

An Analysis of Some Tonally Differentiated Doublets in White Hmong (Miao)*

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0. Introduction
1. Doublets of recent origin
 - 1.a. Sex Coding
 - 1.b. Affect Contrast
 - 1.c. Expressive Derivation
2. "Family phenomena" doublets
 - 2.a. Sandhi Form Promotion
 - 2.b. Analogical Tone Shift
 - 2.c. Derivation by Tone Change
 - 2.d. Tone Split
 - 2.e. Tone Variation
3. Glossary of some tonally differentiated doublets
4. Notes
5. References

0. Introduction. This paper is designed to reveal in outline a number of the important synchronic and diachronic processes which are responsible for the high number of tonally differentiated doublets in the White Hmong (Miao) dialect of the West, or Sichuan-Guizhou-Yunnan branch of Hmong, the Hmong-Mien (Miao-Yao) family. It incorporates and builds on the excellent paper by G.B. Downer, "Tone-Change and Tone-Shift in White Miao" (1967). The enterprise is undertaken with a good measure of humility, given the size of the corpus of data, its complicated history, and the likelihood of error in determining cognacy for those pairs for which insufficient supporting data from other dialects has been made available.¹ Nevertheless, the existence of two good dictionaries apiece for White Hmong (hereafter WHm), Bertrais 1964 and Heimbach 1969, and the closely related Green Hmong (hereafter GHm), Lyman 1974 and Xiong 1983, and the availability of native speakers now living in this country as refugees make possible an initial determination of those analogical and expressive processes that give rise to some of the doublets.

Similarly, the availability of three comparative studies, two for Hmong (Wang Fushi's substantial 1979 work and Chang 1976) and one for Hmong-Mien (Purnell 1970) make possible a few comments about the doublets which retain traces of old morphophonemic alternations. These comments are intended to suggest which items could be most profitably sought (from the point of view of the comparativist) in future dialect studies and to provide a theory about the nature of Proto-Hmong-Mien (hereafter PHmM) morphophonemics and morphology, to be adopted or discarded as more information becomes available.

Borrowings from Chinese account for many tonally differentiated WHm doublets, a number of which are included in the glossary. Although certain Hmong tones seem to be involved more than others, I have neither the expertise nor the information necessary to comment on this enormously complex problem here.

1. The doublets in this first set are either demonstrably linked to the WHm dialect alone, or will be discussed in terms of this dialect primarily, since evidence of these processes in other dialects is limited. They are assumed to be of relatively recent origin.

1.a. Sex Coding. There are a few WHm doublets referring to people in which tone distinguishes the sex of the individual, and does so in each pair with the whispery², or -g tone for males and the glottalized, or -m tone for females. Although the set of doublets listed below is small, it seems to be a clean little example of tonal morphology:

male (<u>-g</u>)	female (<u>-m</u>)
<u>ntsug</u> "widow(er); orphan"	<u>poj ntsuam</u> "widow"
<u>ntxawg</u> "youngest son"	<u>ntxawm</u> "youngest daughter"
<u>yawg</u> "paternal grandfather; male (and other older men in F's line)"	<u>yawm</u> "maternal grandfather" (and other older men in M's line)
<u>pog-</u> wives of men designated by <u>yawg</u> (< <u>poj</u> "female")	<u>niam-</u> wives of men designated by <u>yawm</u>
<u>npawg</u> "male 1st cousin, different clan; peer, friend"	<u>muam npawm</u> "female 1st cousin, different clan"
	<u>muam</u> "man's sister; peer female relation" (< * <u>-g</u> (C2))
	<u>niam</u> "mother; older female relation"
<u>nraug</u> "bachelor"	
<u>laug</u> male of certain animal species	<u>maum</u> female of certain animal species (corresponding to <u>laug</u> among other male terms); also in reference to female humans

The two clearest pairs are ntsug (C2)³ "widow(er); orphan"/ntsiam (D2) "widow" [Wang PHm *mbr- 11(C2) "without husband, without parents"] and ntxawg (C2) "youngest son (or given name for same); a pet name for little boys"/ntxawm (D2) "youngest daughter (or given name for same); a pet name for little girls". The chief difference between the two pairs is that ntsug, the "male form", is unmarked for the first pair while ntxawm, the "female form" is unmarked for the second pair. A widow can be either poj "female"-ntsiam or poj-ntsug, the latter perhaps derived by tone sandhi but nevertheless falling in with the unmarked (and historical) form, while a widower can only be yawg "male"-ntsug and orphans, both male and female, only ntsug. Conversely, the terms for "father's youngest brother" and his wife employ the "female form": txiv "father"-ntxawm and niam "mother"-ntxawm. We may suppose, then, that ntsiam "widow" and ntxawg "youngest son" are the forms that have been derived to round out this emerging WHm pattern.

Yawg and yawm, both "grandfather", refer respectively to the paternal grandfather (and other older men in the paternal line) and the maternal grandfather (and other older men in the maternal line). Significantly, the wives of the men designated by yawg are called pog-[< poj "female" - Wang PHm *b- 13(A2) "female human" - cf. GHm puj "grandmother", without the tone coding] and the wives of the men designated by yawm are called niam.⁴

Npawg "first cousin male, different clan" is paired with muam "sister"-npaws "first cousin female, different clan". *Npawm is unattested, but it is interesting that the first element of female kinship terms is often either muam "sister; peer female relation" or niam "mother; older female relation". Npawg has been generalized in both WHm and GHm to mean "peer, friend", and is used as a third person singular male pronoun in GHm (Lyman, p. 189).

Given names, with the exception of Ntxawg/Ntxawm mentioned above, are not distinguished by sex in any consistent way. The same name often serves for both males and females, and when presented with an unknown name in isolation, a native speaker has to be told the sex of its referent.

It is hard to say now to what extent sex coding is characteristic of the Hmong family. GHm has two of the pairs: ntxawg/ntxawm and yawg/yawm. In the two GHm dictionaries, yawm alone is listed as the term for "grandfather" while yawg appears as the term for "husband" and as a more general male term in compounds. Jacques Lemoine, however, in his detailed GHm ethnography (pp. 174-75) records a division of the two terms along the lines described for WHm: yawg for older men in the paternal line, yawm for older men related through women, either mother or wife (affinials). He observes that the main oppositions in Hmong kinship nomenclature are clansmen vs. affinials and elder vs. younger. It may be the former opposition that is being encoded in yawg/yawm, an opposition related to, but slightly different from, male vs. female. Ruey Yih-Fu records both [jeu³³] (C2) and [jeu¹³] (D2) for "grandfather" in another dialect of the Sichuan-Guizhou-Yunnan branch, Xuyong (Hmong Ntsu), in his 1958 article "Terminological Structure of the Miao Kinship System", but the tone/sex correspondence is different. The D2 form corresponding to yawm seems to be the more general term for older male relatives, denoting, among others, both paternal and maternal grandfathers. The C2 form corresponding to yawg is used for "husband" as in GHm, but also for older men in the wife's family.

The history of the WHm/GHm word for a man's sister, muam (D2), "correctly" tone coded, lends support to the theory that sex coding is a relatively new utilization of these distinctions in the grammars of these dialects. This root appears with the tonal reflex of C2 in Xuyong (Ruey, op. cit.) and in two Mien dialects (Purnell's Chiengrai and Haininh). If C2 reflexes are now felt more appropriate for the male members of such pairs in WHm and GHm, a tone switch to D2 would be well motivated.

It is risky to speculate about which form(s) may have served as the model for the analogy, if this is another instance of what Downer (1967) calls "analogical tone shift". The primary terms "male"/"female", "husband"/"wife", "father"/"mother", "son"/"daughter" are not coded with C2/D2 reflexes in the family, with the exception of niam "mother" and yawg "husband; male" in GHm. It may be significant that Wang's comparative study includes two male roots for which tone C2 must be reconstructed: PHm *nd- 17(C2) "young man" > WHm nraug "unmarried man" and PHm *dz- 26(C2) "male" > an unattested WHm *cag.

1.b. Affect Contrast. The whispery tone (C2) was characterized by one native speaker as the "angry" tone. This came up in a discussion of the difference in meaning between sentences with the completive particle tas (B2) [Purnell PWestHm *dan (B) "finished"] and its variant tag (C2). According to this speaker, in a proposition about a bee whose legs had been

broken "...tag" ("all"), the bee might still be wiggling a little bit (perhaps one leg), but if they had been broken "...tag" the bee would be left completely immobile. By "angry", he seemed to mean "insistent", or simply "stressed". It may yet be discovered that the tag/tag contrast is correlated with other syntactic or semantic properties of the sentence⁵, but so far, Heimbach's observation (p. 304) that tag is the stressed form of tag is as far as we can go.

