: 91
head-internal relative	**S**	B	n/a	B	L: 70; V: 92
	A	B	n/a	D	L: 71; V: 93
	P (non-S/A)	D	n/a	B/D	L: 72, 73; V: 94, 95

[12] For instance, Peterson (2020) finds stem alternation to be relevant for just a handful of verbs in Rengmitca.

[13] Use of base or derived forms in K'Cho and Vaiphei is accompanied by pragmatic nuances which we do not attempt to fully account for here. Other instances of B/D in this chart usually involve similar pragmatic subtleties.

headless relative	**S**	B	B	B	L: 74; K: 85; V: 96
	A	B	B	D	L: 75; K: 86; V: 97
	P (non-S/A)	D	D	B/D	L: 76, 77; K: 87, 88; V: 98, 99
polar question with final particle		B	B	B/D	L: 100-2; K: 107-9; V: 114-6
polar question, non-final particle	**S**	D	D	B	L: 103; K: 110; V: 117
	A	D	D	B/D	L: 105; K: 112; V: 119
	P	D	D	B/D	L: 106; K: 113; V: 120
	non-S/A	B	D	B	L: 104; K: 111; V: 118
content question	**S**	B (*D)	B/D	B/D	L: 121-124; K: 133-6; V: 145-8
	A	D (*B)	D[14]	D (*B)	L: 125-128; K: 137-8; V: 149-152
	P	B (*D)	D	B/D	L: 129-132; K: 143, 144; V: 153-6
imperative		B	B (D)	B	L: 157-8; K: 161-3; V:169-70
prohibitive		B	B	D	L: 159; K: 164; V: 171
reflexive and reciprocal		B	B (B/D)	D or B	L: 173-6; K: 177-80ff.; V: 185-8
adverbial clause		D/B	D/B	D/B	L: 189-92; K: 193-6; V: 197-200
derivative		D	D	D	L: 201-2; K: 207-8; V: 213-4
compound		D/B	D/B	B	L: 203-6; K: 209-12; V: 215-8

Table 12. Summary

15 Conclusion

In this discussion we have tried to document the complexity of the factors which condition the distribution of base and derived verb forms in three South Central languages. No doubt our treatment fails to be exhaustive, even in the case of Lai. We have no magic theory to reduce this complexity to an easily comprehensible form, and we are skeptical that any such exists. While there are few comparative studies of verb stem alternation (an important exception is King 2009), most morphosyntactic studies of South Central languages at least mention it. For Lai, we have drawn on the discussion in Hay-Neave (1953), Lehman (1996, 1999), Lehman and Ceu Hlun (2003), Peterson (1998), Peterson and VanBik (2001), Kathol and VanBik (1999, 2001), Kathol (2003), Bedell (2010), and Bedell and Siang Nawl (2012). For K'Cho, we have drawn on Jordan (1969), Mang (2006), and Nolan and Mang (2009). For Vaiphei, we have drawn on Suantak (2013). Significant examples and/or discussion of verb stem alternation in other Kuki-Chin languages include, for Mizo, Lorrain (1940) and Chhangte (1993); for Daai, So-Hartmann (2009); for Thadou, Cover (2006); for Senthang, Ngun Tin Par (2016); for Sizang, Davis (2017); for Hyow, Zakaria (2018); for Rengmitca, Peterson (2020).

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[14] Use of the base stem in relation to A and P in K'Cho results in a non-interrogative (indefinite) interpretation.

ABBREVIATIONS

1	first person	NOM	nominalizing suffix
2	second person	ORD	ordinal suffix
3	third person	P	postposition
CAUS	causative suffix	PERF	perfect auxiliary
C	conjunction or complementizer	PL	plural suffix or particle
D	dual suffix or particle	Q	interrogative particle
IMP	imperative particle	QS	interrogative scope particle
LOC	locative suffix	RECIP	reciprocal particle
NEG	negative particle	REL	relative suffix
NF	non-future particle	RR	reflexive and reciprocal particle or prefix

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