The Development of Nominal/Non-Nominal Class Marking by Tone in Shimen Hmong

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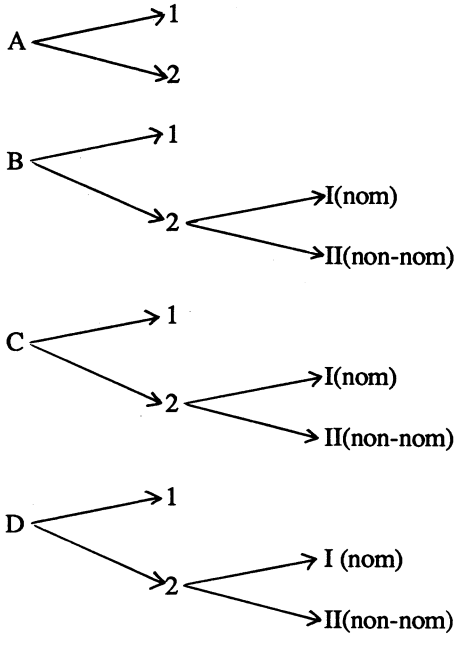
1. Introduction.

Tone in the Shimen dialect of Hmongic (called by its speakers a^{55}-m̊au^{55}) spoken in Weining district, northwest Guizhou province, China is atypical not only of the Hmong-Mien (Miao-Yao) family but also of the dialects of Hmongic most closely related to it, in that one of its functions is to mark a nominal/non-nominal contrast in three of its eight historical tone categories.[1]

(1)



55	ta^{55}	"thick"
35	d̤a^{35}	"to come"[2]
55	ta^{55}	"to shake hands"
33	dai^{33}	"large bowl"
11	d̤o^{11}	"to wait"
33	ta^{33}	"to kill"
53	dzau^{53}	"chisel"
31	da^{31}	"to die"
11	tai^{11}	"to pick up"
53	dau^{53}	"bean"
31	d̤a^{31}	"to step on" (Wang 1979)

In the leftmost column, the letters "A", "B", "C", and "D" represent Proto-Hmong-Mien tone categories. The primary split of each of these original tones into subcategories "1" and "2" was conditioned by the feature of voicing in the initial consonant. The number "1" tone words originally had voiceless initials and the number "2" tone words originally had voiced initials: in Shimen this contrast is retained. The development of the secondary split according to word class membership is the object of the present study. Following are some pairs exemplifying this tone split in categories B2 and C2 (minimal pairs in D2 are

lacking to me). These pairs, whether corresponding to one root or two, would be homophonous in other Hmongic dialects:

(2)	nominal	non-nominal
B2:	mo^{33} "fly "(insect)	mo^{11} "fine" (adjective)
	ndzie^{33} "a braid of hair"	ndzie^{11} "to braid"
	vɯ^{33} "urine"	vɯ^{11} "to urinate"
C2:	ndlo^{53} "interior"	ndlo^{31} "to rest on"
	ɳɖau^{53} "young man"	ɳɖau^{31} "to pick"

(Wang 1979)

Marking of major word class by tone is quite rare in Asian tone languages generally,[3] but is common in African tone languages. An account of the development of grammatical tone in this Asian language is thus important as a case study in typological change.

This study of the function of tone in Shimen Hmong is part of a larger typological study of tone languages being conducted by the author (Ratliff 1991a and 1991b). In this larger study, tone function is used as an entrée into the delineation of networks of tone language features. Although often supported and sometimes induced by language contact, tone language type change is understood as triggered by a change in one or more of the features of these networks which ultimately leads to a change in possible tone function. This is the path which I claim Shimen has taken to arrive at its present areally uncharacteristic shape.

Most Asian tone languages are characterized by lexical tone and, optionally, morphological tone which affects only small word classes, performs evaulative functions, or performs discourse functions. These tone functions are related to other features of Asian languages, namely, the absence of extensive segmental morphology and limited resources for word-building. Tones must be used primarily to generate more lexical contrasts since there are few other devices available to do so. If grammatical marking of large word classes by tone were to take place, the primary function of tone in these languages would be cancelled out. It therefore does not occur except in cases like Shimen, where we can see what may be a type change in progress. Tonal marking of large word classes in Shimen is able to develop because of the concomitant presence or development of certain related features of its tone language network: Shimen has developed limited segmental morphology, namely prefixes and ablaut evaluative morphology (Wang 1957, 1983), and has retained the old voicing contrast in initial consonants, a contrast levelled in most other dialects. These two facts set the stage for the development of a type of tone sandhi which spreads the tone of a word or prefix rightward across a voiced consonant. I will demonstrate that the tone split in categories B2, C2, and D2 is dependent on the existence of old nominal or nominalizing prefixes and reflects the historical effects of a type of tone sandhi which is still present in the dialect.