Similarly, the classifier tus (B2), when used as an anaphoric pronoun in a possessive construction, can alternate with a stronger, more insistent tug:

Tus no yog kuv tus.
clf-long this is I clf-long

"This is my (pen)."

Tus no yog kuv tug!

"This is my (pen)! (...and I won't loan it to you)"

Another native speaker observed that when a discussion turns into an argument, about the ownership of a horse, for example, which also takes the tus (here "animate") classifier⁶, the tone will shift from tus to the stressed tug in this way. This correlation of stress and the whispery tone does not apply to GHm because in this dialect B2 and C2 have merged: the base form of the completive is taag and the base form of the classifier is tug.

There is some indication that a shift to the whispery tone can give a negative meaning to the word thus altered. Nyuan "little" [Purnell FWestAHm *huu (C/D), PIuMien *-gwaa (B), PKimMun *gau (A) "child"] is neutral, while nyuag is denigrating, "un peu méprisant" (Mottin, p. 48):

Tsis muai ib tee nyuag dej. "There is not one lousy drop of
not exist one drop little water water left." (Mottin, p. 48)

Nyuag-yaus tsis paub dab-tsi. "Little-old-me doesn't know
little young not know something" (Bertrais)

Yau "small, younger" [Wang PHm *z- 15(C1) "small"; Purnell PHm *yeu¹ (C) "small"] has a semantically analogous variant yaus (B2) [GHm yaug], but in the low level tone, as in the nyuag-yaus "this humble person" (= the speaker) of the last sentence.

The negative associations of nplog "anus", almost certainly derived from nplos "a socket, hole for the handle of an implement" are evident. A more problematic doublet is niam/niag. Niam "mother" [Wang PHm *mz- 21(D2) "female (dog)"; Purnell PHm *nia? (D) "mother"] is the likely cognate of niag, which, according to Bertrais, is a pejorative term used to refer to an individual. Heimbach calls it a term of familiarity (p. 140), that same quality which often breeds contempt. The problem is that it can and does mean "old lady", but it can also be used to describe men (niag yawg "old fellow, old friend") and even inanimate objects. This gives rise to ambiguities, since niag also means "large, great" (a meaning also derivative of "mother" according to Lyman (p. 196), cf. English "mother-lode"). Hence, tus niag dej can mean either "the great river" or "the little-old river" depending on context.

1.c. Expressive Derivation. In much the same way English derives its rich onomatopoeic comic-book language from prosaic language by phonological caricature, as in sploosh! from splash, Hmong speakers can exploit their tone system to find the best sound-meaning matches in expressive derivation. Two examples given by a native speaker of GHm:

<u>poob</u>	"to fall"
<u>poog</u>	"the sound of falling"
<u>toob</u>	"to squash"
<u>toog</u>	"a heavy falling sound"

Expressives capture the speaker's perception of the essence of the thing described, not necessarily its sound, but also its movement, its persistence, its visibility and other innate characteristics, through his determination of the resemblance between sound and meaning. Hmong has an expressive word class with its own roots, distinct from the roots of words of other classes.⁷ Not surprisingly, though, words from the prosaic part of the language can be shaped to the morphology of the two-word expressives (and expressive words can be "legitimized" by being incorporated into the syntactic center of the Hmong sentence, much as zap! has been given verbal status in English by its contextualization and the affixation of -ed in "He zapped me"). The two doublets hlu/hluj and zuz/zuj, and doubtless many more, can be explained by this attraction of prosaic words into expressive phrases.

WHm two-word expressives have the following characteristic morphology: the two words have the same initial but dissimilar finals. The tones of the two words are either the same, or the tone of the first word is -j (53) and the tone of the second is any other. If the two tones are the same, the final of the first word is -i; if different, the final of the first word is -u. Hlu "to delay, prolong, drag out" is therefore present in expressive guise in the phrase suab "rub" taw "foot" hluj-hluav = "to drag the feet". The dominant tonal patterns in WHm two-word expressives have representatives with similar meanings: the falling-rising pattern exemplified by hluj-hluav (53-34) is characteristic of expressives with a "double orientation", cf. suaj-suav "the undulating movement of a snake", dhuj-dheev "whimpering on and off", (quaj "cry") nyuj-nyav "whining"/(luag "smile") nyuj-nyav "smile ingratiatingly, with double meaning" (the preceding are associations, of which there are many more for each expressive, and not definitions). A person who is dragging his feet hluj-hluav, therefore, is travelling ahead while his heart is travelling back.

Zus (B2) [GHm zug] "progressively" is usually found in the semantically equivalent phrase zuj-zus [GHm zuj-zug]. Despite the identity of the vowels, which is not characteristic of WHm two-word expressives, it seems that the first element was "lifted" from other expressives to incorporate zus in a more iconic representation of the meaning "to play out gradually": cf. zuj-zuav "whine", zuj-zoog "(to see something) in flashes because of obstacles to the sight, as an animal glimpsed moving in the forest", zuj-zas "(to walk) sideways, on a slant", zuj-ziaj "the sound of pulling a metal chain over something", zuj-zeb "little hungry pigs squealing".

The reflex of C2, the whispery tone, plays a key role as a change form in both affect contrast and expressive derivation. This is probably due to a number of things: (1) the B2 reflex in WHm is 22, in GHm is the

2.a. Sandhi Form Promotion. Tone sandhi in WHm and GHm, and, from the information provided in Downer (1967) and Wang (1979), in other Hmong dialects as well, is of the Asian paradigmatic replacement type: following a word of tone category X, a word of tone category Y will change (or will have the potential of changing) to membership in tone category Z in certain grammatical constructions primarily within the noun phrase.⁸ The following chart will show which tone categories are involved in WHm, GHm, and the dialects reported on in Downer and Wang, and will make clear the degree of similarity among the sandhi systems:

Hmong dialects tone changes after A tone reflex	East Guizhou Yangzhao (Wang 1)	West Hunan Jiwei (W 2)	<u>Sichuan-Guizhou-Yunnan</u>							Puyuan (W 8)	Feng- xiang (W 9)
			Xuyong (Dowmer)	White Hmong	Green Hmong	Xianjin (W 3)	Shimen (W 4)	Qingyan (W 5)	Caopo (W 6)	Zongdi (W 7)	
A2 → C2			*	*	*	(not verbs)		*	*	*	(not verbs)
B2 → C2			*	*	(B2 & C2 merged in C1m)	*	*	*	*	*	
B1 → C1		*	*	*	*	*	*			*	
C1 → D1				*	*	*	*			*	
D2 → C2				*	*	*					
(A2 → A1							*				
A1 → C1 after B1)					(W p. 82 suggests tone of "sickle" due to this change at earlier time)						
	no tone sandhi reported										
		environment?	environment A1 or A2				environment A1				environment?

tone sandhi situation unclear: Puyuan has only 3 tones (A = D, B, C). In Wang there are 5 examples of P1m A2 → B and 3 examples of P1m A2 → C.

no tone sandhi reported

With the notable exception of the widespread change of C1 to D1 (and the changes which seem to be limited to the Shimen dialect), tone sandhi in Hmong seems to involve a change of A or B (or D) to C following a tone A word.

Within the Hmong family, sandhi form promotion accounts for the fact that one root can have reflexes of two different tone categories in different dialects. Wang makes note of sandhi form promotion frequently, calling it "historical tone change". He attributes historical tone change to the influence of a previous word or prefix which is either still in evidence, or is assumed to have existed at an earlier stage because of the tone of the word in question. For example, the root for "cooking stove" (WHm txos - D1) has tone C1 in five of the seven dialects in which it is found, but tone D1 in Xianjin and Shimen (and WHm). Wang notes (p. 49) that an A1 prefix exists in Shimen and on that basis assumes that an analogous prefix used to exist in Xianjin (and therefore presumably in WHm also). The root for "half" (WHm txhais - D1 "one of a pair") has both C1 and D1 reflexes in different dialects but there is no evidence of a sandhi trigger word to account for them. Wang makes the reasonable guess (p. 35) that the word for "one", which has a reconstructed A1 tone, in the phrase "one half" caused the change to D1 in Xianjin, Shimen, and Zongdi, and by extension in WHm, and was subsequently dropped. Finally, for roots such as "soul" (WHm plig - C2), sandhi form promotion is assumed to account for the existence of both A2 and C2 forms in the nine dialects included in Wang's study, without either evidence of a trigger form or a good guess as to what such a form might have been, on the basis of the patterns outlined in the chart above (p. 48).

