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ABSTRACT

Many South Central languages have relatively unproductive sets of transitivizing (causative) and detransitivizing (middle) prefixal markers. This paper first surveys what we know so far about what markers are attested where in the group. Thereafter we suggest some possibilities as to the diachronic developments behind the distribution of markers which will form initial hypotheses for future research.

KEYWORDS

Kuki-Chin, South Central, Tibeto-Burman, Trans-Himalayan, valence, causative, middle, transitivization, detransitivization, passive, antipassive, anticausative

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1 Introduction

In its central sense in linguistics, valence refers to the number of arguments controlled by a verbal predicate. Valence is closely linked to the notion of (in)transitivity. Intransitive verbs associated with only one participant or a single argument are called univalent or monovalent, transitive verbs are called divalent or bivalent, and ditransitive verbs that have three core participants may be referred to as trivalent.[1]

South Central Tibeto-Burman (Kuki-Chin) languages typically possess rich resources for changing or otherwise affecting the valence of a basic verbal predicate. The devices available to them include generally productive suffixal causative and applicative constructions, as well as a battery of usually less productive transitivizing and detransitivizing elements which appear prefixally.

In its first and main part, this paper will survey what we know so far about the valence-changing prefixes found in South Central languages. For organizational purposes this section will assume the subgrouping of South Central languages proposed by Peterson (2017); see the introductory chapter of this volume for further details. In the second part, we will make some observations regarding the diachronic relationships which appear to be probable between the elements identified.

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[*] This paper began as a draft manuscript prepared by the first author for the Workshop on Kuki-Chin Linguistics, held in conjunction with the 46th International Conference on Sino-Tibetan Languages and Linguistics at Dartmouth in 2013. After her unfortunate passing in 2018, the second author has worked to bring the paper to completion; he has done his best to retain the spirit and style of the original manuscript. The second author would like to acknowledge the support of NSF grants #BCS-0349021 (for work with Khumi, Hyow, and Pangkhua) and #BCS-1360770 (for work with Rengmitca). NSF grants #BCS-1911269 to Dartmouth College and #BCS-1911385 to CSU, Fullerton (Kenneth Van Bik, P.I.) have funded work with Lawmtuk-Ruawghawn. We would also like to express our gratitude to Shobhana Chelliah, Scott DeLancey, Samson Lotven, Ken Van Bik, and Muhammad Zakaria for data and feedback, and to an anonymous reviewer for useful comments and suggestions. Portions of this work were presented by the second author in a lecture to the TiBLANEI (Tibeto-Burman Linguistics Association of North East India) group, which likewise resulted in highly useful feedback.

[1] The terms one-place/two-place/three-place (predicate) and argument structure are also widely used in discussions of these properties, although we will not use these terms here.

To preview where the discussion is going, some of the main generalizations will be as follows. First, there are widespread transitivizing/causative prefixes of approximately the form *p-* or *m-*. On the other hand, there are also widespread vowel, nasal or vowel-nasal prefixes with a detransitivizing/middle function. Besides these more frequently attested prefixes, the elements discussed generally have a more restricted distribution, including a middle prefix *ki-*, causatives signaled by a process (or processes) of initial consonant mutation, as well as a handful of unique or possibly unique formations.

2 The distribution of valence-changing prefixes

2.1 Southwestern

We begin with some of the richest evidence for valence-changing prefixes in South Central, which is found in the Southwestern group of languages. There is also solid attestation of these prefixes in Southeastern languages, which we will turn to in the next section.

2.1.1 Lemi

The Lemi people live in the mountainous area of eastern Paletwa township of Southern Chin State in Myanmar. Their villages are only accessible by walking on foot or by small boat. Travel from the main town, Paletwa, takes about three to four days. The Lemi call their language and their people *Lemi*, but also sometimes *Aki Alawng*, and their population is estimated to be about 3,000. The Lemi language is closely related to Nise, Nideun (Taheungso), Khongtu, Likhy, and Nangboi (Rengsa). These groups all surround the Lemi-speaking area, there is considerable intermarriage, and in some villages two or more of these groups live together. Nevertheless, many Lemi villages have only Lemi people living in them. These languages are sometimes grouped together under the term *Eastern Khumi*. Wordlist comparison shows about seventy percent lexical similarity between Lemi and Kaladan Khumi.

Lemi makes use of a nominative-accusative case system. Unlike most South Central languages it does not exhibit verb stem alternation (see Bedell et al. (2023)) and also has no verbal participant marking system (see DeLancey (2023)). It is an agglutinating language and, as will be seen, more than one prefix can attach to a verb. Apart from valence-changing prefixes there are also other functional prefixes, such as nominalizers, adjectivizers, and markers of possession. Most of the prefixes also occur frozen and lexicalized with verbal and nominal roots.

As already noted, valence-increasing devices found in most SC languages include causatives and applicatives. In addition to the prefixal morphological elements discussed here, Lemi has a postverbal causative in *-hai*,[2] and a benefactive/malefactive applicative in *-py*.

[2] In her original manuscript, the first author referred to this element as a periphrastic causative marker. There is evidence that this marker also marks applicative constructions in addition to causatives in Lemi. The comparable elements in Khumi and Rengmitca are not discernibly periphrastic in nature, however.

The prefix *mä-* occurs in free variation with *bä-*. However, in this paper, only the form *mä-* is used for illustration.[3] Prefixation with *mä-* derives causative verbs from free verb roots. The examples in (1) show transitive and causative verbs that are derived from intransitive state and activity verbs:

(1) Lemi causative prefix *mä-* with intransitive base verbs:

	simplex		***causative***
a.	*lawi* 'free'	→	*mälawi* 'release'
b.	*kawi* 'full'	→	*mäkawi* 'fill'
c.	*cai* 'clean (intr.)'	→	*mäcai* 'clean (trans.)'
d.	*sang* 'famous'	→	*mäsang* 'make famous'
e.	*dü* 'die, dead'	→	*mädü* 'kill'
f.	*hing* 'live'	→	*mähing* 'make alive'
g.	*ri* 'afraid'	→	*märi* 'threaten'
h.	*rawng* 'rotten'	→	*märawng* 'cause to rot'
i.	*kung* 'enter'	→	*mäkung* 'cause to enter'
j.	*tho* 'leave'	→	*mätho* 'drive out'
k.	*caw* 'eat'	→	*mäcaw* 'feed'

As seen in these examples, through prefixation with *mä-*, monovalent verbs become bivalent. The examples in (2) illustrate how such prefixation works in a sentential context:

(2) Sentential illustration of *mä-* with intransitives:

a. *bärawi=a* *tui* *kawi=dy*
earthen.pot=LOC water full=CL.FIN
'The earthen pot is full with water.'

b. *äna.awi=ma* *bärawi=a* *tui* *mäkawi*
POSS.mother=AGTM earthen.pot=LOC water fill (=CAUS-full)

vi=dy
EMPH=CL.FIN
'Mother fills the earthen pot with water.'

The examples in (3) show monotransitive base verbs becoming ditransitive through prefixation with *mä-*:

[3] *ä* presumably represents a schwa-like or otherwise reduced vowel found in minor syllables associated with sesquisyllabic structures in the representations for prefixes in Lemi and Mro-Khimi. For other languages (e.g., Khumi, most of the examples from Rengmitca), such a vowel is represented in this paper by an apostrophe. In other cases, the absence of a vowel in transcriptions may reflect a syllabic consonant constituting the minor syllable (as in (22) from Rengmitca), or the vowel of the minor syllable may simply be left untranscribed due to orthographic conventions (as in some of the Lamkang forms given in 57 below).

(3) Lemi causative prefix *mä-* with transitive base verbs:

	simplex		***causative***
a.	*lu* 'cut down'	→	*mälu* 'cause to cut down'
b.	*khawi* 'split'	→	*mäkhawi* 'cause to split'
c.	*qang* 'look for'	→	*mäqang* 'cause to look for'

The full sentences in (4) show the operation of the prefix with base transitives in context:

(4) Sentential illustration of *mä-* with transitive base verbs:

a. *awiawi* *thingkawng* *kung* *lu* *vi*
Awiawi tree stem cut.down EMPH
'Awiawi cuts down a tree.'

b. *päui=ma* *äpäi=tea* *thing* *mälu* *hai*
grandfather=AGTM POSS.son-in-law=REC tree CAUS.cut.down CAUS

vi
EMPH
'The grandfather makes his son-in-law cut down a tree.'

(4b) also demonstrates a complication: some verbs in Lemi require the postverbal causative element *hai* alongside the prefixal causative *mä-* to express a well-formed causative construction.

An alternative to the *mä-~bä-* causative prefix is a second prefix, *tä-*, which also functions in Lemi as a causativizer and transitivizer, seen in (5). *tä-* has low productivity. As will be discussed further below, Peterson (2013) identifies a presumably related prefix *t-* in Khumi. Peterson considers that it might simply be an allomorph of the *p-* causative in that language, which corresponds to Lemi's *mä-~bä-* causative, since it is found primarily before bilabial-initial and *h*-initial roots. However, Peterson ultimately concludes it should be viewed as a separate historical formation altogether.[4] Also, note that some of the roots prefixed by *tä-* do not occur as free verb roots, but instead take either the detransitivizing prefix *ae-* (discussed below) or the transitivizer/causativizer *tä-*.

[4] Jacques (2019) proposes an account for this variant based on the discussion of it in the first author's original manuscript which would be compatible with Peterson's conclusion that it reflects a separate causative formation. He suggests that this *t'-* prefix is a reflex of the Proto-Tibeto-Burman **s-* causative prefix, which we will discuss below in section 3. Although the expected reflex of PTB **s* here would be an aspirate *t-*, Jacques suggests that it may have deaspirated due to constraints on which consonants may appear in minor syllables; this suggestion seems reasonable given the relative paucity of aspirate plosives in minor syllables in at least Khumi. One issue that is unclear on this account is why certain verbs would have the **s-* causative and others the **p-* causative, but it is nevertheless an intriguing hypothesis that warrants investigation in future work.

(5) Lemi causative prefix *tä-*:

	simplex		***causative***
a.	*bawi* 'together'	→	*täbawi* 'put into a group'
b.	*aeprei* 'spread out'	→	*täprei* 'scatter'
c.	*phra* 'collapsed'	→	*täphra* 'destroy'
d.	*aehüng* 'tremble'	→	*tähüng* 'shake'
e.	*phawng* 'open up'	→	*täphawng* 'bring out of'

Valence-decrease involves the removal of arguments from syntactic expressions, although they may continue to be semantically understood. Valence-decreasing constructions in Lemi might be regarded as middles, with a variety of senses, including reflexive, reciprocal, and anticausative. All valence-decreasing operations make use of the prefix *ae-*.[5] (6) provides some examples of intransitive verbs that are derived from transitive ones through prefixation with *ae-*.