I would like to acknowledge my debt to Wang Fushi of the Institute of Nationality Studies, Chinese Academy of Social Sciences, who is the senior authority in the

field of Hmong-Mien historical and descriptive studies. He is also the individual who knows Shimen Hmong best, based on his field work in Guizhou province, his collaboration with Wang Deguang, a native speaker of the Shimen dialect and trained linguist, and the resultant studies of various aspects of this dialect which have been published in four long and detailed articles (1957, 1982, 1983, 1984). Surprisingly, in his published work Wang makes no attempt to explain the origin of the grammatical marking by tone that he reports. I have decided to undertake this task, but with the awareness that it is wholly dependent on Wang's important work.

2. The historical development of Shimen class marking by tone.

2.1. Determination of the original B2, C2, and D2 tones.

The first step in solving the puzzle of the unusual word class marking by tone in Shimen involves making a hypothesis as to which of each pair, the nominal tone or the non-nominal tone is the original tone and which is the derived tone. Four facts argue for the non-nominal tone as the original and the nominal tone as the derived in each case.

2.1.1. Breathy phonation in tones A2, B2II, and D2II. The syllables to which number 2 tones are associated (the "yang" tones in the Hmong-Mien, Chinese and Tai-Kadai families) had, or, in the case of Shimen Hmong, still have, voiced initial consonants. The feature of voice in initial consonants has been associated by many scholars with the development of breathy phonation in adjacent vowels: see, for example, see the work of Sherard (1972), Diffloth (1984), and Solnit (1989) on languages as diverse as Shanghai, Mon, and Kayaw. The languages and dialects of Hmong-Mien show this same association. A Chinese Academy of Sciences survey team (1959) reports that syllables associated with tones B2 and especially C2 (and, occasionally, tones A2 and D2) across the Hmongic family are typically characterized by initials with voiced aspiration, which is equivalent to what western scholars would characterize as breathy phonation on the syllable level. The breathiness associated with the non-nominal tones A2, B2 (non-nominal) and D2 (non-nominal), then, probably was associated with the pre-split values of tones A2, B2 and D2. The fact that the yang tone which did not split, tone A2, is characterized by breathiness lends further support to this hypothesis.

2.1.2. Homogeneity of the nominal classes. A second strong argument for the non-nominal tones as the original B2, C2, and D2 tones is the limitation of the nominal tones to use with monosyllabic nouns and classifiers. To the "non-nominal" tones, words of all other parts of speech within these historical tone categories are assigned. In line with generally accepted linguistic practice, it makes sense to identify the derived form as the one with the more restricted (and predictable) use. The same observation must have led Wang (1984: 59 ff) to make the practical suggestion that the non-nominal tone be used in any writing system developed for Shimen Hmong, since the nominal tone can be figured out by the reader/writer through the application of a single rule.

2.1.3. Limited size of the nominal classes and variation in speech. Finally, Wang reports that the number of words in the three nominal classes are fairly small. He further reports that there is some variation in the tonal realization of these nominals between the value of the nominal and the non-nominal tones. He reports no equivalent variation in the pronunciation of the non-nominals (Wang 1984: 61,71).

2.2. Hypothesis for the development of the nominal tone classes. With the probability of the greater antiquity of the non-nominal tone thus established, we can now proceed to a discussion of how the nominal tone classes developed.

There is very good indirect evidence that nominal and/or nominalizing prefixes caused the root tone of nouns in tone categories B2, C2, and D2 to change. These prefixes subsequently disappeared, giving rise to a class of tonally marked nouns. It is not clear which prefixes disappeared or under what circumstances they disappeared. However, much can be inferred about the nature of the tone relationship between them and the tones of their roots. I believe that the exclusion of tone A2 from this secondary split can be explained as a consequence of the nature of this prefix-root tone relationship. Further, I think we have enough evidence to understand why this split was confined to syllables with voiced initial consonants. Finally, we can make an educated guess about the semantic and phonological nature of these prefixes.