Sandhi form promotion results in tonally differentiated doublets in WHm when the base form becomes disassociated from the sandhi form of the the same root, often with a concomitant meaning differentiation. Often the sandhi form has taken over the central meaning of the root and the base form has been relegated to a marginal function. This is the case with the now independent word for "person" in WHm, neeg (C2), which was derived from neej (A2) in the compound tib-neeg "a single person" [GHm tuab-neeg]. The base form is now limited to certain set expressions, for example lub "clf-abstractions" neej = "the human condition", txiv "male" neej = "male; man", ib "one" sim "life" neej = "a lifetime". Similarly, both the historical hauv (B1) and the sandhi form hau (C1) exist in WHm, representing the family root for "head" (Wang, p. 31: 6 dialects have B1, 3 have C1). Hau was probably derived from the compound in which it is usually found, taub "gourd"-hau = "head". Hauv is now used to refer to the "head" part of something, the source, base, or summit, and in the semantically equivalent compound hauv-paus. Finally, although the WHm dictionaries list only cag (C2) for "root" from a PHm A2 root, both the sandhi form cag and the historical caj exist in the dialect, according to my tutor, with the following interesting semantic split: caj is used for edible roots, cag for inedible roots, such as tree roots (cf. Wang, p. 93: 5 dialects have A2, the other 4 have C2).

In a frozen compound, the second element, if a sandhi form, can become disassociated from its base form by speakers, giving rise in a slightly different way to a tonally differentiated doublet since in this case the historical form is still dominant. Qav (B1) "frog" bears the historical tone, and in the compound nab "snake"-qa (C1) = "lizard" the

sandhi tone. Although with some thought, it is possible to see a lizard as a frog-like snake, i.e., a snake with feet, the relationship between the two is now opaque for speakers and lexicographers alike. Similarly, kev (B1) "road" bears the historical tone, but in the commonplace compound ua-ke (C1) "together", derived from the phrase ua "make" ib "one" ke "road", all sense of a connection to the word meaning "road" has been lost.

2.b. Analogical Tone Shift. A group of locative nouns in WHm and the dialect of Shimen--pem "up", nram "down", tom "there", tim "over there", ntawm "nearby", saum "above", and nraum "outside"--have been attracted into a tonally defined group by what Downer (1967) calls "analogical tone shift". The "locative" tone is the reflex of D2 in both Shimen and WHm. The cognates of these words in two other dialects, Xianjin and Xuyong, have a variety of tones. This is also true of GHm, in which cognate "up" and "down" have tone B2 and cognate "above" and "outside" have tone C1. According to the comparative data in Downer's paper, WHm and GHm tom "there" originally had tone D2 (perhaps qualifying therefore as the Ur-Locative)¹⁰, but GHm tim "over there" and ntawm "nearby" originally had tone C2, showing a partial shift along WHm lines.

The time depth of this shift cannot be very great, given the limitation of this phenomenon to, as far as we know, only WHm, Shimen, and to some extent GHm. The fact that D2 (< roots with *-p and *-t) is in involved as a tone, and that an initial/tone mismatch occurs with thau "the time when" (aspirated initials pattern only with A1, B1, C1, and D1, unless the word in question came into the language after the split of the four original tones) also places this shift at a time after both the loss of the finals (or after the development of tonal characteristics on syllables with final stops) and the loss of initial voicing in Hmong.

The locatives can undergo yet another tone shift to 213 (considered by many to be WHm's eighth tone) when occurring phrase-finally.¹¹ All of the above-mentioned locatives, therefore, are members of cognate pairs (pem/ped, nram/nrad, etc.). This shift is well discussed in Downer, Heimbach, and Mottin. Of more interest here is the fact that two of these roots, "up" and "down", are known to be represented by both the historical source form and the locative form:

<u>pes</u> (B2)	"mountains, hills" (limited use)
<u>pem</u> (D2)	"up, at a higher level"

<u>nras</u> (B2)	"a plain"
<u>nram</u> (D2)	"down, below"

It is proposed here that two more doublets can be explained by the same phenomenon:

<u>nrau</u> (C1)	"beyond" in the phrase <u>ntu</u> (A2) "sky"-- <u>nraus</u> (D1) = "place extremely distant, on the other side of the earth, the 'regions beyond'" (Heimbach, p. 175)
<u>nraum</u> (D2)	"outside, outwardly; the other side"

<u>zaus</u> (B2)	"a time, an occasion" [GHm <u>zag</u> (B2)]
<u>zaum</u> (D2)	"a time, an occasion"

An explanation for the second doublet eluded Heimbach (p. 446), as the two forms have the same meaning and are impossible to predict from environment. It seems probable that the explanation lies in the fact that this is a "space/time class" rather than a "locative class" of words. Downer observed (p. 596) that another time root, WHm thaum "the time when", patterns with the locatives. Historically it has tone D1. In GHm, thaus (D1) and thaum (D2) exist side-by-side as do zaus and zaum in WHm. Further evidence for this reanalysis of class membership is that thaum, sim "time", and tamsim "immediately" all participate in the phrase final shift to 213, which is characteristic of the locative words and a few other words only.¹²

2.c. Derivation by Tone Change. Two good doublets involving the C tone, with supporting data from somewhat more problematic doublets, make it appear that derivation by tone change was a live process at some time in the past. It is suggested here that the C tone may have been the "derivation tone" in PHmM, as has been proposed for Ancient Chinese by Downer (1959), making the history of PHmM tones even more surprisingly similar to the history of Chinese tones.

The two doublets mentioned above seem to be clear examples of an old tone derivation process: WHm roj (A2) "fat, grease"/rog (C2) "to be fat" [Wang *d₁- 25(A2)/*d₁- 25(C2)] and WHm txiv (B1) "fruit"/txi (C1) "to bear fruit" [Wang *p₂- 2(B1)/*p₂- 2(C1)]. Wang reconstructs the same initial and final for the members of each of these pairs, and doublets are found in eight of his nine dialects (of the four words, Jiwei reportedly has only the C tone "to be fat" and the B tone "fruit"). The C tone meanings "to be fat" and "to bear fruit" seem to be derivative of the meanings "fat, grease" and "fruit", respectively.

The words for "buy" and "sell", WHm muas (B2)/muag (C2), constitute a special case. The PHmM forms as reconstructed by Purnell, *maai¹ (B) "buy"/*maai¹ (C) "sell" are identical to the Ancient Chinese forms as reconstructed by Karlgren, *māi (B) "buy"/*māi (C) "sell". So although this is clearly another case of derivation by tone change, the question is, in which language? Paul Benedict suggests the source for both was an Austro-Thai "exchange", *(m)ba_{li}, from which "buy" evolved, and (with prefixed *pa-) "sell". This loan into Ancient Chinese then was presumably passed back to Hmong-Mien after the simplification of the initial and the loss of medial *-l-.¹³ This root is all the more interesting in that WHm muaj (A2) "to have" is identical phonologically, save for tone, to "buy" and "sell", and is related by the concept of possession:

<u>muaj</u> (A2)	"to have"	Wang PHm * <u>m</u> - 7(A2)	Purnell PHmM * <u>maai</u> ¹ (A)
<u>muas</u> (B2)	"to buy"	Wang PHm * <u>m</u> - 7(B2)	Purnell PHmM * <u>maai</u> ¹ (B)
<u>muag</u> (C2)	"to sell"	Wang PHm * <u>m</u> - 7(C2)	Purnell PHmM * <u>maai</u> ¹ (C)

Another word which may belong to this family is WHm muab (A1) "to take something in hand", which may be understood as the causative of muaj (A2) "to have". Although a very common verb in WHm, it has not been included in the comparative studies, so this connection is only tentatively proposed.

A very complicated picture emerges for four obviously cognate words for "middle, center" in WHm:

- *[Intaŋ] { ntav (B1) "middle of an object measured vertically"
 Purnell PHm *ntaŋ (B?) "half"
nta (C1) "middle digit, middle pipe on a Hmong mouth organ"
 Ben MIDDLE, Purnell PHm *ntoŋ (C?) < PHmM *ntoŋ³ (C) "middle, center"
 CENTER,
 HALF { nraβ (~ nruab) (A1) "middle of an object measured horizontally"
 Purnell PHm *ntrəŋ (A) "middle, center"
 *()(n)t/1/əŋ Wang PHm *nt-29(A1) "middle"
nra (C1) "half; of the full moon (half-way through its cycle?)

Both derivation by tone change to tone C and either /-r-/ infixation (with reference to Benedict's AT forms) or "point of articulation mutation" (David Strecker, personal communication) seem to be involved in the generation of these variants.