(6) Lemi *ae-* detransitivizing prefix:

	transitive		***intransitive***
a.	*hi* 'spread (trans.)'	→	*aehi* 'spread (intr.)'
b.	*hui* 'follow'	→	*aehui* 'run'[6]
c.	*lawi* 'escape from'	→	*aelawi* 'free'
d.	*thyng* 'put upon'	→	*aethyng* 'be upon s.t.'
e.	*khy* 'break'	→	*aekhy* 'broken'
f.	*pä-awng* 'open (trans.)'	→	*aepä-awng* 'open (intr.)'[7]

For a large number of intransitive verbs, the prefix *ae-* is lexicalized and there is no synchronic transitive counterpart. These are all verbs that express body posture or change in body posture, such as those seen in (7).

(7) Lemi lexicalizations involving *ae-*:

a. *aedaw* 'stand'
b. *aety* 'sit'
c. *aebo* 'stretch out'
d. *aehawi* 'turn around'
e. *aeke* 'walk'
f. *aecü* 'move'

[5] A comparison of the first author's use of the digraph *ae* for Lemi with the phonetic transcriptions of Herr (2011) suggests that the vowel quality indicated by this digraph is approximately [ɛ].

[6] An anonymous reviewer suggests that this pair may reflect an antipassive sense for the prefix, since the intransitive subject of the the verb on the right corresponds to the transitive subject of the one on the left; perhaps this relationship holds even more clearly in (6c). This does not appear to be a systematic possibility in the language, but given its other senses, development of an antipassive usage for the prefix would not be unexpected.

[7] Note that this pair also appears to include a *pä-* causative prefix in both forms; it is not clear why the form of the causative prefix here is *pä-* rather than *bä-~mä-*, as otherwise seen in Lemi.

Besides these unproductive instances, reflexivization is expressed via intransitive verbs that are derived from transitive verbs by prefixation with *ae-*. In reflexive constructions the subject and the object refer to the same entity. Since this one entity fulfils two semantic roles, the syntactic valence of a transitive clause is reduced.

As the examples in (8) show, many of the transitive verbs are prefixed with *mä-*. For some of them the prefix *mä-* has become lexicalized and frozen; for others, a free root is still attested.

(8) Lemi reflexivization marked by *ae-*:

	transitive		***reflexive***
a.	*ho* 'hide (trans.)'	→	*aeho* 'hide oneself'
b.	*mäthy* 'decorate'	→	*aemäthy* 'decorate oneself'
c.	*khu* 'cover'	→	*aekhu* 'cover oneself'
d.	*mäcaw* 'feed'	→	*aemäcaw* 'feed oneself'
e.	*mäqa* 'cause to change'	→	*aemäqa* 'change oneself'
f.	*mäneng* 'humble (trans.)'	→	*aemäneng* 'humble oneself'
g.	*mäkhe* 'make angry'	→	*aemäkhe* 'make oneself angry'

(9b) provides an illustration of the prefix with its reflexive sense in full sentences:

(9) Sentential illustration of reflexive function of *ae-*:

a. *päai=lä* *cae'u* *ho* *vi*
father=TOP book hide EMPH
'Father hides the book.'

b. *nade=na=lä* *aeho* *vi=dy*
child=PL=TOP REFL.hide EMPH=CL.FIN
'The children hide themselves.'

Reciprocal constructions are also marked by the prefix *ae-*. In reciprocal constructions two participants act mutually upon each other and they are both equally agent and patient. In the set of examples given in (10) we see that many non-reciprocal verbs are already prefixed with a valence-increasing prefix and the valence-decreasing prefix is added on, preceding the valence-increasing prefix (e.g., 10d-h).

(10) Lemi reciprocalization marked by *ae-*:

	transitive		***reciprocal***
a.	*e* 'oppose'	→	*ae-e* 'argue with e.o.'
b.	*düng* 'ask'	→	*aedüng* 'discuss with e.o.'
c.	*jaw* 'scold'	→	*aejaw* 'quarrel with e.o.'
d.	*täphü* 'separate'	→	*aetäphü* 'separate from e.o.'
e.	*täphra* 'destroy'	→	*aetäphra* 'destroy e.o.'
f.	*täkhaw* 'blame'	→	*aetäkhaw* 'blame e.o.'
g.	*tämüng* 'suppress'	→	*aetämüng* 'suppress e.o.'
h.	*täkhi* 'point at'	→	*aetäkhi* 'point at e.o.'
i.	*märi* 'share with'	→	*aemäri* 'share among e.o.'

2.1.2 Mro-Khimi

The Mro-Khimi people have an estimated population of about 100,000.[8] Only a few of their villages are located in the southwest part of Paletwa township in Chin State. They mostly live in the townships of Kyauktaw, Ponnagyun, Buthidaung, Mrauk-U, and Pauktaw in Rakhine State.

Mro-Khimi has four main dialects with about 83-100% lexical similarity: Wakung, Areong, Xena, and Xangtau. Wakung has the largest population and the data in this paper represent that dialect. Mro-Khimi shares 71-88% lexical similarity with Lemi and 67-80% with Kaladan Khumi.

Subjects or agents in Mro-Khimi are not marked for case, but the language exhibits differential object marking. Like Lemi, Mro-Khimi also does not have verb stem alternation and its verbal participant marking system is minimal: only first and second person objects are marked with the clitic *na=* preceding the main verb.

Mro-Khimi has, in addition to the causative prefixes, a postverbal (periphrastic) causative *he*. There are indications that the semantically bleached verb *sa* 'do' is developing into another causative. Mro-Khimi also has a postverbal benefactive/malefactive applicative, *by,* which does not necessarily add another argument.

As seen earlier for Lemi, (11) gives some instances of simplex intransitive verbs and the use of the causative prefix *m-* to create derived causatives/transitives in Mro-Khimi:[9]

(11) Mro-Khimi causative prefix *m-*:

	simplex		***causative***
a.	*thau* 'get up'	→	*mthau* 'raise up'
b.	*koen* 'enter'	→	*mkoen* 'cause to enter'
c.	*thoe* 'take out'	→	*mthoe* 'drive out'
d.	*xin* 'live'	→	*mxin* 'cause to live'
e.	*sa* 'eat'	→	*msa* 'feed'
f.	*jon* 'go astray'	→	*mjon* 'lead astray'
g.	*shui* 'wet'	→	*mshui* 'make wet'
h.	*dan* 'cold'	→	*mdan* 'cause to be cold'
i.	*se* 'clean (intr.)'	→	*mse* 'clean (trans.)'
j.	*ka*[10] 'cross over'	→	*mkan* 'take to cross over'

(12) provides some sentential examples showing the use of non-causative and causative verbs in context:

[8] Please note that in previous papers and presentations the first author has referred to this language group as *Mro*. In recent years this group has decided that they prefer to be known as Mro-Khimi. The language is not to be confused with Mru, which is a non-South Central language.

[9] Examples (11-13) differ from other data sets in this paper in not including either a vowel or an apostrophe to indicate the minor syllable nature of the structures associated with the illustrated prefixes. However, the first author's pronunciation of these syllables did not distinguish them from the minor syllable realizations of comparable prefixes, and, as far as the second author knows, she never described them as showing syllabic consonantal behavior in any of her work.

[10] It is unclear whether or not this is a mistake in the first author's original manuscript and the form should actually be *kan*. Khumi has an apparent cognate with a final nasal.

(12) Illustration of Mro-Khimi *m-* causative in sentential context:

a. *ing=me* *khimi* *long=doe* *koen=de*
house=LOC man CLASSF=UNIT enter=CL.FIN
'A man enters the house.'

b. *ape=la* *khimi* *tne=gan* *mkoen* *by* *de*
poss.father=TOP man DEM=OBJ CAUS.enter APPL CL.FINAL
'Father makes that man enter.'

Note that in (12b) the postverbal benefactive/malefactive applicative occurs alongside the causative prefix.

With a similar distribution to what we saw earlier for Lemi, there are instances of a variant causative prefix, *t-*, in Mro-Khimi. Some examples are seen in (13).

(13) Mro-Khimi causative prefix *t-*:

	simplex		***causative***
a.	*bi* 'hot'	→	*tbi* 'heat up'
b.	*xe* 'break off (intr.)'	→	*txe* 'break off (trans.)'
c.	*poe* 'climb up'	→	*tpoe* 'cause to climb up'
d.	*be* 'spread out (intr.)'	→	*tbe* 'spread out (trans.)'
e.	*phui* 'sprinkle (trans.)'	→	*tphui* 'cause to sprinkle s.t.'
f.	*prei* 'separate from'	→	*tprei* 'cause to separate'

Mro-Khimi has reflexive and reciprocal constructions marked by means of a prefix *ka-*. This prefix does not appear to be particularly productive, however. (14) gives some instances of the prefix used to mark reflexives. Note that in many of these cases, the *ka-* prefix attaches to a corresponding transitive which is itself marked with the *m-* causative prefix.

(14) Mro-Khimi reflexives marked by *ka-*:

	transitive		***reflexive***
a.	*msyn* 'decorate'	→	*kamsyn* 'beautify oneself'
b.	*mshie* 'wash'	→	*kamshie* 'wash oneself'
c.	*mtu* 'teach'	→	*katu* 'learn by oneself'
d.	*mse* 'clean'	→	*kamse* 'clean oneself'
e.	(no corresponding transitive)		*kahoh* 'bathe oneself'

(15) provides some instances where *ka-* marks reciprocalization. Here it is noteworthy that, in contrast to the reflexive examples in (15), reciprocal verbs hardly ever involve an *m-*prefixed transitive counterpart.

(15) Mro-Khimi reciprocal marked by *ka-*:

	non-reciprocal		***reciprocal***
a.	*ho* 'speak to'	→	*kaho* 'speak with e.o.'
b.	*khei* 'love'	→	*khei* 'love e.o.'[11]
c.	*braan* 'quarrel with'	→	*kabraan* 'fight with e.o.'
d.	*prei* 'separate self from'	→	*kaprei* 'separate from e.o.'
e.	*diwn* 'ask'	→	*kadiwn* 'discuss with e.o.'
f.	*joe* 'scold'	→	*kajoe* 'quarrel with e.o.'
g.	*ty* 'attack'	→	*katy* 'fight with e.o.'
h.	*mlau* 'welcome'	→	*kamlau* 'greet e.o.'

(16a-b) illustrate the syntactic effects of using the prefix *ka-* in its reciprocal sense.

(16) Sentential illustration of reciprocal use of Mro-Khimi *ka-*:

a. *Xaton=la* *Onxa=gan* *braan* *by* *de*
Xaton=TOP Onxa=OBJ quarrel APPL CL.FIN
'Xaton quarrels with Onxa.'

b. *Xanton* *he* *Onxa* *xini* *kabraan* *de*
Xanton and Onxa DUAL REC.fight CL.FIN
'Xanton and Onxa fight with each other.'