First, however, I would like to briefly establish why such a development would not be unexpected in a member of the Hmong-Mien family based on the widespread existence of prefixes, tone sandhi affecting roots following prefixes and subsequent prefix loss in both Shimen and in other dialects.

2.2.1. Family precedents for separate aspects of the hypothesis.

2.2.1.1. The presence of nominal and nominalizing prefixes in the family and in Shimen. Nominal prefixes have been recorded for several dialects related to Shimen as well as for Shimen itself. Although semantically like classifiers, prefixes are obligatorily present in every syntactic environment. Some examples are given below:

(3)

Dananshan (West Hmongic)		(Wang 1985)
so^{43}-	parts of body	
qa^{43}-	humans, abstractions . . .	
Meizu Bunu (West Hmongic)		(Mao, Meng, Zheng 1982)
ka^{33}-	insects, vegetables	
pu^{43}-	animate, human	
Yanghao (East Hmongic)		(Wang 1985)
tɕi^{33}-	humans	
ɛ^{33}-	names	
Layiping (North Hmongic)		(Wang 1985)
qɔ^{35}-	humans, names, plants . . .	
ta^{35}-	animate non-human, natural forces	

Nominalizing derivational prefixes have been reported in other dialects as well. Examples appear below:

(4)

White Hmong (West Hmongic)	(Xiong et al. 1983)
ke^{24}-	
Meizu Bunu (West Hmongic)	(Mao, Meng, Zheng 1982)
pu^{33}-	
ta^{22}-	

Although possibly the result of the fact that there is more published information on Shimen than on any other West Hmongic dialect spoken in China, Shimen seems to be characterized by more prefixes than other members of this branch of the family. There is at least one example of a derivational prefix in Shimen, and that is the prefix ʔa- (with variable tone) when used with a classifier. With the addition of this prefix, classifiers become "abstract nouns" according to Wang. The example reproduced below seems to indicate that the derived noun plays a role in partitive constructions:

(5) tae^{55} te^{55} bau^{35} ɲi^{55} a^{33}-te^{55} ɬo^{55} ta^{55}-die^{31}.

some clf flower this (of)bud(s) big very
"(As to) some (of) these flowers...the buds are very big."
(Wang 1957: 132)

This brief sampling suggests that it is not unlikely that a nominalizing prefix or prefixes would have been available to play a role in the development of tonally marked word classes in Shimen.

2.2.1.2. The evidence of prefixes causing tone change in the root syllable. To yield the desired result, however, we must be convinced that this hypothetical prefix could have plausibly altered the tone of the root to which it was attached. This needs to be demonstrated, because there are word classes which do not typically induce tone change in following words of certain other classes. For example, Wang specifically mentions the general inability of classifiers and verbs to cause tone change in following nouns (1984:18). This is true of the dialect I have studied closely as well, White Hmong of northern Southeast Asia (West Hmongic).

Prefixes cause tone change in a following root in the modern form of the language as described by Wang (1957, 1984). His examples include prefix-classifier, prefix-noun, and prefix-verb (limited to the only two verbal prefixes: the reciprocal and the negative). The prefix-root relationship constitutes an example of the usual sandhi domain in Hmongic: two morphemes not separated by a major constitutent boundary standing in a close semantic relationship to one another. Other examples are the numeral-classifier collocation and the noun-noun compound collocation.

The tone change a prefix can effect upon a following root in Shimen can represent either one of two types of rightward tone sandhi. The first is a paradigmatic replacement type of tone sandhi which is of some antiquity (Downer 1967, Wang 1979, 1984, Ratliff 1987). I will refer to this system as the "West Hmongic" type, since it appears in several dialects of this branch. Although doubtlessly phonetically motivated at some point, it no longer appears to be so today. There is also a later tone sandhi system peculiar to Shimen which is possible, in the main, to describe phonologically. I will refer to this system as the "Shimen" type (Wang 1984: "tone change in liaison"). The complementary roles of these two types of tone sandhi in Shimen is crucial to the solution of this historical problem. Both will be discussed fully in section 2.2.2.1 below.