There are two doublets in which the C tone is not involved, but which seem nonetheless to be instances of derivation by tone change. PHm "fan" [Wang *mbr- 9(D2)] has mainly D2 reflexes, but D1 in Jiwei (which Wang believes might be due to incorrect recording or pronunciation), A2 in Shimen, and both A2 (verb) and D2 (noun) in Xianjin. WHm, as Xianjin, has both ntxuaj (A2) "to wave, fan, flap" and ntxuam (D2) "a fan". Another doublet which combines derivation by tone change and affixation (or a change in initial consonantism) is nghuab (A1) "to dry up"/ghuav (B1) "dry" [Wang *Nqh- 10(A1) "dry; thirsty"/*qh- 10(B1) "wither and dry"; Chang reconstructs only one PHm form for both, *Nqh- (A1), p. 200].

2.d. Tone Split. Chang (1972) noticed that certain PHmM roots were represented by both odd- and even-numbered reflexes of the same tone in different sets of dialects (for example, he lists A1 and A2 reflexes for "to fall", p. 565). From this he extended the reconstruction of an earlier voicing contrast (for "to fall", *p-/*b-) which suggested to him in turn "the possibility of a prefix which caused devoicing (or voicing) in certain dialects" (p. 563). There are a few doublets, two clearly relics, which would support Chang's theory that there was at one time an initial voicing contrast correlated with a semantic contrast; one such contrast, it is suggested here, was causative/noncausative.

WHm tua (C1) "kill"/tuag (C2) "die" is the classic example of initial contrast developing into tonal contrast. For the crucial intermediate stage, see Chang's citation of the Shimen forms (p. 559), where the voicing contrast has been retained and is correlated with two different allophones of tone C. Benedict reconstructs the AT root *-play for DIE, KILL. He believes that the voiceless initial is retained in conjunction with the AT prefix *pa-, accounting for the C1 form tua "kill", while the unprefix form becomes subject to an initial voicing process, accounting for the C2 form, tuag "die". Another WHm doublet which patterns in exactly the same way is ci (C1) "to toast over a fire"/cig (C2) "to be alright". Wang reconstructs the former with a voiceless initial (*tq-, PHm "to bake"), the latter with a voiced initial (*dz-, PHm "to burn"). The same final is reconstructed for both.

An A tone split with an analogous semantic split in both WHm and GHm is the above-mentioned muab (A1) "to take something in hand"/muaj (A2) "to have". Data on muab is lacking, however, and it is therefore impos-

sible to determine the antiquity of this pair, or the extent to which it developed in a fashion similar to tua/tuag and ci/cig. Another doublet in WHm and GHm which bears further research is ncab (A1) "to straighten"/ncaj (A2) "straight". Wang has reconstructed a root for this doublet with tone A1, but reports that Xianjin has tone A2. Upon further investigation it may be discovered that more dialects have an old voiced initial tonal reflex, or that more dialects have both reflexes.

Two of the roots Chang cites (p. 565), "to fall" and "to wear", have not yielded a causative/noncausative doublet in any one of the dialects he examined, but the existence of A1 reflexes in some dialects and A2 reflexes in other dialects for the root "to fall" suggests the possibility of an old "fall"/"fell" distinction signalled by an initial voicing contrast, and similarly the existence of both B1 and B2 reflexes for the root "to wear" suggests an old "wear"/"dress" distinction.

Cev (B1) "body, trunk"/ces (B2) "leg, branch" have PHm initials contrasting only in voicing and identical PHm finals, as reconstructed by Wang. This demonstrates that an original voicing contrast could be correlated with semantic distinctions other than causative/noncausative; here, the distinction is whole/part.

2.e. Tone Variation. As Matisoff so well pointed out, there is no reason to assume that only contemporary languages are messy.¹⁴ In addition to the cases discussed in the sandhi form promotion section above, a few WHm doublets have roots which are represented by two or more tones in other Hmong dialects, implying that there was variation at every historical stage.

The tone of the reciprocal shifts like the wind through the family: Wang reports reflexes with A1, B1, C1, and D1. It may be that the reciprocal, being so closely linked to the verb, was somewhat chameleon-like at an earlier stage, taking on the tone of the verb it accompanied. Wang mentions (p. 124) that in Gaopo, the vowel of the reciprocal will harmonize with the vowel of the following verb, suggesting that there was a relationship between the two close enough to account for the variety of tonal reflexes, perhaps, in the same way. In WHm there are two apparently free variants, sib (A1) and sis (D1), with no difference in meaning and no cooccurrence restrictions. The synchronic fluidity between sib and sis is demonstrated by the fact that tone sandhi forms often appear after sis (D1) when only sib (A1) has the power to trigger the change.

In WHm, the root for "child; little" has both C2 and D2 tones (nyuag/nyuam - see section 1.b.), in GHm the tones recorded are C1 (Lyman) and D1 (Xiong), and in Mien both A2 (Kim Mun) and B2 (Iu Mien) occur, according to Purnell's data. The greater fluidity of this etymon may be explained by the fact that when talking to or referring to children, the universal tendency is to play with sound.

Glossary of Some Tonally Differentiated WHm Doublets

WHm	White Hmong (Hmoob Dawb)	
GHm	Green Hmong (Moob Ntsuab; Mong Leeg)	
Ch	Chinese	
H	Heimbach	<u>White Hmong - English Dictionary</u>
Ber	Bertrais	<u>Dictionnaire Hmong (Meo Blanc) - Français</u> (WHm)
X	Xiong	<u>English - Mong - English Dictionary</u> (GHm)
L	Lyman	<u>Dictionary of Mong Njua</u> (GHm)
W	Wang	<u>The Comparison of Initials and Finals of Miao Dialects</u>
C	Chang	<u>"Proto-Miao Initials"</u>
P	Purnell	<u>Toward a Reconstruction of Proto-Miao-Yao</u>
K	Karlgren	<u>Analytic Dictionary of Chinese and Sino-Japanese</u>
Ben	Benedict	<u>Austro-Thai Language and Culture</u>

WHm and GHm tone letters:

-b (55)	-ɔ̃ (33)
-j (53)	-g (falling, whispery)
-v (34)	-m (low, glottalized)
-s (22)	-d (213)

(GHm forms in parentheses following WHm forms, if different)

- cag (C2) "inedible roots"
caj (A2) "edible roots"

L, WHm native speaker

W 84 *dɛ- 29(A2) "root"

P PHm *djɔ̃² (A) "root"
- cav (caav) (B1) ~ cas (caas) (D1) "to disagree, quarrel, discuss"
 (usu. with reciprocal)

H, Ber, X, L
- cai (C1) "law, rule, custom"
caiv (B1) "prohibition, rule, tabu"

H, Ber, X, L Cf. L: txoj kev cai "commandment, law"
txoj kev caiv "a religious system (a tabu system)"
 length road

K 1219 *tsɛ̃i (C) "restrain, regulate, govern, law"

Ben CHIEF, MASTER, RULER *[a]caw (≠ Ch? Ben, p. 120)

4. ceg (C2) "leg, limb, branch"
ces (B2) "leg of an animal - separated from body"

H (C2 = B2 in GHm)

ceg (C2) ~ ces (B2) "leg, limb, branch"
cev (B1) "body, trunk, main frame"

H, Ber, X, L Cf. H: ceg ntoo "tree branch"
cev ntoo "tree trunk"
tree

W 84 *dz- 4(B2) "branch" (C2 in Xianjin is attributed to sandhi form
82 *tq- 4(B1) "body" promotion)

P PWestM *dje¹ "branch"
PM *tce (B) "body"

K 1212 *t¹sie (A) "branch, limb"

5. ceeb (A1) "tight, tense, alert; startled, frightened"
ceev (B1) "tight, tense, strained; careful"

H, Ber, X, L

K 868 *sien (A) "stretch out"
1194 *zien (C) "careful"

6. ci (C1) "bright, brilliant; to toast or roast"
cig (C2) "alight"

H, Ber, X, L

W 82 *tq- 2(C1) "to bake"
84 *dz- 2(C2) "to burn"

P PWestM *tci (C1) "bright"
PY *ts²ia? (D2) "burn"

K 860 *t¹siak "to burn, roast; bright, lustrous, clear"

7. chib (A1) "a period of time" (L: "a tabu period, a week")
chim (D2) "a short period of time"

H, L

K 338 *kji (A) "a time, a period"
*gji (A) "time, date, appointed time"

- ?8. chim (D2) ~ chis (B2 or D1) "to be angry"
chib (A1) "to wound, offend, slander, be disrespectful"

H, Ber, X, L

P PM *tchi (C) "air, anger"
PY *tchia² (C1)

K 333 *k'jei (C) "breath, air . . . temperament, energy, anger"

9. dai (tlai) (C1) "to hang, hang up"
daig (tlaig) (C2) "to be caught, hooked up, clogged, stopped up"

H, Ber, X, L

C *Gw- /*G1- (A2) "to hang"