As can be seen here, (16a) involves a transitive event, where Onxa is marked as a direct object; in (16b), on the other hand, Onxa is instead part of a coordinate NP with Xanton, and since the event is intransitive, no object marking is required.

2.1.3 Khumi

The Bangladesh variety Khumi is spoken by about 2,000 people in Ruma, Roangchari, and Thanchi Thanas in the Chittagong Hill Tracts of Bangladesh. It is largely mutually intelligible with the Khumi varieties spoken in southern Chin State by tens of thousands. Peterson (2013) discusses the valence-changing prefixes attested in the northern dialect of Bangladesh; this section is based on that study. For further details on Khumi grammar see Peterson (2019).[12]

As already mentioned, Khumi has a causative prefix *p'-*. In addition to this prefix the language possesses a suffixal benefactive applicative *–pë*^{1} and a suffixal causative/applicative *–hay*^{3}.

Instances of the *p'-* prefix are seen in (17).

[11] This data is as cited by the first author, although the reciprocal form appears to be missing the prefix in question.

[12] Superscripts in Khumi and Rengmitca data indicate distinctive tones.

(17) Khumi causative prefix *p'-*:

	simplex		*causative*
a.	*thew*^{2} 'come out'	→	*p'thew*^{2} 'cause to come out'
b.	*tlång*^{4} 'melt (intr.)'	→	*p'tlång*^{4} 'melt (trans.)'
c.	*dang*^{4} 'lukewarm'	→	*p'dang*^{4} 'cool off, make stop hurting'
d.	*ne*^{2} 'sink (intr.)'	→	*p'ne*^{2} 'sink (trans.)'
e.	*tu*^{4} 'sink (intr.)'	→	*p'tu*^{4} 'sink (trans.)'
f.	*döy*^{2} 'die, go out'	→	*p'döy*^{2} 'kill, turn off, extinguish'
g.	*kuy*^{4} 'sway'	→	*p'kuy*^{4} 'make sway'
h.	*så*^{2} 'long'	→	*p'så*^{2} 'lengthen'
i.	*khe*^{2} 'hatch (intr.)'	→	*p'khe*^{2} 'hatch (trans.)'
j.	*kung*^{2} 'enter (intr.)'	→	*p'kung*^{2} 'make enter (trans.)'
k.	*i*^{2} 'sleep'	→	*p'i*^{2} 'make sleep'
l.	*o*^{2} 'brood'	→	*p'o*^{2} 'cause to brood'
m.	*hang*^{3} 'cry out'	→	*p'hang*^{3} 'make cry out'

It will be apparent that a number of these examples have cognates either in Lemi or Mro-Khimi, and even in the Southeastern languages, K'Cho and Daai, as we will see shortly.

Also, as already noted, like the Southwestern languages considered so far, Khumi has a variant causative prefix *t-*, illustrated by the forms in (18):

(18) Khumi causative prefix *t'-*:

	simplex		*causative*
a.	*bi*^{4} 'hot'	→	*t'bi*^{4} 'heat up'
b.	*phra*^{2} 'destroyed'	→	*t'phra*^{2} 'destroy'
c.	*më*^{4} 'twist (intr)'	→	*t'më*^{4} 'twist (trans)'
d.	*pa*^{1} 'participate'	→	*t'pa*^{1} 'coax'
e.	*anghåy*^{2} 'swing (intr)'	→	*t'håy*^{2} 'swing (trans)'

Note that for (18a-b) there are exactly corresponding forms in Mro-Khimi and Lemi.

Khumi has a set of valence decreasing prefixes which include one resembling the vowel prefix *ae-* seen in Lemi. (19) illustrates various senses of the valence-decreasing prefix *a-*, which is normally pronounced as a low-toned (underlyingly toneless), reduced, centralized vowel.

(19) Uses of Khumi valence-decreasing *a-*:

	reflexive		
a.	*phew*^{1} 'lift up'	→	*a*^{1}*phew*^{1} 'lift oneself up'
b.	*plo*^{4} 'praise, admire'	→	*a*^{1}*plo*^{4} 'boast, brag about oneself'
c.	*t'håy*^{2} 'swing'	→	*a*^{1}*t'håy*^{2} 'swing oneself'

reciprocal

d.	*tiw²* 'fight'	→	*a¹tiw²* 'fight e.o.'
e.	*bång²* 'help	→	*a¹bång²* 'help e.o.'
f.	*khëng¹* 'look (after)'	→	*a¹khëng¹* 'look after e.o.'
g.	*ko²* 'shoot'	→	*a¹ko²* 'shoot (at) e.o.'
h.	*ngay³* 'love'	→	*a¹ngay³* 'love e.o.'

passive

i.	*mü⁴* 'cover'	→	*a¹mü⁴* 'covered'
j.	*niw¹* 'see'	→	*a¹niw¹* 'be seen'
k.	*sa¹* 'do, make'	→	*a¹sa¹* 'done, made'

anticausative

l.	*bang³* 'hang'	→	*a¹bang³* 'hang'
m.	*ë²* 'peel off'	→	*a¹'ë²* 'peel off'
n.	*p'kang¹* 'freeze (trans.)'	→	*a¹p'kang¹* 'freeze (intr.)'
o.	*p'täng⁴* 'ignite (trans.)'	→	*a¹p'täng⁴* 'ignite (intr.)'

Note that a few of these examples involve detransitivization of a stem apparently bearing the *p'-* or *t'-* causative prefixes. This is a fairly common occurrence.

Intransitive and transitive stems frequently occur in pairs, one member bearing the detransitivizing prefix *a-* and the other the causative prefix, as seen in (20).

(20) Pairs of intransitive (with prefix *a-*) and transitive verbs (with prefix *p-*):

	intransitive		***transitive***
a.	*athöyng²* 'startled'	→	*p'thöyng²* 'startle'
b.	*angöyng¹* 'unified'	→	*p'ngöyng¹* 'unify'
c.	*asang⁴* 'high, rise'	→	*p'sang⁴* 'lift, raise'
d.	*atang⁴* 'caught'	→	*p'tang⁴* 'catch'
e.	*akhë⁴* 'tangled'	→	*p'khë⁴* 'tangle'
f.	*ako²* 'crack (intr.)'	→	*p'ko²* 'crack (trans.)'
g.	*ahiw¹* 'bathe (intr.)'	→	*p'hiw¹* 'bathe (trans.)'
h.	*apüng⁴* 'loaded'	→	*t'püng⁴* 'load'
i.	*amang³* 'caught'	→	*t'mang³* 'catch'
j.	*aphung²* 'buried'	→	*t'phung²* 'bury, cover up'
k.	*apew¹* 'explode (intr.)'	→	*t'pew¹* 'explode (trans.)'

A complication is presented by cases where an intransitive stem involves an optional nasal in addition to what is apparently the same *a-* marker: *a(m)-* or *a(ng)-*. These variants are not straightforwardly analyzable as simple allomorphs of the first two prefixes. Given roots specify whether they may take one or the other of these prefixes in the intransitive form. A few examples are given in (21).

(21) Pairs of intransitive (with prefix *a(m)-~a(ng)-*) and transitive verbs (with prefix *p'-*):

	intransitive		***transitive***
a.	*a(m)cewng*^{2} 'skewered'	→	*p'cewng*^{2} 'skewer'[13]
b.	*a(m)yå*^{2} 'drift, float'	→	*p'yå*^{2} 'carry along (with current)'
c.	*a(m)'uy*^{4} 'start to ripen'	→	*p'uy*^{4} 'cause to ripen'
d.	*a(ng)to*^{2} 'move'	→	*p'to*^{2} 'send'
e.	*a(ng)khäng*^{2} 'fly (intr.)'	→	*p'khäng*^{2} 'fly (trans.)'

2.1.4 Rengmitca

A final Southwestern language, Rengmitca, is now only spoken by a handful of individuals residing in the far southern Chittagong Hill Tracts near the town of Alikadam. There are no known speakers across the border in Chin State, although there may be a language group under a different name there which corresponds to this one given our limited knowledge of the Southwestern languages spoken in Chin State.

The data that we have for Rengmitca does not currently lend itself to presentation of long lists of relevant pairs as we have provided for other Southwestern languages, but lexical surveys and text examples clearly reveal the presence of an *m-* causative prefix corresponding to the *m-* and *p'-* causative prefixes we see for other languages.[14] See the instances of this prefix in (22) and (23).

(22) Rengmitca causative prefix *m-*:

m-plåt^{2}*-'ö*	*tumi*^{3}	*plåt*^{2}*-dök*^{4}*la*^{3}	*ki*^{4}*-wet*^{4}*-dök*^{4}*=le*^{3}	*kajnit*^{4}
CAUS-escape-NEG	DEM	escape-SEQ	finish-PFV-REAL=EMOT	1DEXCL

'He can't let him go. If he gets away, we're finished.' (354.47)[15]

(23)

dök^{4}*lö*^{3}	*matnit*^{2}*=nö*^{3}*=på*^{3}	*pan*^{3}	*klång*^{4}*=nö*^{3}	*khaj*^{1}*-wet*^{4}*-dök*^{4}*=nö*
then	3D=LOC=FOC	raft	top=LOC	put-PFV-REAL=SEQ

m'-jaw^{4}*-sut*^{2}*-dök*^{4}*=ti*^{3}
CAUS-float-DUR-REAL=EVID
'Then they put them on a raft and floated them (off).' (109.54-55)

Consider also (24a) and (24b), which show a causative and its corresponding non-causative form in relevant transitive and intransitive contexts.

[13] In some cases (e.g., *a(m)döyng*^{1} 'close up (intr.)' vs. *p'döyng*^{1} 'close up (trans.)', there is variation in the intransitive form such that it may include the *p-* from the transitive (causative) form: e.g., *ampdöyng*^{1} occurs alongside *amdöyng*^{1}, suggesting that the nasal is actually part of the middle prefix.

[14] There is variation in pronunciation of this prefix: sometimes it is a syllabic nasal and other times it is the onset of a minor syllable, as in most of the other languages discussed here.

[15] Citations included for Rengmitca and Lawmtuk-Ruawghawn (see below) examples indicate their location in text corpora collected for the languages.

(24) Rengmitca:

a. *lö³* *j'i⁴=nö³=på³* *m'-thaw³*
and elder.sibling=LOC=FOC CAUS-wake.up
'And he woke the older brother up.'

b. *j'i⁴* *thaw³-dök⁴=lö³…*
elder.sibling wake.up-REAL=TOP
'The older brother woke up and…' (123.37)

There is no compelling evidence for a middle prefix in the available Rengmitca data which would be cognate with the elements seen in any other Southwestern languages. Instead, Rengmitca appears to make use of a middle prefix *t'-* borrowed from Mru, a non-South Central language which speakers are shifting to.[16] There is no indication that this *t'-* middle prefix is related to the *t'-* causative prefix seen in Lemi and Khumi.

