

TONE SANDHI COMPOUNDING IN WHITE HMONG

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1. Tone Sandhi and Compound Formation¹

The term "sandhi" refers to phonetic changes occurring in words which are caused by certain phonetic characteristics of contiguous words. Thus "tone sandhi" is the change of tone in one word caused by the tone of a neighboring word. According to Kenneth Pike (1948: 25), "regular tone sandhi" narrowly described is "forced meaningless substitutions of one toneme for another . . . in which one toneme is perturbed by another." Eugénie Henderson (1967: 174) refers to "tonal alternation and compounding" and differentiates "tonal alternation," which affects meaning, from "tone sandhi," which she takes in the narrow sense given above.

White Hmong tone sandhi does not conform to either of the above descriptions of tone sandhi or tonal alternation exactly. It is of Pike's "arbitrary type" (1948: 26), in which the proper phonetic environment is not sufficient to guarantee tone change. Grammatical category and the particular lexical items involved also play a role. The compounds which result from tone change are sometimes different in meaning from a phrase involving the two unaltered words, but usually they are not. I choose to call tonal alternation in White Hmong "tone sandhi" (1) to emphasize the syntagmatic nature of the alternation, and (2) to emphasize the historical connection between the White Hmong "system relic" and the "regular" (mechanical) tone sandhi system from which it came (see Section 3. below). For reasons concerning the semantic unity of the members of the resultant tonally defined pairs and the behavior of a few of them as syntactic units (see Section 2.5.), I choose to call these pairs "compounds" after Lyman², and indicate their compound status with a linking hyphen in the orthography. Inasmuch as tone sandhi serves to create new words in White Hmong, it constitutes one of the morphological functions of tone in the language.

2. A Synchronic Account of White Hmong Tone Sandhi

2.1. On the Nature of White Hmong Tone Sandhi

Many words with high falling, low level, low checked, mid rising, and mid level tones (those words marked with -j, -s, -m, -v, and ɔ) respectively) have alternate tonal realizations when they enter into a particularly close relationship with a preceding word which has either a high level or high falling tone (-b, -j). Almost five hundred pairs of words which involve alternate tonal realizations, i.e., tone sandhi compounds, are listed in Appendix I of my dissertation (not

¹ This paper is simultaneously an expansion of a paper presented at the 1985 SEASSI Conference Panel on Hmong Linguistics and a reduction of Chapter II of my Ph.D. dissertation, "The Morphological Functions of Tone in White Hmong" (University of Chicago: 1986).

² Unpublished notes of Thomas A. Lyman, 1963, quoted in Heimbach, p. 454.

reproduced here in the interest of economy). A few examples here will serve to give an introduction to the nature of these tonally-defined compounds:

Noun-Verb Attribute (no change of style or meaning)	<i>dej siav</i> water cooked "boiled water" (H 298) ³	<i>dej-sia</i> "boiled water" (H 34)
Noun-Noun Attribute (with reported stylistic difference)	<i>hnoob tes</i> sun hand "sunray" (B <i>taw</i>)	<i>hnoob-teg</i> "sunray" (B <i>tes</i>)
Verb-Noun (with reported meaning difference)	<i>poob dej</i> fall water "to fall into water" (native speakers)	<i>poob-deg</i> "to drown" (B <i>dej</i> ; H 447)

There are both strict phonological (Section 2.2.) and syntactic (Section 2.3.) conditions on the occurrence of tone sandhi compounding; I have also observed that certain lexical items are more likely than others, given the same phonological and syntactic environments, to enter into such compounds (Section 2.4.). However, even after long familiarity with the compounds that do exist and the rules which limit their occurrence, it is impossible for me to predict which pairs of words must always compound, which (of those that meet the minimal criteria) must never compound, and which, as those examples cited above, can occur either way. Of those pairs of words which have been found both in a collocation of independent morphemes and in a tonally defined compound, some have concomitant meaning differences and some do not.