P PM *qlai (C?) < PMY *q1- "hang, dangle"
PY *klaaŋ (A1)

K 433 *k'wāi (C) "hang up"

10. duav (tluav) (B1) "waist, lower back, hip"
duas (tluas) (D1) "notch made in a tree when it is being felled;
(resulting) chip, splinter"

H, Ber, L

W 109 *q1- 11(B1) "waist"

P PM *kluu (B?) < PMY *klaai¹ (B) "kidney, lower back"

Ben BACK, BEHIND PMY *klaay < *k(a/)li(kuz)

11. hau (C1) "head, lid/cover, leader"
haus (B1) "the 'head' part, the principal part, base, source, summit"

H, Ber, X, L

W 11 *w- 16(B1) "head" (C1 forms in Xianjin, Shimen, and Zongdi are
attributed to sandhi form promotion)

P PM *heu² (B/C) "head"

Ben HEAD, HAIR (HEAD), TOPKNOT *ghleu < PMY *gh1[up] < *q[a]lu[b](u)

hau (C1) "head, lid/cover, leader"
haub (A1) "to lead astray; persuade"

H, Ber, X Cf. Ber: ntseeg lawv hau "croire leurs propos captieux"
believe their
mloog lawv haub "écouter leurs propos captieux"
listen to

12. hwj (A2) ~ hwm (fwm) (D2) "honor, respect, take care of"

H, Ber

13. kab (kaab) (A1) "insect"
kas (kaas) (D1) "maggot"
 H, Ber, X, L
 W 94 *k- 26(A1) "insect"
 94 *k- 26(C1) "maggot" (D1 forms in Xianjin, Shimen, and Zongdi are attributed to sandhi form promotion)
 C *k- (A1) "insect"
 P PM *kɛŋ (A)
 PY *k'ɛŋ (A1) < PMY *kʔɛŋ (A) "insect, worm"
14. kaj (kaaj) (A2) "bright, clear"
ka (kaa) (C1) "clear but with a few clouds; the noise and smoke clearing after a battle"
 X, native speakers (both WHm and GHm)
 W 116 *G1w- 26(A2) "bright"
 C *Gw- / *G1- (A2) "bright"
 P PY *gwyaaŋ (A1) "bright, clear"
 Ben SHINE, GLITTER, BRIGHT PMY *[ŋɔ̃]iɪiaŋ < *Nq(i)iaŋ
15. kauj (A2) "coil, ring"
kauv (B1) "to roll up (as a scroll), wind around, entwine"
 H, Ber, X
 K 357 *kau (B) "to wind around, wrap"
16. kev (B1) "road, path, way"
ke (C1) "together" (in ua-ke < ua ib ke)
 make one road
 H, Ber, X
 W 94 *k- 4(B1) "road"
 P PM *ke² (B) < PMY *kyau¹ (B) "road, trail"
17. kiaj (A2)-kiam (D2) ~ ciaj-ciam "boundary"
 H, Ber Cf. doublet compounds khausj-khaum, maj-mam, txheej-txheem
 K 353, 356 *kiaŋ (A) "boundary, frontier"
 360 Man. kie (C) "boundary"
- ?18. kiam (kam) (D2) "to accuse, blame, make trouble for someone"
kiav (B1) "to settle a case (without penalty); forgive"

H

K 296 Man. kīe < *kīpt "accuse, 'attack with words'"

19. khaub (A1) "to wind around, encircle, wind up; whirlwind" (in
khaub (khuv) (B1) "whirlwind" (in khaub zeeg) khaub zig)

H, Ber, L

K 102 *Ywan (A) < *g'- "surround" (?)

20. khaui (A2)-khaum (D2) "the hollow shell of an animal; skull"

H, Ber Cf. doublet compounds kiaj-kiam, maj-mam, txheej-txheem

K 506 Man. k'o (A) "shell, husk"

21. khawb (A1) "hook, buckle; link of a chain; to hook"
khawm (D2) "button, closure; to button, fasten, tie up"

H, Ber, L

P PWestM *khat (C1) < PM *kh-t (C) < PMY *kh- (C) "button"

K 484 Man. kou < *kau (A) "hook, to hook" (?)

419 Man. k'ou (C) < *k'au (C) "button, buckle"
 < *k'au (B) "button"

22. khov (B1) "hard, steady, firm; solidified"
kho (C1) "(harden, in the sense of) reforge, fix, heal"

H

Ben HARD, HEART (HARD PART), GRAIN, STONE PM *k[u]? < PMY *kat < *[ma/]ka/ts (with secondary aspiration?) Cf. Ben's discussion of the tonal reflexes of this root in Thai, pp. 198-99.

23. khuab (A1) ~ khuam (D2) "to hang up, hook up; hooked, snagged"

H, Ber, X, L Cf. WHm khuam (D2) "hang up, place; be caught"

K 499 *g'ipt "hook"

24. lau (C1) (lauv (B1)) "male of birds"
laug (C2) "male of certain animal species--sheep, goats, deer . . ."

H, Ber

W 53 *l- 15(B1) "male (chicken)" (C1 forms in Xianjin and Shimen are attributed to sandhi form promotion)

25. los (B2) "to bury (a person)"
log (C2) "to bury something in the ground (in order to hide it)"

H, Ber (B2 = C2 in GHm)

W 74 *1- 25(B2) "to bury (a person)"

Ben SUBMERGE, BURY PM *1o(q) < PMY *lo[m] < *lom/lop < *(q/)lub/lub

26. loo1 (A2) "unconscious"
loog (C2) "numb, insensitive" (GHm: "asleep, unconscious")

H, Ber, X (L lists loos (D1) as variant of loog)

- ?27. luab (A1) "to slip, slide aside"
luam (D2) "to slip, slide due to a slippery surface; to iron clothing"
luag (C2) "to pull, drag"

H, Ber

28. ma1 (A2) -mam (D2) "slowly, gently, gradually"
 (the GHm doublet is maav/maam; the two are apparently not used together in a compound as in WHm)

H, Ber, (X, L) Cf. doublet compounds kia1-kiam, kha1-khaum, txhe1-txheem

P PWestM *ma1 (D) < PMY *m- "slowly"

K 596 Man. man (A) "equilibrium, slow" (?)

29. muab (A1) "to take something in hand"
muaj (A2) "to have"

H, Ber, X, L

W 6 *m- 7(A2) "to have"

P PWestM *mua (A) < PM *mua (A) < PMY *maai¹ (A) "have"
 PY *maai (A)

muas (B2) "to buy"
muag (C2) "to sell"

H, Ber (B2 = C2 in GHm, in which muag is "sell", yuav is "buy")

W 6 *m- 7(B2) "to buy" (C2 forms in Qingyan and Fengxiang)
 6 *m- 7(C2) "to sell" (B2 in Yanghao)

P PWestM *mua (B) < PM *mua (B) < PMY *maai¹ (B) "buy"
 PY *maai (B)

PWestM *mua (C) < PM *mua (C) < PMY *maai¹ (C) "sell"
 PY *maai (C)

- K 702 *māi (B) "to buy"
 *māi (C) "to sell"

Ben EXCHANGE, CHANGE, BUY SELL *(m)bali

30. nej (mej) (A2) "you (pl.)"
neb (meb) (A1) "you (dual)"

H, Ber, X, L

W 6 *m- 2(A2) "you (pl.)" (C2 forms in Shimen and Gaopo are tentatively attributed to sandhi form promotion)

- P PM *mne¹ (A) "you (pl.)"
 PM *?mne (A?) "you (dual)"

Máo, Méng and Zhèng (1982) report that the Meizu dialect of Bunu, a Hmong language spoken mainly in western Guangxi province, shows dual and plural contrasts in the second and third pronouns solely by a difference in tone:

2dual <u>mi</u> (A1)	2pl <u>mi</u> (A2)
3dual <u>mu</u> (A1)	3pl <u>mu</u> (A2)

31. neeg (C2) "person"
neej (A2) "person (in compounds); human existence"

H, Ber, X, L

W 49 *n- 20(A2) "man, person" (A1 in Xianjin, A1 and A2 in Shimen-- the A2 form meaning "to get married" = "become a man"; the A1 forms are attributed to sandhi form promotion)

- P PWestM *nen (A) < PM *nen¹ (A) < PMY * -en¹ (A) "person"

Ben HAVE, ACQUIRE (POWER), MANA, HAVE BREATH *[b]a/na (?)