2.2 Southeastern

Like the Southwestern languages, Southeastern languages are rich in (usually relatively unproductive) transitivizing and detransitivizing prefixal material.

2.2.1 Daai

It was originally through her study of Daai that the first author became aware of functional prefixes in SC and their important effects on verbal valence. The Daai people are spread out over Mindat, Kanpetlet, Paletwa and Matupi–all four townships of the Southern Chin Hills of Myanmar. Daai is an SOV language with occasional OSV order. It has ergative-absolutive case marking, verb stem alternation, and a fairly intricate system of verbal participant marking, more in line with the typical SC profile than the structures seen in the languages considered thus far. For further details on Daai grammar see So-Hartmann (2009).

Apart from valence change through prefixation, Daai also has another morphological causative, the devoicing or aspiration of a stem initial consonant; this latter process is exceedingly rare, with only four known instances.[17] Sometimes aspiration and the prefix *m-* co-occur, as will be shown below. The language also has an analytic postverbal causative formed with *shak* and several applicative constructions.

As in many of the Southwestern languages, there are causatives formed with a prefixal *m-* element, illustrated in (25).

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[16] Alternatively, this *t'-* prefix in Rengmitca could be related to the *ka-* middle prefix seen in Mro-Khimi; in fact, there are other instances where a *t'-* prefixal element in Rengmitca corresponds to *k'-* prefixes seen elsewhere in Southwestern languages (e.g., Rengmitca *t'na²* 'ear', cognate with Khumi *k'no⁴* 'ear', and the widespread *k-*nominalizer (Konnerth 2016) attested as *k(ang)-* in Khumi and elsewhere in South Central has a regular *t'-* reflex in Rengmitca's most frequent nominalizing element–see Peterson 2020). If this *t'-* prefix is actually of South Central provenance, then possibly it has been passed from Rengmitca (and/or other Southwestern languages) to Mru rather than vice versa.

[17] These are (So-Hartmann 2009: 193): *läh*/*lät* 'free' vs. *hläh*/*hlät* 'release', *luh*/*lut* 'enter' vs. *hlut* 'make [hole]' (the first author's gloss here is unclear), *nep* 'take control' vs. *hnep* 'suppress', and *kyum* 'be inside' vs. *khyum* 'put inside'.

(25) Daai causative prefix *m-*:

	simplex		*causative*
a.	*do* 'good'	→	*mdo* 'make well'
b.	*küüi* 'precious'	→	*mküüi* 'praise'
c.	*hlün* 'high'	→	*mhlün* 'exalt'
d.	*don* 'run'	→	*mdon* 'cause to run'
e.	*kaai* 'climb'	→	*mkaai* 'cause to climb'
f.	*hleei* 'lie'	→	*mhleei* 'deceive'
g.	*som* 'come into being'	→	*msom* 'create'
h.	*khyüh* 'disappear'	→	*mkhyüh* 'kill' (='make disappear'/'bury')
i.	*thoh* 'get up'	→	*mthoh* 'raise up'[18]

(26) provides some examples in sentential contexts.

(26) Sentential illustration of Daai causative *m-*:

a. *mnaai sun mo:=a do:ng=kti.*
Mnaai DEM jungle=LOC run =NON.FUT
'Mnaai ran into the jungle.'

b. *ngna:m=e=noh mnaai sun ah-nih mdon mjoh.*
village=PL=ERG Mnaai DEM S.AGR:3DU/PL CAUS.run EVID
'The villagers caused Mnaai to run away.'[19]

The set of examples in (27) shows instances in which the prefixation with *m-* is accompanied by aspiration or devoicing of the stem initial consonant, a phenomenon we will refer to as mutation in what follows.

(27) Daai causative *m-* accompanied by aspiration/devoicing of stem-initial consonant:

	simplex		*causative*
a.	*leem* 'wounded'	→	*mhleem-ei* 'hurt'[20]
b.	*luh/lut* 'enter'	→	*mhluh* 'push in'
c.	*leh/let* 'wake up'	→	*mhlet* 'wake up'
d.	*lat* 'turn around'[21]	→	*mhlat* 'turn over'
e.	*mang* 'turn around'	→	*mhmang* 'turn around'
f.	*neem/nee:m* 'low'	→	*mhnee:m-ei* 'humble (trans.)'
g.	*kyu:m* 'descend'	→	*mkhyu:m* 'send down'

[18] Cf. the cognate verbs seen in example (24).
[19] Variation in the form of the verb root between these examples, and in the simplex forms seen in (27) and (29) below involves different stem alternants in Daai.
[20] Interestingly, the causative forms for (27a) and (27f) involve additional suffixal morphology: *-ei*, treated by So-Hartmann (2009) as a marker of agent orientation (292). Peterson and Zakaria (2020) argue that this Daai element is cognate to the *-hai* causative element seen earlier in Lemi (4b), and apparently here it reinforces the causative meaning of the prefixal causative marker. Cf. example (4b), which apparently involves the same phenomenon.
[21] Presumably this is a mistake in the first author's original manuscript and should mean 'turn over'.

A second prefixal causative pattern seen in Daai is marked by a prefix actually realized as preglottalization (indicated in the Daai orthography by *k(')*-). Causative derivations involving this prefix seem often to involve volatile or violent events. Examples are given in (28).

(28) Daai causative prefix *k-* (=ˀ-):

	simplex		***causative***
a.	*ak* 'break (intr.)'	→	*k'ak* 'break (trans.)'
b.	*pyak* 'collapse'	→	*kpyak* 'destroy'
c.	*poo:k* 'explode'	→	*kpook* 'cause to explode'[22]
d.	*bät* 'break off (intr.)'	→	*kbät* 'break off (trans.)'
e.	*ngphüüm* 'drown (intr.)'	→	*kphüüm* 'drown (trans.)'
f.	*tee:k* 'torn'	→	*ktee:k* 'tear apart'
g.	*toom* 'roll'	→	*ktoom* 'roll together'
h.	*pyee:ng* 'scattered'	→	*kpyee:ng* 'scatter'
i.	*ngthü:ng* 'shake (intr.)'	→	*kthü:ng* 'shake (trans.)'

At least some of these forms (e.g., 'destroy', which may ultimately be a Burmese borrowing, and 'explode') have corresponding Khumi forms where the *t'-* causative prefix occurs rather than the *p'-* causative prefix. This would suggest that there may be a relationship between the Khumi (and other Southwestern) causative forms in *t'-* and these Daai causative forms involving preglottalization. Note also that a couple of the roots which involve this derivation, (28e) and (28i), occur in pairings where the intransitive member involves Daai's middle prefix, to which we now turn.

Daai's middle prefix, *ng-*, has a variety of valence-decreasing functions. (29) gives examples in which *ng-* has a reflexive sense:

(29) Daai reflexives marked by *ng-*:

	transitive (non-reflexive)		***reflexive***
a.	*mük* 'turn upside down'	→	*ngmük* 'cover oneself'
b.	*thuh/thup* 'hide (trans.)'	→	*ngthuh/ngthup* 'hide oneself'
c.	*ktoom* 'roll (trans.)'	→	*ngtoo:m* 'roll up (intr.)'
d.	*hloop* 'wrap around'	→	*nghloop* 'wrap around oneself'

The forms in (29c) may also suggest a possible anticausative sense. The forms in (30) show that *ng-* may also encode a reciprocal sense:

[22] The vowel alternation seen in this pair is included in the first author's original manuscript. This may be a typo.

(30) Daai reciprocals marked by *ng-*:[23]

	non-reciprocal		***reciprocal***
a.	*shoong* 'meet (trans.)'	→	*ngshoong* 'meet e.o.'
b.	*shun* 'stab'	→	*ngshun* 'fight e.o.'
c.	*leh* 'step on'	→	*ngleh-ei* 'visit e.o.'
d.	*saam* 'test'	→	*ngsaam-ei* 'compete'
e.	(no corresponding non-reciprocal)		*ngtuun-ngvoo:k* 'fight e.o.'
f.	(no corresponding non-reciprocal)		*ngshuh-ngkaih* 'quarrel with e.o.'
g.	(no corresponding non-reciprocal)		*nglooi-ei* 'be friendly with e.o.'

In Daai passive constructions are attested, although rarely. An example is seen in (31b), which also involves the *ng-* middle prefix:

(31) Illustration of passive use of *ng-* middle prefix in Daai:

a. *Thang=noh* *nga:-peem* *thup=kti*
Thang=ERG fish-basket hide=NON.FUT
'Thang hid the fish baskets.'

b. *nga:-peem* *ngthup=kti=e*
fish-basket PASS.hide=NON.FUT=PL
'The fish baskets are hidden.'

(32) provides further examples where the semantics of *ng-*, while detransitivizing in function, is less clearly classifiable as involving one or the other of these senses.

(32) Additional senses of Daai middle prefix *ng-*:

	transitive		***middle***
a.	*tüüi* 'create'	→	*ngtüüi* 'come into being (=be created)"
b.	*shääm* 'look after'	→	*ngshääm* 'ready'
c.	*tou* 'look at'	→	*ngtou* 'pretty'
d.	*pheh* 'arrest'	→	*ngpheh* 'imprisoned (=be arrested)'

ng- is also lexicalized with a variety of verbs expressing body postures or movements and sounds, as seen in (33).

(33) Lexicalizations of Daai *ng-* middle prefix:

body postures/movements
a. *ngdüih/ngdüüi* 'stand'
b. *ngshut* 'sit'
c. *ngdääng* 'kneel'

[23] Note that again, a number of the forms on the right bear the suffix *-ei*, which, as Peterson and Zakaria (2020) propose, develops middle semantics of its own in Southeastern languages like Daai. Contrary to the previous instance of its use in (27a and f), where it seemed to reinforce the semantics of a causative prefix, here it would appear to be related to the middle marking effect of the *ng-* prefix.

d. *ngko:* 'lie down'
e. *ngbok* 'bow down'
f. *nglaam* 'dance'

sounds
g. *ng'äi* 'sing'
h. *ng'äh* 'groan in desperation'
i. *ng'üüi* 'groan in pain'
j. *ng'eih* 'growl softly'

2.2.2 K'Cho

The K'Cho people live northeast of the Daai, in the Mindat and Kanpetlet townships of southern Chin State, Myanmar. They are also known by other names, such as Müün, Ng'meen, Mindat Chin, Yawdwin Chin, Chinbok, and Chinme. Their population is estimated to be about 30,000. K'Cho has ergative/absolutive case-marking, and exhibits verb stem alternation and a verbal participant marking system. K'Cho and Daai are closely related languages but are not mutually comprehensible.

As in Daai, we see an *m-* causative prefix in K'Cho. (34) provides some examples.