2.2.1.3. The link between tone change and subsequent prefix loss. In his 1979 comparative study of Hmongic initials and finals in nine dialects, Wang convincingly uses the "disappearing prefix analysis" to account for cognates with

had altered the tone of the cognate according to the rules of the West Hmongic tone sandhi system. Examples of roots with anomalous tones in Shimen explained in this way include (1) Shimen tshai^{11} (D1) "half (catty)" corresponding to words with C1 in 4 other dialects, whose tone Wang attributes to the influence and subsequent loss of the numeral "one", and (2) Shimen lau^{33} (C1) "cock" corresponding to words with B1 in 5 other dialects, whose tone Wang attributes to the influence and subsequent loss of a prefix (Wang 1979: 35, 69).

A second piece of evidence for the derived nominal tone as a trace of an old prefix in Shimen involves an interesting set of exceptions to the word class assignment by tone in historical categories B2, C2, and D2. The only nouns which are not marked by the tone of the nominal class, but rather retain the older tone of the non-nominal class, are those which are prefixed, as exemplified below:

(6) "persimmon": noun with non-nominal tone B2II, prefix retained in ki^{55}-n̥ie^{11}
"tongue": noun with non-nominal tone D2II, prefix retained in a^{55}-ndlai^{31}
"bamboo": noun with non-nominal tone D2II, prefix retained in i^{55}-ɖey^{31}
(Wang 1979: 37, 47, 73)

The clear conclusion to be drawn from this data is that in the very case we are interested in, nominal class membership is linked to the *absence* of a prefix: the one which I claim caused it originally to change tone. It is not clear whether these exceptions can be explained by the particular prefixes which remain or by the withering of the sandhi system that used to link the now-absent prefixes to their roots. I find the second explanation more likely since, as can be seen above, many prefixes are attested in these exceptional cases.

2.2.2. The mechanism of the change in Shimen.

2.2.2.1. The nature of the tone sandhi involved. To understand the nature of the tone sandhi which led to the tone split according to grammatical class, it is necessary to first review and compare the two types of tone sandhi operative in Shimen mentioned above: the West Hmongic type and the Shimen type.

The West Hmongic tone sandhi system involves the substitution of the reflex of one historical tone category for another in a word following a word with an A tone reflex. There are also restrictions on the type of syntactic relationship which must obtain between the trigger on the left and the affected syllable on the right. The substitutions, by historical category, appear below:

(7)

A2		
B2 ⟶	C2	
D2		
		Al -
		A2 -
Bl ⟶	Cl	
Cl ⟶	Dl	

(Ratliff 1987: 97)

The examples from Shimen given in Wang's data involve only the last two rules on that list, such as:

(8)

tu^{55}	ki^{55}(B1)	⟶	tu^{55}-ki^{33}(C1)
son	grandson		offspring
qu^{55}	tʂho^{33}(C1)	⟶	qu^{55}-tʂho^{11}(D1)
old	clothing		old clothing

(Wang 1984: 19, 21)[4]

Unlike the West Hmongic tone sandhi system, the complex "Shimen type" of tone sandhi can be described phonologically. The most general phonological rule we can extract from this system is that the tone of the second syllable of a disyllabic word or tightly-knit phrase (e.g. possessive-noun, numeral-classifier, verb-expressive) lowers to 31 when it is high falling, and to 11 in many other cases, as exemplified below. The concomitant change of phonation type indicates that this system also involves historical categories: for example, it is the B2II low level tone with breathy voice that shows up as the change tone in these examples, not the D1 low level tone with modal voice.

(9)

qha^{33}	va^{53}	⟶	qha^{33}-va^{31}
guest	meal		guest meal
ndzai^{53}	mo^{53}	⟶	ndzai^{53}-mo^{31}
bundle	wheat		bundle of wheat
tu^{55}	ba^{31}	⟶	tu^{55}-ba^{11}
son	hug		adopted son
la^{53}	nɯ^{33}	⟶	la^{53}-nɯ^{11}
others	horse		others' horse
ɻey^{11}	nɯ^{33}	⟶	ɻey^{11}-nɯ^{11}
bell	horse		horse bell

(Wang 1984: 19-28)

The details of both kinds of changes are set forth in Wang 1984, section 3 in a set of 33 productive tone sandhi rules, organized for presentation on the basis of historical tone category. At first glance, this long list of rules seems to reflect no particular pattern, either historical or synchronic. The complexity is significantly reduced, however, when the two tone sandhi systems are disentangled. First, there is a striking by-product of a division of Wang's list of 33 into two groups, one for West Hmongic rules and the other for Shimen rules: the former group affects only syllables with voiceless initials and the latter affects only syllables with voiced initials (as can be seen in the examples in 8 and 9 above). The significance of this discovery will be taken up in the next section. 29 of Wang's 33 productive tone sandhi rules are Shimen rules and 4 are West Hmongic rules (B1 to C1 and C1 to D1 both after A1 and after A2). When the Shimen rules are analyzed by tone values as opposed to historical tone category, the reduced list of 29 can be further reduced to 15. In 9 rules out of the 15, the second word of the complex is lowered to 31 or 11.