- ?32. niam (nam) (D2) "mother, female, older female relative"
niag (C2) "old lady" (somewhat familiar, negative--also applied to men, objects)

H, Ber

- P PWestM *na (D) < PM *niN (D) < PMY *nia?² (D) "mother"
 PY *nia? (D)

Ben FEMALE, WOMAN, WIFE, MOTHER . . . *(ma/)b/n/a[x]i
 or
 MOTHER, AUNT, FEMALE *[(t/)i]na(/na)

33. ncaj (ncasj) (A2) "straight, honest"
ncab (A1) "to straighten"

H, Ber (Ber defines ncaj as both "straight" and "straighten", but cites ncab xub kom ncaj "straighten arrows", cf. tua kom tuag "kill")
 straighten arrows cause straight kill cause die

W 88 *ntc- 28(A1) "straight" (A2 in Xianjin)

>Ch? K 1198 *tsj'ang (C) "straight, correct . . . exact, just"

ncab (A1) "to straighten, stretch oneself"

ncav (ncaav) (B1) "to stretch out toward"

H, Ber, X Cf. H: ncab duav "back": "to straighten the back"
ncav taw "foot": "to stand on tiptoe (in order
to reach something)"

34. nkawm (D2) "a pair (two opposites which belong together)"
nkawv (B1) (=nkawd?) "two (not necessarily opposites)"

H, Ber (in GHm, nkawm is only used for animate pairs, couples)

W 101 *ng- 18(D2) "pair"

P PM *ngat (D) "pair"

K 681 *ngau (B) "two farmers working as associates; mate; pair"

35. npawg (C2) "male first cousin, different clan name; friend"
npaws (B2) "female first cousin, different clan name" (in muam npaws)

H, Ber (B2 = C2 in GHm)

36. npuv (B1) "powder; flour"
npu (C1) "snow" (limited in WHm, more widely used in GHm)

H

W 7 *mp- 23(C1) "snow"

P PM *npuN (C) < PMY *npwoN¹ (C) "snow"
PY *bwon (C1)

- ?37. npuai (A2) "to pound with the hands; to clap"
npuab (A1) "to mold with the hands; to massage"

H, L Cf. H: npuai plab "stomach": "to pound the stomach to relieve pain"
npuab plab "to massage the stomach"

W 9 *mb- 10(A2) "to clap"

P PM *nbug (A) "clap"

Ben PAIM/SOLE, SLAP, HAND, FIVE PMY *mbaay < *(ta)(m)pag

38. nplaig (C2) "tongue"
nplaim (D2) "flame of fire; flower petal; reed of wind instrument"

H, Ber (nplaig is "tongue" in GHm also)

W 34 *mb1- 6(D2) "tongue"

C *mb1- (D2) "tongue"

P PWestM *nblai (D) < PM *nbrai (D)
PY *byet² (D) < PMY *nbret (D) "tongue"

Ben LICK, TONGUE PMY *mblet < *mblid(a-) < *(m)bli(n)d[a/][sa]ma

39. nplos (B2) "socket, hole for handle of an implement"
nplog (C2) "anus"

H (B2 = C2 in GHm)

40. nghuab (A1) "to dry up; dessicated, drained"
ghuav (B1) "dry"

H, Ber, X

W 107 *Ngh- 10(A1) "dry; thirsty"
104 *gh- 10(B1) "wither and dry"

C *Ngh- (A1) "dry"

P PM *nghue (A) < PMY *nghaa1² (A) "dry"
PY *ghaa1 (A)

> Ch? K 422 *yuo (C) < *g'- "dry up"

Ben DRY PMY *Nghaay < *Nqay(ian)

41. nra (nraab) ~ nruab (A1) "middle of an object measured horizontally"
nra (nraa) (C1) "middle (Ber); of the full moon"

nta (C1) (ntaas (D1)) "middle digit; middle tube on a Hm mouth organ"
ntav (ntaav) (B1) "middle of an object measured vertically"

H, Ber, X (lacking ntaas), L

W 62 *nt_{ff}- 29(A1) "middle"

C *ntr- (A1) "middle"

P PM *ntron (A) "middle, center"

PM *nton (C?) < PMY *nton³ (C) "middle, center"
PY *don_t (C)

PM *ntan (B?) "half"

Ben MIDDLE, CENTER, HALF PMY *ntron < *()_(n)t/l/əŋ
PMY *nton < *[ntən]

42. nras (nraag) (B2) "a plain, an expanse of land"
nam (D2) "down, downhill, down below"

H, Ber Cf. Ber: ib lub tiaj nras "a plain"
 one clf level low land
nyob nam tiaj ". . . be down on the plain"
 be down plain

W 64 *nd- 29(B2) "plain; level land in mountainous region"

Ben FLAT, FLAT SURFACE, PLATEAU, FLOOR... *[(n)dra](m)pay

43. nrau (C1) "beyond" (in ntuj nraus "the other side of the earth, the
nraum (D2) "outside" sky 'regions beyond')

H, Ber

P PM *ntrou (C) "outside"

- ?44. ntiaj (nplaj) (A2) "earth" in ntiaj teb "earth" (nplaj teb)
ntiav (nkla) (B1) "shallow"
ntiag (nkla) (C2) "the front surface; bosom; the presence of"
 (perhaps the promoted sandhi form of ntiaj, cf.
 H: ntiaj teb gaum ntuj = "heavens and earth"
 bosom? earth back sky
 and ib ntiag ntuj "the whole heaven and earth")

H, Ber (X and L only first two; P cites nkla for GHm, perhaps from Rulison)

W 112 *NG1- 21(A2) "before one's face"
 111 *Nq1- ?(B1) "shallow"

P PM *ndeN (A) < PMY *(nd-) "earth"
 PY *dau (?)

PWestAM *nkla (B1) "shallow"

PWestAM *nkla (C2) "breast"

45. ntsiab (ntsab) (A1) "hulled rice; a kernel; the heart of the matter"
ntsiav (ntsav) (B1) "kernel of corn" (WHm) "clitoris" (GHm)

H, L Cf. L: quag-pui ua lub ntsab "a woman is like a grain of
 human-fem. make clf hulled rice"

P PWestAM *ntsa (A1) "rice kernels"

K 788 *nziang (A) "pulp, kernel"

46. ntsuag (C2) "widow(er); orphan"
ntsuam (D2) "widow"

H, Ber

- W 27 *mbr- 11(C2) "without parents, without husband" (the same root as "bamboo shoot" since, without branches or leaves, the bamboo shoot is the image of loneliness--Wang, p. 43)

47. ntswg (C2) ~ ntswm (D2) "nose" (ntswm in semant. equiv. caj ntswm)

H, Ber

- W 27 *mbr- 19(C2) "nose"

- P PM *ntš (C2?) < PMY *ndžlui¹ (C?) "nose, snout"
PY *blui (C2)

48. ntxawm (D2) "youngest daughter; pet name for little girls"
ntxawg (C2) "youngest son; pet name for little boys"

H, Ber, X, L

49. ntxoov (B1) "to shade, shady, shadowy"
ntxoo (C1) "a shadow" (only found in the compound ntxoov-ntxoo)

H, Ber, X Cf. sov-so, a distinct range on a temperature scale between sov "warm" and reduplicated sov sov "very warm" and khov-kho in ua tus khov-kho "to act strong" from khov "steady; make clf-anim. hard" and/or kho "to reforge steel"

- P PM *ntsoŋ¹ (B) "shade"

50. ntxuaj (A2) "to fan, flap, wave"
ntxuam (D2) "a fan; a species of bird with a fan-like tail"

H, Ber, X

- W 27 *mbr- 9(D2) "fan" (A2 and D2 in Xianjin, verb and noun respectively, as in WHm; A2 in Shimen for both verb and noun)

- P PM *ndzrua (D?) < PMY *ndzr- (D) "fan"
PY *byaa (D)

- ?51. ntxhua (C1) "to wash by scrubbing (clothes)"
txhuam (D2) "to scrub clean (with an instrument)"
ntxuav (B1) "to wash (hands, body, dishes . . .)"

H, Ber, X, L

- W 41 *ntsh- 12(C1) "to wash clothes"
40 *nts- 10(B1) "to wash"

C *nts- (B1) "to wash (hands)"

P PM *ntshu³ (C) < PMY *ntsh¹o⁴ (C) "wash (laundry)"
 PY *dz¹o¹ (C)

PIuMien *dzen (D2) "clean"

PM *nts² (B) < PMY *nts¹aa³ (B/C) "wash (bathe)"
 PY *dz¹aa³ (C)

>Ch? K 771 *ts²au (B) "to bathe, wash"

52. ntxhuab (A1) "moss"
ntxhuav (B1) "mossy, hairy" (of a lion - "hairy tiger", corn tassels, moss)

H, Ber, X, L

53. nyuam (D2) (nyuas (D1)-X; nyua (C1)-L) "little"; "child" in menyuam
nyuag (C2) "little, insignificant" little-

H, Ber, Mottin

P PWestAM *ñua (C2/D2)
 PIuMien *-ñwaa (B2) "child"
 PKimMun *ñau (A2)

Ben CHILD PMY *ñaw(a)(?) < *Naw(a)(k)

54. pauv zog (B1) "create obligation by working for another" (zog "energy")
pauj zog (A2) "fulfill obligation by working for another"

H, Ber, X

W 3 *b- 16(A2) "to pay up"

55. pej (A2) ~ pem (D2) "different, other, out of the ordinary"

H, Ber, GHm (X has pej, L has pem)

K 728 Man. pie (A) ". . . different, other . . ."