(34) K'Cho *m-* causative prefix:

	simplex		***causative***
a.	*ip* 'sleep'	→	*m'ih* 'cause to sleep' (Mang 2006: 58)
b.	*dawng* 'run'	→	*m'dawng* 'make run'
c.	*kiawm* 'beautiful'	→	*m'kiawm* 'beautify/embellish'
d.	*ghin* 'live'	→	*m'ghin* 'to vivify'
e.	*sih* 'die'	→	*m'sih* 'cause to die/to kill'
f.	*däm* 'big'	→	*m'däm* 'to make bigger, enlarge'
g.	*ei-awk* 'eat-drink'	→	*m'ei-m'awk* 'make eat and drink'
h.	*om* 'abide, stay'	→	*m'om* 'make stay or abide with you' (Jordan 1968: 42)

Also, as we saw in Daai, there are at least some instances where the prefix is absent, and instead, causativization is signaled by aspiration or devoicing of an initial consonant. According to Jordan (1969), this happens whenever the non-causative root is *m-*initial, resulting in a voiceless nasal for the causative stem; in addition, a few *k-*initial forms are aspirated and also undergo a process of palatalization in the causative. The forms Jordan discusses (1969: 42-43) are given in (35).

(35) K'Cho causatives involving initial nasal devoicing or plosive aspiration (+palatalization):

	simplex		***causative***
a.	*maih* 'gone, exhausted'	→	*hmaih* 'liquidate, make all disappear'
b.	*ma* 'first'	→	*hma* 'place first'
c.	*kiah* 'fall down'	→	*chah* 'drop'
d.	*kiuk* 'fall, as a tree/post'	→	*chuk* 'fell'
e.	*kium* 'shut up/enclosed'	→	*chum* 'enclose, lock in'

Besides this causative prefix and set of processes, Mang (2006: 59) also mentions that some verbs form their causative with a *k-* prefix, like *pang* 'be deaf' and its counterpart, *k'pan* 'cause to be deaf'. As Jordan does not explicitly mention this means of causative formation, at present it is unclear how productive it is in K'Cho.[24]

K'Cho also closely resembles Daai in terms of its prefixal valence-decreasing potential. The prefix *ng-* marks a middle with various possible senses. Even a cursory glance at the relevant portion of Jordan's extensive dictionary reveals that this prefix has quite a high frequency, although it may be lexicalized in many of the verbs containing it. In terms of function, Mang mentions reflexivization and reciprocalization, which are seen in the forms in (36).

(36) Reflexive and reciprocal senses of K'Cho *ng-* middle prefix:

	transitive		***middle***
a.	*át-ci* 'cut'	→	*ng'áh-ci* 'cut oneself' (Mang 2006: 55)
b.	*hngu(k)-ci* 'see'	→	*ng'hnguh-ci* 'see e.o.' (Mang 2006: 56)

In other cases *ng-* would appear to have an anticausative sense, illustrated by (37b), in comparison to (37a).

(37) Anticausative sense of K'Cho middle prefix *ng-* (Mang 2006: 54):

a. *Om noh k'tung ung ng'ya bat-ci*
Om ERG post at bag hang.up.I-NF
'Om hangs up a/the bag on the post.

b. *k'tung ung Om ng'bat-ci.*
post at Om MID-hang.up.I-NF
'Om hangs (clings) to the post.'

In recent papers Konnerth (2021) and Jacques (2021) both independently point out instances Mang cites of an antipassive use of *ng-* in K'Cho. For instance, in (38a), there is a P participant, 'pig', and the A participant, 'dog', is marked with the ergative case clitic.[25]

(38) Antipassive sense of K'Cho middle prefix *ng-* (Mang 2006: 54):

a. *ui noh vok na(k)-ci*
dog ERG pig bark.at.I-NFUT
'the dog barks/ed at the pig.'

b. *ui ng'-na(k)-ci*
dog MID-bark.at.I-NFUT
'the dog barks/ed.'

[24] It is furthermore unclear whether this prefix represents a true velar stop, or if, as in Daai, *k'-* here might also represent preglottalization. Jordan's dictionary includes *pang* 'deaf' and *pan* 'deafen'. If the marking here potentially indicates preglottalization, one possibility worth considering is that, while Jordan detected the stem alternation involved in this pair, he was not aware of the preglottalization associated with the causative form. This may be relevant for other forms cited in his dictionary, as well.

[25] A and P are used here in the sense of Payne 1997.

In (38b), however, where the middle prefix is attached to the verb, the P participant is omitted and the A participant does not bear the ergative marker. It is unclear how pervasive this use of the prefix is, but an antipassive sense is an entirely plausible detransitivizing development under the rubric of a middle marker.

2.2.3 Other evidence of valence-changing prefixation in Southeastern languages

To the best of our knowledge, there is no direct evidence from other Southeastern languages, such as Asho (spoken in far southeastern Chin State and in adjacent areas of Burma outside of Chin State) and Hyow (spoken in the central Chittagong Hill Tracts of Bangladesh), for prefixes which affect valence. However, there is an unproductive causativization process in Hyow involving devoicing of initial sonorants or aspiration of initial plosives which is usually taken to reflect historical prefixation of one or another sort (see further discussion in section 3 below). As alluded to in our discussion of Daai above, we will refer to this as the mutation causative pattern. Some examples from Hyow are given in (39) from Zakaria (2018).[26]

(39) Hyow causatives involving initial devoicing of sonorants or aspiration of voiceless plosives:

	simplex		***causative***
a.	*yá* 'stand'	→	*hyà* 'make stand'
b.	*yŝw* 'float'	→	*hyŝw* 'make float'
c.	*yɔ́ʔl* 'lie down'	→	*hyɔ́ʔl* 'make lie down'
d.	*yûl* 'get wet'	→	*hyûl* 'make wet'
e.	*kɘ́m* 'descend'	→	*khɘ́m* 'make descend'
f.	*kŝy* 'climb, ascend'	→	*khɔ́y* 'make go up'
g.	*krɔ́k* 'fall'	→	*khrɔ́k* 'drop'
h.	*lǽk* 'small'	→	*hlǽk* 'make small'
i.	*lâ̂ng* 'hot'	→	*hlâ̂ng* 'make hot'
j.	*lǽw* 'suffer a loss'	→	*hlǽwêy* 'make suffer a loss'[27]
k.	*láp* 'open'	→	*hláp* 'break open'
l.	*lé* 'large'	→	*hlé* 'enlarge'
m.	*lɔ́m* 'dance'	→	*hlɔ́m* 'make dance'
n.	*lúʔy* 'full'	→	*hlúʔy* 'make full/fill'
o.	*mrán* 'fast'	→	*hmrán* 'make fast'
p.	*núy* 'laugh'	→	*hnúyêy* 'make laugh'
q.	*ólón* 'be surpassed'	→	*hlón* 'surpass'
r.	*yáp* 'be ruined'	→	*hyáp* 'ruin'
s.	*yúp* 'go out'	→	*hyúp* 'extinguish'
t.	*yút* 'diminish'	→	*hyút* 'make diminish'
u.	*pɘ́k* 'be leaked	→	*phɘ́k* 'leak'
v.	*póʔ* 'burst'	→	*phóʔ* 'make burst'
w.	*pyɔ́* 'happy'	→	*phyɔ́* 'make happy'

[26] Thank you to Muhammad Zakaria for providing this list of relevant forms.

[27] Notice the co-occurrence of the initial consonant mutation and a suffixal element, here and in (39p), resembling examples like (4b) in Lemi and (27a, f) in Daai.

Otherwise, valence-affecting elements in Hyow and closely related Southeastern languages like Sumtu and Asho would appear to all be suffixal in nature.

2.3 Central

Central languages vary in terms of the richness of their prefixation. Core Central languages may have a middle prefix, like Lai and Mizo, but generally do not have discrete causative prefixation comparable to what we see in the Southwestern and Southeastern languages.[28] Maraic languages have both valence increasing and valence decreasing prefixal formations.

2.3.1 Core Central

2.3.1.1 Hakha Lai

As we saw for Hyow in the preceding section, Lai exhibits an unproductive initial sonorant voicing/stop aspiration alternation for purposes of indicating non-causative/causative pairs (the mutation causative). Some relevant Lai pairs are seen in (40):

(40) Lai causatives involving mutation causative (Patent 1997):

	simplex		***causative***
a.	*tlaak* 'fall'	→	*thlaak* 'drop'
b.	*lum* 'hot'	→	*hlum* 'heat up'
c.	*mit* 'go out'	→	*hmit* 'extinguish'
d.	*ril* 'roll'	→	*hril* 'cause to roll'
e.	*rook* 'deteriorate'	→	*hrook* 'destroy'
f.	*kek* 'break up (intr.)'	→	*khek* 'break up (trans.)'
g.	*kiak* 'snap (intr.)'	→	*khiak* 'snap (trans.)'
h.	*neem* 'soft'	→	*hneem* 'comfort'
i.	*pe'l* 'stumble'	→	*phe'l* 'cause to stumble'
j.	*pit* 'blocked'	→	*phit* 'block'
k.	*tlaaw* 'disappear'	→	*thlaaw* 'cause to disappear'
l.	*tluu* 'fall over'	→	*thluu* 'cause to fall over'
m.	*tsuang* 'board (intr.)'	→	*tshuang* 'board (trans.)'
n.	*tsat* 'broken, torn'	→	*tshat* 'break, tear'
o.	*ʈet* 'worn out'	→	*ʈhet* 'wear out'
p.	*ʈum* 'descend'	→	*ʈhum* 'cause to descend'
q.	*ʈi'* 'scared'	→	*ʈhi'* 'frighten'

[28] We know of one language which may contradict this generalization. While its exact position in South Central was inadvertently left unaddressed by Peterson (2017), Pangkhua bears at least contact-induced similarity to Core Central languages (especially Mizo and Bawm), if it is not indeed Core Central, as often appears to be assumed. If it *is* Core Central, Pangkhua is distinct from other known Core Central languages in that it clearly retains what we will in Section 3 deem to be an archaic *ma-* causative prefix, alongside what appears to be an *an-* middle prefix, according to the discussion in Löffler (1985: 282-3). See also Akter 2022 for a recent and thorough treatment of this issue in Pangkhua. If Pangkhua is *not* a Core Central language, and is instead more closely affiliated with a different South Central subgroup, then the generalization holds.

Besides this phenomenon, Lai has extensive and highly productive causative and applicative constructions marked suffixally (see Peterson 1998; VanBik 2002).

In Lai there is a productive middle prefix *'ii-* (Yamashita Smith 1998). There are two allomorphs of the middle: with (consistently consonant-final) plural subject markers, or following consonant-final directionals, it manifests as *'ii-*, and with (consistently vowel-final) singular subject markers and vowel-final preverbal directionals, it manifests as lengthening of an immediately preceding vowel. The middle in Lai marks reflexive, reciprocal, and naturally middle events. (41a) provides a transitive event, whereas (41b) illustrates the reciprocal use of Lai's middle marker:

(41) Lai middle marker (Yamashita Smith 1998: 11):

a.	*kurbungbel=ni'*	*an-fanuu*	*khaa*	*a-ɬhit*
	Kurbungbel=ERG	3P.POSS-daughter	DEIC	3SS-marry$_{D}$
	'Kurbungbel married their daughter.'			
b.	*kurbungbel=lee*	*an-fanuu*	*tsuu*	*an-'ii-ɬhii*
	Kurbungbel=and	3P.POSS-daughter	DEIC	3PS-MID-marry$_{B}$
	'Kurbungbel and their daughter got married.'			