As mentioned above in connection with the seemingly unmotivated phonation type changes in these rules, history is still involved in the Shimen type of tone sandhi. Further proof of this is that the trigger for the Shimen changes is, in 10 out of the 15 rules, a reflex of either tone category A1 (55) or A2 (35), as in the West Hmongic system. Furthermore, an A tone trigger does not consistently lead to the lowering of the tone of the second word. The 6 Shimen rules with A tone triggers which do not involve lowering can all be analyzed synchronically as involving the spread of the final high tone to the first mora of the second syllable, as exemplified below:

(10)

au^{55}	ŋdʑau^{35}	→	au^{55}-ŋdʑau^{55}
water	mouth		saliva
ɴGai^{35}	ŋɯ^{35}	→	ɴGai^{35}-ŋɯ^{55}
meat	cow		beef
tl̥au^{55}	nɯ^{33}	→	tl̥au^{55}-nɯ^{53}
hair	horse		horsehair
dlo^{35}	mbə^{33}	→	dlo^{35}-mbə^{53}
oil	fish		fish oil

(Wang 1984: 19-23)

It is important to note that this is a minor pattern: all of the collocations exhibiting Shimen tone sandhi in which the first word has a reflex of tone B, C, or D, as well as some of the collocations in which the first word has a reflex of tone A, involve the lowering of the tone of the second word to 31, or 11, as exemplified in number 9 above.

To determine which of these types of tone sandhi played a role in the development of the nominal tones in categories B2, C2, and D2, we need to look at the values of the nominal tones with respect to the non-nominal tones:

(11)

B2	non-nominal 11 →	nominal 33
C2, D2	non-nominal 31 →	nominal 53

Note that the nominal tones are higher than the non-nominal tones, from which we have determined they are derived. Of the tone sandhi systems operative in Shimen, only the minor Shimen type rules exemplified in 10 above could have produced this effect. These rules do not involve lowering as do the major rules, but seem to involve spreading, and, since the A-tone triggers are high, raising of the second syllable. I hypothesize that the tone sandhi involved in the development of the nominal tones was closer to the minor Shimen type, that is, involved spreading, and the prefix bore a high tone, causing the original (=non-nominal) tone to rise.

Further, assuming that the higher nominal tone was formed as the result of a close relationship with a high tone prefix may give us an explanation as to why the A2 tone did not split in this way: with a value of 35, it is already high -- or at least significantly higher than any of the other tones associated with syllables with voiced initials.[5]

2.2.2.2. The limitation of the effects of this tone sandhi to words with voiced initials. The data presented above also allow us to propose an

explanation for the exclusion of roots with voiceless initials from the tone split according to word class which occurred in categories B2, C2, and D2.

As mentioned above, in the newer Shimen type of tone sandhi, a word or prefix alters only the tone of a following word with a voiced initial. The only rules in which words with voiceless initials are affected in Wang's list of 33 tone sandhi rules actually belong to the older sandhi system: Wang included them in his list of major tone changes since his focus in this section of his paper was on productive rules. From the examples given in Wang 1984, the only West Hmongic tone sandhi rules still operative in the modern language are those which influence words with B1 and C1 initials (the "1" of B1 and C1, again, indicates that the initial of the word with these tones are voiceless), as exemplified in 8 above. Wang's comparative study reveals only three words with voiced initials which may have been tonally altered by this older system (in each case, the triggering morpheme is gone).[6] There is no evidence that the three West Hmongic rules in which a word with a voiced initial is affected are still productive.