56. pes (B2) "mountains, hills" (in four-word expressions)
pem (D2) "up; at a higher level"

Ber

W 3 *b- 4(B2) "mountain" (D2 form in Shimen, analogous to WHm pem)

P PM *bi (B) "mountain"

57. pob (A1) "ball, lump, bundle; round-shaped object"
pov (B1) "rounded hill"

Ber, L

58. plev (B1) "to sting, an insect sting"
ple (C1) "a sting, a stinger (insect proboscis)"

H, Ber Ber also lists ple as verb, but cites:

muv plev ib ples [<ple] "the bee stung once"
 bee sting one sting

- ?59. pliab (plab) (A1) "flat, flattened out"
pliaj (plaj) (A2) "forehead"
plia (C1) "to level out"

H (1st and 2nd), Ber (all 3), X (1st and 2nd), L (only plaj)

60. qav (qaav) (B1) "frog"
qa (qaa) (C1) "lizard" in nab (naab) (A1)-qa (qaa)
 snake

H, Ber, X, L

W 103 *q- 26(B1) "frog"

P PM *qεη (B) < PMY *qεη (B) "frog"
 PY *kεη (B)

Cf. K 71 *kāp "frog, lizard"

61. ges (B2) "low to the ground"
geg (C2) "short in stature"

According to one native speaker, geg is the general word for "short" while ges is used in measurement comparisons for people:

Nws ges dua kuv. "He is shorter than I."
 3ps more lps
 (*Nws geg dua kuv.)

H (B2 = C2 in GHm).

W 105 *G- 3(B2) "low; short in stature"

62. rau (C1) "to put, place; to, toward"
raug (C2) "(to hit) on" (used in passive-like sentences such as:

Kuv raug ntaus. "I got hit."
 lps hit

Lawv raug nws kaw. "They were locked up by him/her."
 3pp 3ps lock up

H, Ber, X, L

W 56 *t- 14(C1) "put on (shoes)"
 58 *d- 14(C2) "(to hit) on"

63. roj (A2) "oil, grease, fat, resin"
rog (C2) "fat, stout, obese (of animals, less politely of people)"
 H, Ber, X, L
 W 69 *d1- 25(A2) "oil, fat"
 69 *d1- 25(C2) "fat"
 P PM *d1oN (C) "be fat"
64. sib (A1) ~ sis (D1) reciprocal
 H, Ber, GHm (X has sib, L has sis)
 W 81 *g- 1(A1/B1/C1/D1) "to each other"
 original "tone harmony" to following verb?
65. sij (A2) ~ sim (D2) ~ siv (B1) "time" in compounds: sij hawm "occasion"
sim neej "lifetime"
 H, Ber, X (first two), L (first two) txawm siv "just then"
 K 811 Man. sɿ < *zi (A) "time, hour, season, epoch"
66. tav (taav) (B1) "a point in time" (L, e.g. tav su "noon")
ta (C1) (taab (A1)) "just now, just a moment ago" in puas/puag ta
 (puam taab)
tav (taav) (B1) "a point in time"
tas (taag) (B2) ~ tag (C2) "a broad period of time" (L, e.g. tas kis
 "morning")
 H, Ber, X, L
67. tas (taag) (B2) "complete; all"
tag (C2) "absolutely complete; 101%"
 H, Ber (B2 = C2 in GHm)
 P PWestM *daŋ (B) "finished"
68. tau (C1) "ability (dependent on presence or absence of external hindrance)"
taus (taug) (B2) "ability (dependent on prs. or abs. of intern. hindrance)"
 H, Ber, X, L
 W 44 *t- 14(C1) "to get, to gain"
 P PWestM *tau² (C1) < PM *təu (C) < PMY *t ? (D) "get"
 PY *tu? (D)
 PWestAM *tau (B2) "able to"
 PY *tu? (D) "able to"

69. tawg (C2) "break open; open (of flowers)"
tawm (D2) "come out"

H, Ber, X, L

W 46 *d- 18(C2) "to explode"

P PWestM *dai (D) "exit"

70. tua (C1) "kill, attempt to kill"
tuag (C2) "die"

H, Ber, X, L Cf. H: tua kom tuag "kill"
kill cause die

W 44 *t- 11(C1) "to kill"
46 *d- 11(C2) "to die"

C *d- (C2) "to die"

P PM *tua (C) < PMY *tai¹ (C) "kill"
PY *tai (C1)

PM *dua (D) < PMY *dai² (C) "die"
PY *tai (C2)

Ben DIE, KILL PMY *tay < *(p/)tay < *[pa/]play "kill"
PMY *day < *tay (initial voicing) "die"

71. tw (C1) (twv (B1)-L) "tail, pertaining to the end"
twv (B1) "to compete (fight to the end)"
tw (B2 or D1) "to come to an end"; "pigtail" in vis/yiv tws

H, Ber, X (first two), L (twv only, both "tail" and "compete")

W 44 *t- 19(B1) "tail"

P PM *tɛ (B) < PMY *twei² (B) "tail"
PY *twei (B1)

Ben TAIL, BUTTOCKS, ANUS PMY *twei < *[t]tui < *[(m)b]u(n)tut

72. thib (A1) "to pass off an unpleasant job on someone else"
this (D1) (thij (A2)-L) "to take on someone else's unpleasant job;
on behalf of, instead of"

H, Ber

K 41 Man. t'i (C) "substitute, change, instead of"

73. tsau (C1) "to leave an article in water to soak"
tsaug (C2) "to briefly immerse an article in water, rinse"

H, Ber

- K 871 Man. tsan (C) "to sink in water; soak"
 1066 Man. tsan (C) "to moisten; dip in water"

74. tswi (A2) "to control, constrain, govern"
tswm (D2) "to press down, repress"

H, Ber, X, L

- (C)
 K 1194 Man. tsən ^ "weigh down, press upon, repress, govern . . ."

75. tshab (A1) "a go-between" (H); "to send someone to the parents of a
 girl who is about to be abducted (Ber) in tshab-xov
tshaj (A2) "to send out, to spread abroad" message

H, Ber, X (tshaab "diffuse")

- K 1190 Man. ts'ə (C) "penetrate, communicate, spread everywhere . . ."

76. tshib (A1) "elbow"
tshim (D2) "a cubit (measure from elbow to fingertip)"

H, Ber, L

Cf. Thai *sook~*sok (Shan) "elbow, forearm, cubit" (Ben, p. 219)

77. tshoob (A1)~ tshoov (B1)~ tshoom (D2) "to fire a gun"

H (slight differences in meaning for the variants)

- K 1273 Man. ts'ung (C) "firearms"

78. txiv (B1) "fruit"
txi (C1) "to bear fruit"

H, Ber, X, L

- W 13 *pɛ- 2(B1) "fruit"
 13 *pɛ- 2(C1) "to bear fruit"

- P PM *tsri (B) < PMY *tsr- (B) "fruit"
 PY *pylou (B1)

79. txiv (B1) "male, husband, father"
txij (A2) "couple, pair; one of a couple or pair" in txij nkawm
txis (D1) "to join in marriage" pair

H, Ber, X (has txi (C1) for "to marry"), L (has txig~txim as clf. for a couple or pair)

Cf. H: muab txis ua niam-txiv
take marry make wif+husband

W 13 *pg- 3(B1) "male (dog)"

Cf. W p. 65: 49 *n- 20(A2) "person" [> WHm neeg "person"]
also has the secondary meaning "to get married" in the sense of "to become a man" in Shimen.

80. txiab (txab) (A1) "scissors"
txiav (txav) (B1) "to cut, chop off"

H, Ber, X, L Cf. Ber: muab rab txiab txiav plaub hau
take clf scissors cut hair head

K 883 *tsjak "cut, chop off" (?)

81. txheej (A2)-txheem (D2) "practice, custom, basis" (txheem "support")

H, Ber Cf. doublet compounds kiaj-kiam, khausj-khausm, maj-mam

K 1203 *ziang (A) "support" (?)