2.3.1.2 Mizo

Mizo's best known causative construction is one marked by suffixal *-tîr* (Chhangte 1992: 100-1). Chhangte (1993: 88-89) mentions that the causative mutation pattern seen in Lai occurs in Mizo, but does not provide a full list of examples.

There is also ample evidence for a widespread prefixal causative marked by *ti-* (Chhangte 1993: 143). This element appears to have grammaticalized from the independent predicate *ti* 'do, say', and is cited as early as Lorrain and Savidge (1898) as a "(prefix) used to make intransitive verbs transitive, to cause to be" (204). Some pairs included in Lorrain and Savidge's dictionary, supplemented by additional forms from Lorrain's more comprehensive (1940) dictionary, are seen in (42).

(42) Mizo's *ti-* causative prefix:

	simplex		***causative***
a.	*bâl* 'be/get dirty'	→	*tibâl* 'make dirty'
b.	*bua* 'spilled'	→	*tibua* 'spill, upset'
c.	*dam* 'alive, well, saved'	→	*tidam* 'make well, save'
d.	*chhuak* 'come/go out'	→	*tichhuak* 'put out, eject'
e.	*harh* 'cheer up, revive'	→	*tiharh* 'revive (trans.), strengthen'
f.	*keh* 'be broken'	→	*tikeh* 'break (trans.)'
g.	*khat* 'full'	→	*tikhat* 'fill'
h.	*koi* 'crooked, bent'	→	*tikoi* 'bend (trans.)'
i.	*lian* 'large'	→	*tilian* 'magnify'
j.	*ngil* 'straight'	→	*tingil* 'straighten (trans.)'
k.	*ngoi* 'be quiet'	→	*tingoi* 'quiet (trans.)'
l.	*parh* 'open (a flower)'	→	*tiparh* 'spread out (trans.)'
m.	*rûi* 'drunk, intoxicated'	→	*tirûi* 'intoxicate'

Despite its superficial similarity to the *t-* causative prefixal variant detected in Southwestern languages, it seems improbable that these stem from the same element. It is likely that the Mizo formation is a relatively recent development given its apparent productivity compared with the relatively unproductive Southwestern formations. Chhangte herself treats it as a transparent instance of verb serialization rather than as a causative prefix in a strict sense (1993: 143), which would further suggest a recent development compared with other hypothetically related SC elements.

Mizo also has a middle prefix of the form *in-*; it marks reflexives, reciprocals, and anticausatives. See (43).

(43) Mizo's *-in* middle prefix (Chhangte 1993: 93):

a. *âmaʔ leʔ âma' â-in-mèèt*
3PRO and 3PRO 3S-REF-shave
'He is shaving himself.'

b. *bòŋ leʔ keel án-in-sii*
cow and goat 3S.PL-RCP-butt
'A cow and goat are butting (each other).'

c. *kôŋkââ â-in-hôŋ*
door 3S-REF-open
'The door is open (who knows who opened it).'

2.3.2 Maraic

Mara has clear evidence for a *pa-* causative prefix, including data collected by the first author, seen in (44), and also abundantly represented in the dictionaries compiled for Mara by Savidge (1908) and Lorrain (1951). In addition to the causative prefix *pa-*, Mara also has a causative suffix *-sa*, and as seen in the data, sometimes both the *pa-* prefix and the *-sa* suffix must occur in order to achieve causativization, reminiscent of patterns seen earlier in Lemi and Daai.

(44) The valence-increasing infix *-pa-* (/pə/):

	simplex		***causative***
a.	*acha* 'cry'	→	*apache* 'cause to cry'[29]
b.	*ado* 'drink'	→	*apadosa* 'cause to drink'
c.	*apha* 'good'	→	*apapha* 'cause to be good'
d.	*amu* 'mad'	→	*apamu* 'cause to be mad'
e.	*achho* 'cook'	→	*apachhosa* 'cause to cook'
f.	*akin* 'climb'	→	*apakinsa* 'cause to climb'

Zophei likewise has evidence for a *pa-* causative prefix, including data like that given in (45).[30]

[29] It is unclear if the vowel alternation seen in this pair is genuine or if it is a mistake. Neither Savidge nor Lorrain's materials can (dis)confirm it.

[30] Thank you to Samson Lotven for providing this data.

(45) Zophei *pa-* causative prefix:

	simplex		***causative***
a.	*khei* 'frozen'	→	*pa-khei* 'freeze'
b.	*søø* 'long'	→	*pa-søø* 'lengthen'
c.	*dau* 'stand'	→	*pa-dau* 'stand something up'
d.	*thlee* 'hang down'	→	*pa-thlee* 'hang'
e.	*tøø* 'sit'	→	*pa-tøø* 'seat'
f.	*thuu* 'wake up'	→	*pa-thuu* 'wake up'
g.	*thlung* 'sweet'	→	*pa-thlung* 'sweeten'
h.	*tsaa* 'dry'	→	*pa-tsaa* 'dry, cure'
i.	*dee* 'quiet'	→	*pa-dee* 'quiet'
j.	*dɨɨ* 'end'	→	*pa-dɨɨ* 'end'
k.	*king* 'curl'	→	*pa-king* 'curl'
l.	*khang* 'protect'	→	*pa-khang* 'block'
m.	*kang* 'burn (trans.?)'	→	*pa-kang* 'roast'

Note that in the last two examples the relationship between the forms does not involve strict causativization.

Although extensive evidence has thus far not been noted in Maraic languages for the kind of mutation causative seen in Hyow and Lai, there is a hint of it in Senthang, which so far does not appear to have the *pV-* causative prefix found in Mara and Zophei. Ngun Tin Par's (2016: 72-73) "causative-inchoative" verb pairings show a couple of instances of aspiration of initial plosives to indicate causative as opposed to inchoative (e.g., inchoative *ɻù* 'drop' vs. causative *ɻʰɔ́ʔ* 'drop', which obviously also involves other changes besides the initial consonant mutation); other forms that Par lists involve simple tonal alternations, which might be due to the same, presumably prefixal, factor.

Middles in Maraic languages are unfortunately poorly studied. The first author collected data from Mara suggesting the presence for that language of a nasal element *-ma-* in marking middles, seen in the reciprocal forms listed in (46):

(46) The valence-decreasing infix *-ma-* (/mə/):

	simplex		***reciprocal***
a.	*achi* 'afraid'	→	*amachi* 'afraid of e.o.'
b.	*atu* 'fight'	→	*amatu* 'fight with e.o.'
c.	*apalao* 'play'	→	*amapalao* 'play with e.o.'
d.	*ahao* 'hate'	→	*amahao* 'hate e.o.'
e.	*abao* 'help'	→	*amabao* 'help e.o.'

The presence of a nasal in these markers is interesting given the widespread nasal element seen in middles elsewhere in South Central.

According to Zophei data collected by the second author, reflexivization/reciprocalization would appear to involve a lengthening of vowel-final prefixal participant markers, reminiscent of the vowel lengthening in singular participant markers as recorded in Lai. Alternatively, we might recognize an *a-* prefix marking middles for the language.

Recent consideration of morphological evidence by Peterson and Van Bik (2020) suggests that Lawmtuk-Ruawghawn, which previously has been grouped under (Core) Central (e.g., by VanBik 2009), is more closely affiliated with Maraic. It has what appears to be a productive middle marker *k'-*, which is transparently related to middle markers found universally in Northeastern and in some Northwestern languages, which we will turn to in the next sections. Recall also the *ka-* prefix seen in Mro-Khimi.

A text example showing a reciprocal use of this marker in Lawmtuk-Ruawghawn is provided in (47).

(47) Lawmtuk-Ruawghawn *k'-* middle marker:

m'khan	*di*	*a-tsot*	*tikkhan*
then	thatch	3SS-pull	when

...	*gompuy=he*	*khan*	*k'-tong*	*a-ca*
	bear=COM	DEIC.OBL	MID-meet	3PS-say

'Then, when he was pulling thatch, he (rabbit) met with bear, they say' (BR42)

2.4 Northeastern

Northeastern languages have evidence for a different prefixal causative of interest, namely one marked by *su-* in Thadou. This is not mentioned in Krishan's more modern (1980) treatment of the language's verbal morphology, but Hodson (1906) clearly identifies it as a causative prefix. Hodson's assessment is confirmed by P. Haokip for present-day Thadou (p.c.)

While few examples are forthcoming from the literature on Thadou to date, similar observations are made for Paite. See the forms in (48), listed by N. Saratchandra Singh (2006: 126):

(48) Paite *su-* causative prefix:

	simplex		***causative***
a.	*vóm* 'be black'	→	*súvóm* 'blacken intentionally'
b.	*hóy* 'be good'	→	*súhóy* 'better intentionally'
c.	*ŋoŋ* 'be deaf'	→	*súŋoŋ* 'deafen intentionally'

Singh identifies a basic meaning of 'to strike with' for the *sú* portion of these.

Henderson (1965), in her treatment of Tedim, does not mention such an element; Otsuka (p.c.) suggests there may be lexicalized instances of a *su-* element in that language.

Paite alternatively makes use of the verb *hi?* 'to do' as a prefix with approximately the same function as prefixal *su* (Singh 2006: 126). Some relevant forms are listed in (49).

(49) Paite *hi?-* causative prefix:

simplex			***causative***
a.	*vóm* 'be black'	→	*hí?vóm* 'blacken intentionally'
b.	*hóy* 'be good'	→	*hí?hóy* 'better intentionally'
c.	*ŋoŋ* 'be deaf'	→	*hí?ŋoŋ* 'deafen intentionally'

The similarity between this construction and Mizo's *ti-* causative construction is noteworthy.

There is a relative paucity of evidence in Northeastern reflecting an earlier prefixal causative element which would have yielded pairs like we see for Hyow and Lai involving aspiration of initial plosives or devoicing of initial sonorants. Henderson's glossary includes the pairs given in (50).

(50) Tedim (Henderson 1965):

	simplex		***causative***
a.	*kak* 'dilate'	→	*khak* 'open wide'
b.	*kang* 'raise oneself'	→	*khang* 'raise'
c.	*kai* 'be suspended'	→	*khai* 'hang'
d.	*puk* 'fall'	→	*phuk* 'fell'

And for Sizang, where Wolfenden (1929) already noted a few pairs based on Rundall (1891), Stern adds a few observed alternating stems based on his own work and on Naylor's (1925) description, as seen in (51).