What we have, then, is a split in what type of tone sandhi rule applies when. The older tone sandhi system which makes reference to historical tone categories now affects roots with voiceless initials, and the newer tone sandhi system which makes reference to the values of tones now affects roots with voiced initials.[7] I would like to suggest that this may be due to the "permeability" (Lukas 1969) or transparency of the voiced initials, which makes either phonological union through lowering of the second syllable or spreading of the tone from the first syllable possible. What makes this plausible is that when the consonant is voiced, the consonant and adjacent vowels share a value for voicing. This may make it easier for other features to spread via an established laryngeal bridge. The roots with voiceless initials, lacking the laryngeal bridge, would thus have not been eligible for the type of tone change which led to the development of the nominal classes.

2.2.2.3. The nature of the lost prefix. The comparative evidence suggests that, if only one prefix was involved, it redundantly indicated "thinghood" on nouns and was capable of deriving nouns from other parts of speech. However, given the variety of prefixes in the modern language, it is possible that more than one prefix may have been involved. Its disappearance leads me to hypothesize that it may have been a phonologically lightweight prefix, perhaps just a single vowel. It is relevant to note in this context that Wang (1984:34) discusses the circumstances under which the prefix **?a-** may be lost in contemporary Shimen. If a classifier precedes a noun with an **?a-** prefix, he reports, the glottal stop preceding the prefix is lost. Further, if the vowel of the classifier is also **a-** or **ai-**, this prefix is entirely swallowed up. Something similar may account for the loss of our mystery nominal(izing) prefix. Finally, the tone of the prefix almost undoubtedly had a reflex of tone category A, since all of the West Hmongic tone sandhi rules require an A-tone trigger, 10 out of the 15 Shimen type rules also require an A-tone trigger, and a high tone prefix would be necessary to account for the raised tones of the nominal classes.

3. The bearing of the Shimen case on tone language typology and typological change.

Shimen Hmong is an interesting case because it appears to represent a typological change in progess. In a cyclic model for tone language type change I presented in Ratliff 1991a, the driving force behind type change is the growth and attrition of segmental morphology with concomitant word length change. Shimen has taken a significant step away from the "Asian" type and toward the "African" by taking the following series of small steps:

(1) the development of prefixes from nouns;

(2) the specialization of one or more prefixes as abstract nominal(izers);

(3) the change of root tone under influence from the prefix tone facilitated by retention of voiced stops; and

(4) the loss of the phonologically degraded prefix(es) with consequent nominal class tone marking.

These changes have resulted in the presence in the modern language of an emerging set of features that are diagnostic of the "African" type: (1) presence of segmental morphology, (2) greater mean word length, (3) higher possible number of syllables (due to retention of the voicing constrast), and perhaps (4) spreading tones.[8]

Shimen Hmong now occupies a position between the two better-represented poles of classic "Asian" and classic "African" tone languages. In my initial study of 30 tone languages in which 12 Asian, 12 African and 6 Central American tone languages were represented, there were 11 type A ("Asian" type) languages, 16 type B ("African" type) languages, and 3 mixed (perhaps transitional) types.[9] It is my belief that the combination of (1) relations of implication and entailment between pairs of features within the tone language feature networks and (2) communicative pressures keeps most tone languages congregated around the two poles. The three exceptions, Chin, Burmese, and Yoruba, along with the language of this study, are therefore of the greatest historical interest.

The classification of Shimen Hmong is difficult. Although there is grammatical marking of large word classes by tone, it affects less than half of the lexicon. Words remain predominantly monosyllabic and segmental morphology is marginal. Will Shimen necessarily move further toward full realization of type B (the "African" type)? Will it develop inflectional tonal morphology, for example? We would expect that only if there were signs of grammaticalization of free morphemes in the verbal phrase to mark tense or aspect or in the noun phrase to mark function or possession. Typology is only one pressure in historical change; powerful family patterns and areal pressures may keep Shimen Hmong in this intermediate position. The addition of more tone languages to the survey and the refinement of the model could show that there are many languages like Shimen which have apparently stabilized between types.

[1]According to Wang (1985:60), even other varieties of the Northeast Yunnan subdialect, to which Shimen Hmong belongs, are not characterized by the split. For an overview of the Hmong-Mien family, see Strecker 1987.

[2]The use of two dots under a vowel indicates breathiness, an aspect of the tone in my analysis. Wang indicates this feature as voiced aspiration, a feature of the initial consonant.

[3]Another example is Tibeto-Burman Chin and related dialects (Henderson 1965, 1967).