82. yav (B1)~ya (C1) (yaas (D1)-L) classifier for lengths (firewood, time)
yas (yaag) (B2) "joint"; classifier for lengths between joints or knots

H, Ber, L

83. yau (C1) "younger, small"
yaus (yaug) (B2) "younger, humble"

H, Ber, L

W 91 *z- 15(C1) "small, little"

P PM *yeu¹ (C) "small"

K 216 *iaü (A) "bent, young, tender"

84. yawm (D2) "maternal grandfather"
yawg (C2) "paternal grandfather; male, man, fellow"

H, Ber, L

P PWestAM *ya (D2) "grandfather"

- ?85. yaws (D1) "gather in, take down, disassemble"
yawm (D2) "gather up, scoop up"

H, Ber, X

86. zaus (zaug) (B2)~zaum (D2) "a time, turn, occasion" H, Ber

Notes

*An earlier version of this paper was read at the 17th International Conference on Sino-Tibetan Languages and Linguistics in Eugene, Oregon, September 1984. I would like to express my deep gratitude to David Strecker for his help and support at every stage of the development of these ideas. Thanks also go to Paul Benedict, Gérard Diffloth, and Nancy Dray for their helpful comments, and to my tutor, Xab Xyooj, for his patience in checking and rechecking the WHm data presented herein. I alone am responsible for any remaining errors in fact or analysis.

The orthography used in this paper is the Romanized Popular Alphabet developed by William A. Smalley in consultation with others in the 1950's. It is the alphabet used by literate Hmong in this country. Of special importance is the fact that final consonants designate tone and doubled vowels indicate a final /ŋ/ (the only final consonant):

WHITE HONG - RPA orthography

Initial Consonants:

[illegible]

Vowels:

1, 0 [01], 2, 0 [0], u, w [1]

aɪ, aʊ [aʊ], æw [æ+], ɪə, uə, oe [ʊə], oo [ʊə]

Tones:

-b (55) -j (53) -v (34) -s (22) -ð (33) -g (whisp. -m (glott. -d (213)

A1	A2	B1	B2, D1	C1	C2	D2	D2-change
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Words are CV(η); structure is SVO, N-A, Gen-N, prepositional

1. "As always, care must be taken to distinguish genuine co-allofams from unrelated forms which have 'accidentally' come to have the same segmental shape and similar meanings, but now differ from each other only by tone." Matisoff 1978, p. 58.
2. "Whispery" is J. C. Catford's term for voice "produced by normal, though relaxed, production . . . , with a concomitant chink constantly open" (1979, p. 99). He has listened to a tape of a WHM speaker which I made, and has reportedly agreed that this term is the proper description of the C2 tone, as opposed to "breathy", which is a step closer to normal voicing on a multivalued scale. This tone is also characterized by a falling contour: a high fall for female speakers, a low fall for male

speakers.

3. The letters A, B, C, D refer to the four original PHM tones as reconstructed by Chang (1972); the numbers 1 and 2 to their voiceless and voiced counterparts which, when the voicing contrast was lost, yielded a potential eight tone system.
4. An exception: the WHm terms for the maternal grandfather's father and his wife (and his brother/wife) are yawm txiv yawg/niam tais pog. Perhaps these people are "double-coded" because the lineage is traced first through the mother (yawm/niam), then through her father (yawg/pog).
5. For example, one speaker maintained that the difference between

Kuv noj mov tas lawm.
I eat rice comp. perf.

and

Kuv noj mov tag lawm.

is that in the tas sentence the rice is "all done" (=gone), while the speaker may still be hungry, whereas in the tag sentence the speaker is "all done" (=full), while there still may be rice on the table. Other speakers have not corroborated this.

6. Other classifiers do not seem to have a stressed variant in this construction.
7. See Ratliff (forthcoming), "Two-Word Expressives in White Hmong".
8. I disagree with R. K. Sprigg, who in his 1975 "The inefficiency of 'tone change' in Sino-Tibetan descriptive linguistics" argues that tone sandhi in WHm can best be described by assigning an abstract tone two phonetic values, one of which, depending on context, will be assigned to a word by rule. Even in a purely synchronic description, historical relics, such as this kind of tone sandhi system, can be best described in terms of history. Sandhi takes place unpredictably in WHm; it is limited to certain constructions (Numeral-Numeral, Numeral-Classifier, Reciprocal-Verb, Noun-Attribute, Verb-Noun), but with the exception of the change in classifiers of the proper tone category following the numbers 1-5, it cannot be counted on to take place at all. For example, "rice field", teb (A1) "field"-npleg (C2) "rice" [< nplej (A2)] shows sandhi change, but "rice seedling", yub (A1) nplej (A2), with exactly the same syntactic and phonetic environment, not only does not show sandhi change, it cannot. The other argument for an analysis in which one tone actually changes into another, of course, is that the same historical tone categories are involved as triggers, targets, and sandhi forms in the dialects described so far, regardless of the phonetic values of the reflexes of those categories. The fact that the trigger forms in WHm are phonetically 55 and 53, high tones, is just accidental (cf. the reflexes of A1 and A2 in Wang's study), making a "pitch harmony" theory implausible.

See Wang and Wang (1982), "The Localizers of Miao in Weining, Guizhou Province".

Wang and Wang, in the above-mentioned article, would disagree, since they say tim and tom are cognate (presumably with vocalic iconicity, but the same orig. tone). Perhaps Xuyong and Xianjin show two different reflexes for these words (C2 for tim, D2 for tom) simply because tom "shifted" from C2 earlier than tim did.

This is called "compensatory tone shift" by Downer, compensating, he suggests, for the loss of a following demonstrative or NP.

The only other words to so shift are a small set of vocatives (niam "mother", menyuam "child", muam "sister", thwjtīm "disciples" and perhaps nkawm "pair") and a few miscellaneous others (lawm "depart", pom "see", tshuam "meet", cuabtam "inheritance").

Paul Benedict, personal communication. I understand that this is discussed in a 1976 article of his on Early Chinese borrowings, but I have not seen it.

Matisoff 1978, pp. 18-19.

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Hmong
dialects
tone
changes
after A tone
reflex

A2 ⇒ C2

B2 ⇒ C2

B1 ⇒ C1

C1 → D1

D2 ⇒ C2

(A2 ⇒ A1

A1 ⇒ C1
after B1)

East
Guizhou
Yanghao
(Wang 1)

no tone sandhi reported

West
Hunan
Jiwei
(W 2)

*

environ-
ment?

Sichuan
Xuyong
(Downer)

*

*

*

Guizhou
White
Hmong

*

*

*

environment A1 or A2

Yunnan
Green
Hmong

*

(B2 & C2
merged
in G1m)

*

environment A1 or A2

Xianjin
(W 3)

*

(not
verbs)

*

*

environment A1 or A2

Shimen
(W 4)

*

*

environment A1

Qingyan
(W 5)

*

*

*

environment A1

Gaopo
(W 6)

*

*

*

environment A1

Zongdi
(W 7)

*

(not
verbs)

*

*

environ-
ment?

Fuyuan
(W 8)

tone sandhi situation unclear: Fuyuan has only 3 tones
(A = D, B, C). In Wang there are 5 examples of P1m *C → B
and 3 examples of P1m *D → C.

environ-
ment?

Feng-
xiang
(W 9)

no tone sandhi reported

WHITE HMONG - RPA orthography

Initial Consonants:

p	t	tx	r	ts	c	k	q
ph [p']	th [t']	txh [ts']	rh [t']	tsh [ts']	ch [c']	kh [k']	qh [q']
p	d						
plh [p'ɣ]	dh [ɔ't']						
np [mb]	nt [nd]	ntx [ndz]	nr [nɔ]	nts [ndz]	nc [nɔ]	nk [ng]	nq [wɛ]
nph [mp']	nth [nt']	ntxh [nts']	nrh [nɔ']	ntsh [ntɕ']	nch [nc']	nkh [ŋk']	nqh [wq']
npl [mbɪ]							
np̄lh [mp'ɣ]							
m	n				ny [n]	g [ŋ]	
hm [ŋ]	hn [ŋ]				hny [ŋ]		
m̄							
hm̄	x	[s]	s	[s]	xy [ɕ]		
	f		z	[z]			
v							
l					y	[j],	
hl [ɣ]					[ɕ]		

h

Vowels:

i, e [ei], a, o [ɔ], u, w [ɯ]

aɪ, au [au], aw [aɯ], ɪa, ua, ee [ɛɪ], oo [ɔɪ]

-b (55)	-j (53)	-v (34)	-ɸ (33)	-g (whisp. fall)	-m (glott. low)	-d (213)
A1	A2	B1	C1	C2	D2	D2-change

Words are CV(ŋ); structure is SV0, N-A, Gen-N, prepositional