(51) Sizang (Wolfenden 1929; Stern 1963):

	simplex		***causative***
a.	*kiem* 'grow less'	→	*khiem* 'make less'
b.	*ken* 'go away, leave'	→	*khen* 'separate, disperse'
c.	*kåm* 'come together'	→	*khåm* 'bring together'
d.	*kai* 'pull, suspended'	→	*khai* 'hang up' (Stern 1963)
e.	*kang* 'burn'	→	*khang* 'burn' (Naylor 1925)

The *k'-* middle prefix seen in Maraic Lawmtuk-Ruawghawn (and with weaker possible evidence in Southwestern and Southeastern) has its most robust attestation in the Northeastern subgroup of South Central. Henderson (1965: 99) mentions the prefix *ki-* and gives the forms in example (52) from Tedim:

(52) Tedim's *ki-* middle prefix:

a.	*ki it ni*	'let us love one another'	(reciprocal)
b.	*ka ki sat kha*	'I hit myself by mistake'	(reflexive)
c.	*a ki ci hi*	'it is called'	(passive)

The first author collected the data in (53) illustrating reflexive and reciprocal uses of the prefix from an acquaintance, although her impression was that the prefix was of limited productivity. Otsuka (2014), however, does not mention that the prefix is anything less than productive, and independently confirms that the element *is* highly productive (p.c.).

(53) Tedim's *ki-* middle prefix:

	transitive		***reciprocal***
a.	*lai* 'fight'	→	*ki lai* 'fight with e.o.'
b.	*tum* 'punch'	→	*ki tum* 'punch e.o.'
c.	*gen* 'tell'	→	*ki gen* 'tell e.o.'
d.	*dong* 'ask'	→	*ki dong* 'ask e.o.'

	reflexive
e.	*ka ki puah hi* 'I put make-up on myself'
f.	*ka ki sil hi* 'I shower myself'

The *ki-* prefix would appear to be highly productive in other Northeastern languages, as well, including Paite, which is grammatically quite similar to Tedim (Tyler Davis, p.c.) Some forms are seen in (54):

(54) Paite *ki-* middle prefix (Singh 2006: 116-117):

	transitive		***middle***
a.	*xó?* 'throw'	→	*kíxó?* 'throw oneself'
b.	*xí?* 'bind'	→	*kíxí?* 'bind oneself'
c.	*nā* 'quarrel'	→	*kinā* 'quarrel with e.o.'
d.	*en* 'look'	→	*kíen* 'look at e.o.'
e.	*năy* 'near'	→	*kínăy* 'near to e.o.'

Although there are restrictions as to verb classes that the *ki-* prefix may apply to, Singh mentions no other constraints on its overall productivity. Similar observations pertain to other Northeastern languages like Thadou (Hodson 1906; Krishan 1980) and Sizang (Stern 1963; Davis 2017).[31]

2.5 Northwestern

The Northwestern languages do not constitute an uncontroversial subgroup like the other ones described so far do; some of these languages may adhere more closely with the Central subgroup of South Central rather than forming a group unto themselves. Regardless of their eventual placement, there is great diversity among them, and we can see here most of the elements encountered in earlier sections. One thing that so far appears to be missing is the formation of causatives by devoicing of initial sonorants or aspiration of initial plosives (the mutation causative) seen most clearly in Hyow and Lai. All of the Northwestern languages we have relevant information for are spoken in Manipur.

[31] Actually, for Thadou, Krishan regards *ki* as a passive or neuter, vs. *iki*, which marks 'reciprocal' (1980: 62); Hodson, in his earlier description, treated *ki* as a marker of mutuality.

2.5.1 Sorbung

Sorbung is spoken in a community of about 300 located in the southeast corner of Ukhrul District (about forty kilometers west of the border with Burma). Mortensen and Keogh (2011) point out that the Sorbung people consider themselves to be ethnic Tangkhuls, the majority ethnic group in Ukhrul District.

Sorbung has two productive valence-changing prefixes. First, there is a familiar-looking causative prefix, *mə-*, shown in example (55).

(55) Sorbung *mə-* causative prefix (Mortensen and Keogh 2011):

	simplex		***causative***
a.	*ʔən-thée* 'wake up (intr.)'	→	*mə-tʰée* 'wake up (trans.)'
b.	*càap* 'hurt'	→	*mə-càap* 'make cry'
c.	*ʔóo* 'bite'	→	*mə-ʔóo* 'make bite'
d.	*ʔən-cii* 'fear; be afraid'	→	*mə-cip* 'frighten'
e.	*kʰòo* 'break'	→	*mə-kʰóo* 'break'

Sorbung also has a valence-decreasing prefix, *ʔəN-*, illustrated in (56) and already seen in (55a and d).

(56) Sorbung valence-decreasing prefix *ʔəN-*:

a. *ʔəntʰee* 'wake up (intr.)'
b. *ʔəncii* 'fear (intr.)'
c. *ʔəndia* 'fall (intr.)'

2.5.2 Lamkang

The main Lamkang settlements are in the Chandel district of Manipur with a population estimated at around 5,000.

Lamkang has a causative prefix *pV-*, mainly realized as *pə-*, which is clearly related to the prefixal causatives we have already encountered. This formation is illustrated by forms given in (57a-f) from Thounaojam and Chelliah (2007), supplemented by forms from CORSAL archival materials (Good 2017). The latter do not include schwa (or any vowel) in their representation of the minor-syllable prefix.

(57) Lamkang *pV-* causative prefix:

	simplex		***causative***
a.	*čen* 'run'	→	*pə-čen* 'cause to run'
b.	*kəl* 'overcook'	→	*pə-kəl* 'cause to overcook'
c.	*saŋ* 'long'	→	*pə-saŋ* 'cause to lengthen'
d.	*bul* 'smear'	→	*pu-bul* 'cause to smear'
e.	*rthum* 'leap'	→	*pə-rthum* 'cause to leap'
f.	*rtit* 'pain'	→	*pə-rtit* 'cause pain'
g.	*dam* 'well'	→	*pdam* 'make well'
h.	*rdel* 'wake (intr.)'	→	*prdel* 'wake (trans.)'

i.	*piir* 'frightened'	→	*ppiir* 'frighten'
j.	*kui* 'break (intr.)'	→	*pkui* 'break (trans.)'
k.	*rthlut* 'shut (intr.)'	→	*prthlut* 'shut (trans.)'
l.	*khaan* 'block'	→	*pkhaan* 'make block'

2.5.3 Koireng

Koireng, also spoken in central Manipur, has an *m*-initial causative; however, the causative in question differs from all of the ones seen so far in that it consists of a syllable ending in a nasal. (58) provides illustrations.

(58) Koireng (Ch. Yashawanta Singh 2010: 83):

	simplex		***causative***
a.	*ril* 'speak'	→	*min-ril* 'cause to speak'
b.	*pa* 'read'	→	*min-pa* 'cause to read'
c.	*tan* 'run'	→	*min-tan* 'cause to run'
d.	*sin* 'small'	→	*min-sin* 'cause to smaller'
e.	*suoy* 'cook'	→	*min-suoy* 'cause to cook'

2.5.4 Monsang

So far there is not extensive evidence for a prefixal causative element in Monsang, but the example cited by Konnerth in (59) suggests the presence of a prefix of an element, *mím-*, (or perhaps *míN-*, with an assimilating final nasal?) which would more or less correspond to the element just noted in Koireng:

(59) Monsang causative prefix:

í-mím-bùm-hɔ̀ *tʰá:-né*
NMLZ-CAUS-help-PROX be.good-IPFV:INTR
'making them help is good' (Konnerth 2021: 45)

Monsang reportedly also has a prefixal element *ŋ-*, with a variety of detransitivizing functions described in Konnerth (2021). Some examples are given in (60a-b).

(60) Monsang detransitivizing prefix (Konnerth 2021: 44):

a. reciprocal sense
ǹ-dɔ̀:-hé-nè
DETRANS-love-PL-IPFV:INTR
'they love each other.'

b. passive sense
í:n *ǹ-tʰè:-sé*
house DETRANS-destroy-PRF
'the house has been destroyed.'

Konnerth also notes more restricted uses of the prefix reflecting an antipassive function.

2.5.5 Chiru

Spoken in various pockets in central Manipur by about 8,500, Chiru has a *mV-* causative prefix, exemplified in (61).

(61) Chiru *mV-* causative prefix (Awan 2018: 123):

	simplex		***causative***
a.	*tán* 'run'	→	*má-tàn* 'make someone run'
b.	*zà* 'sleep'	→	*má-zà* 'make someone sleep'
c.	*sák* 'eat'	→	*má-sàk* 'make someone eat'
d.	*tʰòi* 'rise up'	→	*má-tʰòi* 'make someone rise up'

Interestingly, Chiru has a reflexive prefix *rV-* which is not clearly related to any of the other elements discussed in this paper. The element in question, illustrated in (62), bears some resemblance to a venitive/cislocative directional attested in Central languages (e.g., *rak-* in Hakha Lai). While this is perhaps not the most obvious source for a reflexive marker, it seems like a feasible development.

(62) Chiru *rV-* reflexive prefix (Awan 2018: 123):

	transitive		***reflexive***
a.	*pɛ̀* 'beat'	→	*ré-pɛ̀* 'beat oneself'
b.	*mùk* 'see'	→	*rú-mùk* 'see oneself'
c.	*bèk* 'speak'	→	*ré-bèk* 'talk to oneself'
d.	*má* 'touch'	→	*rá-mà* 'touch oneself'

2.5.6 Tarao

The Tarao, whose language is described by Ch. Y. Singh (2002), live mainly in a few villages in Chandel district of Manipur. Tarao has highly noteworthy prefixal valence-changing morphology.

Most remarkable is a prefixal benefactive marked by *kəm-*, illustrated by the forms in (63).

(63) Tarao's benefactive prefix *kəm-* (Singh 2002: 62-63):

	simplex		***benefactive***
a.	*sak* 'eat'	→	*kəm-sak* 'eat for some one'
b.	*in* 'drink'	→	*kəm-in* 'drink for some one'
c.	*kəl* 'climb'	→	*kəm-kəl* 'climb for some one'

To our knowledge, this is the only instance of a prefixal benefactive in any South Central language. Indeed, prefixal benefactive markers are otherwise essentially unreported in this area. Moreover, the suffixal benefactives which occur in South Central invariably grammaticalize from the verb 'give', which the Tarao prefix is not clearly relatable to, although the *m* of the prefix is conceivably relatable to a 'give' root.

Tarao also has a curious causative prefix with the form *kim-*. See the examples in (64)

(64) Tarao's causative prefix *kim-* (Singh 2002: 62):

	simplex		***causative***
a.	*troŋ* 'speak'	→	*kim-troŋ* 'cause to speak'
b.	*pa* 'read'	→	*kim-pa* 'cause to read'
c.	*lon* 'throw'	→	*kim-lon* 'cause to throw'
d.	*tlan* 'run'	→	*kim-tlan* 'cause to run'

Finally, Tarao reflexives are marked by prefixal *ki-*, closely matching the formation we saw most clearly in Northeastern languages. See the examples in (65).