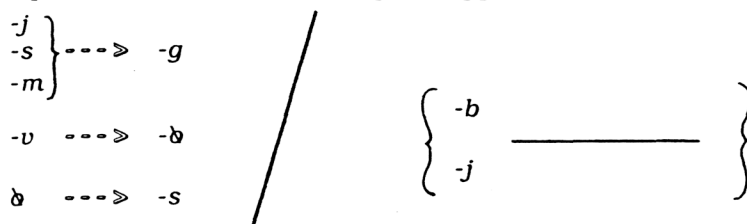
Apart from a number of frozen compounds which all sources and speakers seem to agree on (such as *teb-chaws* "country," from *teb* "land" and *chaw* "place"), the sporadic appearance of these compounds in the lexicon and the equal acceptability of both the compounded and the uncompounded forms in many cases indicates to me the truth of what Gordon Downer (1967) postulates: the tone sandhi system in White Hmong is an historical relic of a system that dates back no further, probably, than Proto-West-Hmongic (the Sichuan-Guizhou-Yunnan *fangyan* protolanguage), and which is in the process of dying out. The existence of a Proto-West-Hmongic sandhi system is inferred by Downer from a comparative study of five dialects of that branch including White Hmong, in which the system is eroded the furthest (see Section 3.1. for an expanded comparative analysis). Downer believes the sandhi system may someday disappear completely: it is possible for the original forms to replace the tonally derived forms in most cases, since speakers rarely cease to identify the base form and the sandhi form as the same "word" (1967: 596). Young speakers, as represented by the two young men I have had the greatest contact with, are beginning to use words with the base tone even in the syntactic collocation which most predictably gives rise to tonal compounding: the numeral-classifier collocation. They often meet questions about which tone is acceptable or better in certain collocations with a shrug of the shoulders, meaning that either is all right, and that neither will obscure communication.

³ "H" and "B" refer to the Heimbach and Bertrais White Hmong dictionaries.

For reasons that will be discussed fully in Section 3. below, I believe that compound formation by tone change is a new use being made of an old, once more regular and thoroughgoing, phonetically motivated tone sandhi system. The points of interest in a synchronic analysis of White Hmong tone sandhi are why it occurs when it does, what kinds of words are likely to be involved within the recognized phonological and syntactic constraints, and how these tonally defined compounds may differ in meaning and behavior from collocations made of the base forms of their component parts.

2.2. Phonological Conditions

White Hmong tone sandhi is of the progressive type; that is, the trigger word precedes the word that undergoes the tone change⁴. Although the changes were most likely due to neutralization under loss of stress in non-prepausal environments originally (see Section 3.3.), the tones that these changes gave rise to have become associated with certain tones in the basic inventory of lexical tones, so that the system in White Hmong today is one of paradigmatic replacement of one tone by another. The "neutralization effect" is still evident in the fact that five different tones collapse into a system of three. A representation of the specific changes which take place appears below:



It is important to remember that the above description of the phonological environment and changes captures the necessary phonological facts about tone sandhi, but that the proper phonological conditions alone are no longer sufficient criteria for change. As mentioned above, sandhi takes place optionally and, although its likelihood can be assessed, it takes place unpredictably. The focus is properly on its occurrence, therefore, rather than on its nonoccurrence. Nonetheless, there are three important exceptions to the scheme above, which are fairly easily explained.