[4]Although the examples given in 8-10 involve compounds, they are relevant to our problem: prefixes change the tones of the roots to which they are attached according to both the rules of the older West Hmongic and the newer Shimen type of tone sandhi.

[5]The fact that tone A2 (35) is affected in the productive Shimen tone sandhi changes presented in this section does not argue against this hypothesis: I am suggesting that the same type of system accounts for the values of the nominal tones, not exactly the same system.

[6]There are two possible examples of West Hmongic A2 > C2 ("you(pl)" and the verb "to sink") and one example of West Hmongic B2 > C2 ("half(day)") mentioned in Wang 1979.

[7]This observation can also extend to and help explain some of the minor or exceptional tone sandhi rules catalogued by Wang (1984: 40 ff), which are presumably of the Shimen type since they are not attested for other dialects. The negative verbal prefix hi^{33}- only causes tone change in the verb to which it is attached if the verb starts with a voiced consonant and the prefix ʔa- which nominalizes classifiers only changes the tone of classifiers which begin with a voiced consonant (see also Wang 1957: 132-35). These minor sandhi rules introduce another complication: in some cases there is right to left tone sandhi (a kind of accommodation, or leveling of differences) which operates after left to right sandhi has taken place. I agree with Wang's analysis in this regard and see no easier way to account for the forms he has recorded.

[8]I include spreading tones as a feature of type B languages only provisionally at this point, because there are a number of type A languages, such as Shanghai, which have them as well.

[9]They are:

A: White Hmong, Biao Min, Siamese, Bouyei, Vietnamese, Bwe Karen, Amoy Hokkien, Mandarin, Cantonese, Hakka, !Xũ

B: Hausa, Somali, Grebo, Mende, Kikuyu, Pakot, Turkana, Kanuri, Dinka, Kxoe, Trique, Otomi, Mazatec, Zapotec, Amuzgo, Huave

Mixed: Chin, Burmese, Yoruba

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Notes

[1]According to Wang (1985:60), even other varieties of the Northeast Yunnan subdialect, to which Shimen Hmong belongs, are not characterized by the split. For an overview of the Hmong-Mien family, see Strecker 1987.

[2]The use of two dots under a vowel indicates breathiness, an aspect of the tone in my analysis. Wang indicates this feature as voiced aspiration, a feature of the initial consonant.

[3]Another example is Tibeto-Burman Chin and related dialects (Henderson 1965, 1967).

[4]Although the examples given in 8-10 involve compounds, they are relevant to our problem: prefixes change the tones of the roots to which they are attached according to both the rules of the older West Hmongic and the newer Shimen type of tone sandhi.

[5]The fact that tone A2 (35) is affected in the productive Shimen tone sandhi changes presented in this section does not argue against this hypothesis: I am suggesting that the same type of system accounts for the values of the nominal tones, not exactly the same system.

[6]There are two possible examples of West Hmongic A2 > C2 ("you(pl)" and the verb "to sink") and one example of West Hmongic B2 > C2 ("half(day)") mentioned in Wang 1979.

[7]This observation can also extend to and help explain some of the minor or exceptional tone sandhi rules catalogued by Wang (1984: 40 ff), which are presumably of the Shimen type since they are not attested for other dialects. The negative verbal prefix hi^{33}- only causes tone change in the verb to which it is attached if the verb starts with a voiced consonant and the prefix ʔa- which nominalizes classifiers only changes the tone of classifiers which begin with a voiced consonant (see also Wang 1957: 132-35). These minor sandhi rules introduce another complication: in some cases there is right to left tone sandhi (a kind of accommodation, or leveling of differences) which operates after left to right sandhi has taken place. I agree with Wang's analysis in this regard and see no easier way to account for the forms he has recorded.

[8]I include spreading tones as a feature of type B languages only provisionally at this point, because there are a number of type A languages, such as Shanghai, which have them as well.

[9]They are:

A: White Hmong, Biao Min, Siamese, Bouyei, Vietnamese, Bwe Karen, Amoy Hokkien, Mandarin, Cantonese, Hakka, !Xũ

B: Hausa, Somali, Grebo, Mende, Kikuyu, Pakot, Turkana, Kanuri, Dinka, Kxoe, Trique, Otomi, Mazatec, Zapotec, Amuzgo, Huave

Mixed: Chin, Burmese, Yoruba

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