(65) Tarao's reflexive prefix *ki-* (Singh 2002: 62):

	transitive		***reflexive***
a.	*sak* 'eat'	→	*ki-sak* 'eat oneself'
b.	*mətha* 'send'	→	*ki-mətha* 'send oneself'
c.	*kheŋ* 'come'	→	*ki-kheŋ* 'come oneself'
d.	*pa* 'read'	→	*ki-pa* 'read oneself'

On the face of it, Tarao is thus quite anomalous. Only the reflexive prefix is recognizable. However, a consideration of the lexical materials included in Singh's description shed some further light on the language's history. It turns out there are a number of presumably causative forms (see the list in 66) which contain just a *mə-* prefixal element, suggesting that for some reason additional bulk has been added to the *m* of the currently productive causative prefix.

(66) Tarao forms containing *mə-* prefixal element:

a. *mətha* 'desert' (but also translated in Singh 2002 as 'send'; see (65b) above)
b. *məthlaph* 'fold'
c. *məthoy* 'hang'
d. *məsəŋ* 'answer'
e. *məthup* 'hide'
f. *məhoŋ* 'open'
g. *mənu* 'show'

In many of these, the prefix is attached to recognizable roots, e.g., *nu* in (63g), which occurs elsewhere in South Central, although it is not reconstructed by Van Bik (2009) (cf. Khumi *niw*^{l} 'see' < **nu*); 'hide' includes Van Bik's root #390, 'open' includes his root #496, and 'fold' contains his root #1287.

3 Summary and some observations on diachrony

Tables 1 and 2 summarize what the previous sections show regarding the distribution of widespread valence-affecting prefixes in SC. + indicates clear presence and – clear absence of the

characteristic. (+) indicates the relatively marginal presence of a characteristic in a given branch of the group.

Regarding prefixal causatives, there is good evidence for a *p*-causative in Maraic, Southwestern, and Northwestern. The *m*-causative variant is seen in Southeastern, Southwestern, and Northwestern. *t*- and preglottal causatives are found exclusively in Southwestern and Southeastern, respectively. Finally, the consonant mutation causative pattern involving sonorant devoicing or aspiration of a root initial consonant is best attested in Core Central and the Southeastern language, Hyow, with traces in Maraic, Northeastern, and the rest of Southeastern. In the latter this phenomenon typically occurs in conjunction with the *m*-causative.

Marker	*Core Central*	*Maraic*	*NE*	*SE*	*SW*	*NW*
p-causative	-	+	-	-	+	+
m-causative	-	-	-	+	+	+
t-causative	-	-	-	-	+	-
preglottal causative	-	-	-	+	-	-
mutation causative	+	(+)	(+)	+	-	-

Table 1. Distribution of widespread valence-increasing prefixes

Regarding middle (valence-decreasing) prefixes, Core Central, Maraic, and Southwestern have vowel-shaped markers. Northeastern languages have the clearest attestation of the *ki*-marker, with traces in Maraic, Northwestern, and (possibly) Southwestern. The (vowel-)nasal middle variants are most widespread, attested in all subgroups of SC other than Northeastern.

Marker	*Core Central*	*Maraic*	*NE*	*SE*	*SW*	*NW*
V-	+	+	-	-	+	-
(V)N-	+	+	-	+	+	+
ki-	-	+	+	-	(+)	+

Table 2. Distribution of widespread valence-decreasing prefixes

Several issues of diachrony present themselves from these distributions, which we will briefly address here.

- The *m*- and *p*-causatives both have a wide distribution, and would appear to be related, so which one is original?
- What is the status of the *t*-causative in Southwestern, and what is its relationship to the preglottalization (*~k-* ʔ) markers found in Southeastern?
- What is the relationship between these causative markers and the mutation causative?

- What account can be given for the distribution of the different middle markers?

On the first issue, while both variants of the causative prefix have roughly equal spread in terms of the independent SC subgroups, it is apparent that these markers must have originally involved the non-nasal variant as their original form. SC-external evidence in Tibeto-Burman leads Matisoff (2003: 132ff.) to posit multiple parallel grammaticalizations of the root 'give' (an excellent source for a causative marker) in different major Tibeto-Burman subgroups, including SC.[32]

The variation between *m-* and *b-* for this prefix noted in Lemi may also suggest that the stop in this prefix was originally oral rather than nasal. Jacques (2019) also argues that since Mara has both *pa-* causative and other (e.g., reciprocal) *ma-* prefixes, while other languages do not, Mara must be conservative, and that therefore **pV-* is the correct reconstruction for the prefix.

Why an originally **p*-causative would change into an *m*-causative, which presumably occurred independently in different parts of SC, is not entirely clear. The presence of a nasal at the end of the marker in Koireng suggests that possibly there was a nasal in the original marker which triggered a shift from *p* to *m* in disparate languages. However, what the provenance of this nasal element would be is unclear, as there does not appear to be evidence for it at a higher level in Tibeto-Burman.

One possibility is that the nasalization comes from some (nasal) remnant of a venitive/cislocative marker, which might have been situated on either side of the causative element in question. Such an element may have occurred frequently in causative constructions, especially to the extent that it has been involved in the development of participant marking systems (see DeLancey (2023)).

A further possibility is suggested by the intransitive/transitive pairings seen for Khumi in example (21). This data would seem to involve the nasal of a middle prefix fusing with the bilabial stop from the causative prefix in the intransitive members of these pairs. If this were a phenomenon which was earlier present in other languages besides Khumi, it might have yielded a developmental stage at which a given causative stem had both nasal and non-nasal variants. Under such a state of affairs, analogy may have resulted in a generalization of the nasal variant over the non-nasal one in causative forms.

Although these both seem to be promising avenues for explanation, we must admit one glaring problem: languages which have either *p-* or *m-* causative prefixes also frequently have nouns which retain proto-prefixes. Generally, when a language has a *p*-causative (like Khumi or Lamkang), relevant nouns almost without fail have a *p-* lexical prefix; if a language instead has an *m*-causative (like Chiru or Koireng), the nouns in question have an *m-* lexical prefix. Accounts for the development of **p* > *m* in the causative prefix based on either assimilation to directional or participant markers, or based on analogical formation, do not appear to account for the developments we witness in lexical noun prefixes.

Regarding the *t*-causatives in Southwestern, we have already mentioned that Jacques' suggestion that this is a reflex of the famous **s*-causative appears reasonable. Whether there is a

[32] Jacques (2019), on the contrary, suggests that these causative constructions may not be independent grammaticalizations but could instead reflect old morphology inherited from an earlier node under Trans-Himalayan. We will not take a stand on this issue here.

relationship between the forms with *t-* causatives in Southwestern languages and those involving preglottalization (or *k-*?) in Southeastern ones remains to be systematically evaluated.

As a next step, we should determine if the set of forms involving either *p-/m-* or *t-* (or preglottal) causativization in Southwestern and Southeastern overlaps significantly with the forms exhibiting the mutation causative in languages where it is common, such as Hyow and Lai. The fact that Southeastern languages like Daai and K'Cho have forms involving both a reflex of the **p-* causative *and* mutation suggests that the mutation causatives we see in languages like Hyow and Lai may not be attributable solely to an **s-*causative, but instead may be the result of either the **s-*causative or the **p-*causative.

An anonymous reviewer suggests that there might even be a more complicated history. In particular, they suggest that the mutation causatives involving voiced/voiceless sonorant alternation perhaps reflect one causative prefix (the **s-*causative), while mutation causatives involving inaspirate and aspirate stop initials reflect some other origin. The provenance of the alternation in the latter instances might not even involve causativization, but rather deaspiration of an original aspirated stop in formation of an intransitive.

At this point such a two-pronged historical account cannot be discounted as a possibility. However, the first piece of the account, that the voiced/voiceless sonorant alternation originates from an **s-*causative, would not seem to be fully supported by the SC data. There are clear instances in Daai and K'Cho where it is reflexes of the **p-* causative prefix which appear to devoice an initial sonorant. Moreover, if Jacques' (2019) hypothesis that the *t-* causative prefix seen in Southwestern languages like Khumi and Lemi reflects the **s-*prefix, said prefix commonly occurs with non-sonorant initial bases in the languages which display it. Suffice it to say that the situation in SC remains quite muddled at this point. We require further information on specific etyma which exhibit these different formations, and will need to assess their histories systematically once the data is forthcoming.

Finally, regarding middles, it would appear that the earliest layer of middle marking is represented by the nasal middle, which is found in all branches of the subgroup besides Northeastern. The vocalic elements either represent a second layer of middle marking, or they are a reduction from an originally *VN-* marker. The *ki-/k'-* marking is the most restricted, and would appear to have originated in the Northeastern group, from whence it feasibly spread via contact to Lawmtuk-Ruawghawn in Maraic, and to Tarao in Northwestern. Its relative productivity, especially compared to the nasal constructions in Southwestern and Southeastern, also suggests a more recent development. The *k-* reciprocal marking seen in Southwestern (Mro-Khimi and possibly Rengmitca) may pose a challenge for an account based on areal spread, however.

4 Conclusion

It should be clear from this survey and the discussion in Section 3 that we require further information on these usually unproductive prefixal formations in order understand how they work fully for specific languages, and also to improve our understanding of their diachronic origins and developments. Nevertheless, we hope that our survey is as complete as possible, and that the questions and potential accounts we raise in our discussion will serve as a firm foundation for future work in this area.

For a given language, investigators should ideally compile exhaustive lists of which verbal roots can occur with transitivizing and detransitivizing prefixes and describe any idiosyncratic

meanings that result from the combination of verbal root and prefix. Careful study of the interaction of such elements with directional markers and participant indexation, which often occupy a similar (preverbal) location in the verbal complex, will also be a central task in documenting and accounting for the history of these prefixes.

Abbreviations

1	first person	IPFV	imperfective
2	second person	ITR	iterative
3	third person	LOC	locative
I	form I stem	MID	middle
II	form II stem	NEG	negative
AGR	agreement	NF	non-future
AGTM	agent marker	NON.FUT	non-future
APPL	applicative	OBJ	object
CAUS	causative	OBL	oblique
CLASSF	classifier	PASS	passive
CL.FIN	clause final particle	PFV	perfective
COM	comitative	P	plural
D	dual	PL	plural
DEIC	deictic	POSS	possessor
DEM	demonstrative	PRO	pronoun
DETRANS	detransitivizer	RCP	reciprocal
DU	dual	REAL	realis
DUR	durative	REC	reciprocal
EMOT	emotive particle	REF	reflexive
EMPH	emphasis	REFL	reflexive
ERG	ergative	S	singular
EVID	(hearsay) evidential	S	intransitive subject
EXCL	exclusive	SEQ	sequential converb
FOC	focus	TOP	topic

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