2.2.1. Low Level (-s) Tone Exceptions

In an account of the White Hmong tone system from a diachronic perspective, we need to differentiate two low level (-s) tones. In White Hmong, the reflex of category B2 (the second of the three Proto-Hmong-Mien tones A, B, and C; the "2" indicates an ancient voiced initial consonant) merged with the reflex of category D1 (the D tone belongs to words that had final *-p or *-t in Proto-Hmong-Mien and arose later than the first three; the "1" indicates an ancient voiceless initial consonant). Only the words with low level tones which

⁴ Tone sandhi in the Mienic branch, on the other hand, is regressive. See Lu Yichang, [The Tonal Change in Morphology in Biao-min Dialect of Mien Language] MZYW 6 (December 1985), pp. 16-20, and Solnit (1985:175-91). Interestingly, tone sandhi in North Hmongic is also regressive (Ying 1962:73; Institute 1962:5).

can be assigned to tone category B2 on the basis of comparative evidence undergo tone sandhi. This indicates that the period when the tone sandhi process was productively generating new compounds predated the White Hmong tonal merger, since no low level (-s) tone word which can be assigned to tone category D1 undergoes tone sandhi. To illustrate the different behavior of the -s¹ tone (< B2) from the -s² tone (< D2), the following comparison between White Hmong and Green Hmong, which did not undergo the same tonal merger, is given below:

tone sandhi with

White Hmong -s¹ (< B2) corresponding to Green Hmong -g (< B2)

<i>tus</i> :	<i>ib-tug</i>	"1-animate- "	<i>tug</i>
<i>tais</i> :	<i>ib-taig</i>	"1-bowlful- "	<i>taig</i>
<i>tes</i> :	<i>pob-teg</i>	"round part-hand"	<i>teg</i>
		(=wrist bone)	

no tone sandhi with

White Hmong -s² (< D1) corresponding to Green Hmong -s (< D1)

<i>caws</i> :	<i>ib caws</i>	"1 leap- "	<i>caws</i>
<i>qais</i> :	<i>ib qais</i>	"1 skein- "	<i>qais</i>
<i>kws</i> :	<i>pob kws</i>	"corn"	<i>kws</i>

Similarly, tone sandhi does not affect the following D1 -s tone words:

<i>nqaj dais</i>	"meat bear" (=bear meat) (cf. <i>nqaj-npuas</i> "pork" and <i>nqaj-nyug</i> "beef") (H 450)
<i>paj kws</i>	"flower corn" (=popcorn) (cf. <i>paj-npleg</i> "puffed rice" (H 449)
<i>sib ntaus</i>	"(recip)-strike" (=to strike each other) (cf. <i>sib-nraus</i> "to butt each other") (H 185)
<i>sib zas</i>	"(recip)-face off" (=to face off against each other) (cf. <i>sib-zeg</i> "to tease each other") (H 450)

2.2.2. The Voiceless Aspirated Stop, Voiceless Fricative/Breathy (-g) Tone Cooccurrence Restriction

The voiceless aspirated stops and the voiceless fricatives constitute a natural class in White Hmong, in that they share a feature which might be called "heightened voiceless noise"; impressionistically, "heightened air flow."⁵ Since aspiration is distinctive in White Hmong, the voiceless aspirated stops have a pronounced period of aspiration before the onset of voicing in the vowel. The voiceless fricatives *f*-, *h*-, *hl*-, *s*-, *x*-, *xy*-, are characterized, of course, by voiceless airflow as well as by friction. The phonological distinctions based on "heightened voiceless noise" would be difficult to maintain if the syllable in question were to be pronounced with the breathy (-g) tone, the main feature of which is also heightened voiceless noise.⁶ Therefore, no Hmong word which begins with one of these initials will carry the breathy (-g) tone.⁷ As a corollary

⁵ These consonants constitute a class in the Tai languages as well, and are referred to as the "high consonants." Certain dialects, including Siamese, underwent a tone split on the basis of whether or not the initial was of this class (Li Fang-Kuei, *A Handbook of Comparative Tai* [Hawaii: University Press, 1977], p.29).

⁶ This tone is a more "whispered" than "murmured" breathy tone.

⁷ Bertrais, introduction: "Les mots qui ont une aspiration ne portent jamais le ton 'neeg'." Mottin, p. 16. "Notons qu'aucun mot aspiré ne se prononce sur ce ton [-g]."