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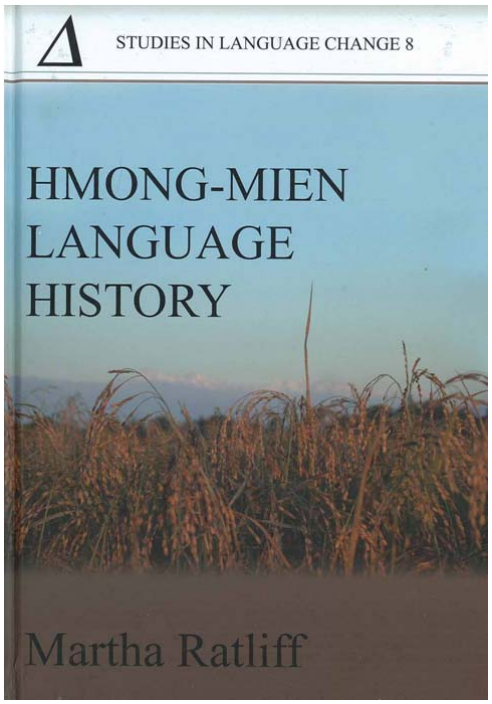

613 Hmong-Mien language history

Martha Ratliff

This book presents a new reconstruction of Proto Hmong-Mien, the ancestor language of the modern Hmong-Mien (Miao-Yao) languages of southern China and northern Southeast Asia. It also contains discussion of selected topics in the history of Hmong-Mien: phonological change, tonogenesis and tone development, ancient morphology, numerals and pronouns, language contact, and the ancient Hmong-Mien world.

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To the memory of

Paul K. Benedict (1912–1997)

and

Wang Fushi 王輔世 (1919–2001)

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I would like to thank my colleague Liu Haiyong for bringing me the best gift I have ever received: a copy of Wang Fushi and Mao Zongwu's 1995 reconstruction of Proto Miao-Yao [Proto Hmong-Mien]. This book has been my constant companion over the past fourteen years: the pages are now falling out, and are covered with notes that have been written, erased, and re-written countless times. As a result, I have felt a special kinship with the late Wang Fushi, whom I had the pleasure to meet only once, at a conference on the minority languages of China held in Santa Barbara, California in 1986.

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Martha Ratliff
Detroit, Michigan U.S.A.
April 2010

1 *Introduction*

1.1 Scope and purpose

The purpose of this book is to present a new reconstruction of Proto Hmong-Mien, the ancestral language of modern-day speakers of the Hmongic (Miao) and Mienic (Yao) languages of southern China and Southeast Asia, and a set of discussions on topics relevant to the historical development of these languages. Some of the discussions argue for particular aspects of historical development in some detail (for example, the development of tone, the origin of the classifier construction, the innovation of vowel length), while others merely sketch out a field of inquiry for future work. This book brings together in one place ideas the author first presented in various publications and conference presentations, as well as a number of new analyses.

1.2 The Hmong-Mien language family

Languages of the Hmong-Mien family are spoken in southern China, and northern Vietnam, Laos, and Thailand. Most Hmong-Mien speakers belong to the Miao and Yao "nationalities"—minority ethnic groups—in China, although not all Miao or Yao people speak a Hmong-Mien language; many now speak local varieties of Chinese instead (Wurm et al. 1988). Hmong-Mien speakers in China primarily inhabit Guizhou, Hunan, and Yunnan provinces and the Guangxi Zhuang Autonomous Region; smaller numbers live in Sichuan, Guangdong, Hubei, and Jiangxi provinces, and on the island of Hainan.

Under pressure from the expanding Han Chinese population, waves of Hmong and Mien speakers migrated to Vietnam, Laos, and Thailand during the 19th and early 20th centuries (Jenks 1994, Culas and Michaud 2004). Another wave of migration followed the end of the Vietnam War in the 1970s, when tens of thousands of Southeast Asian Hmong and Mien emigrated to the United States, Canada, France, French Guiana, and Australia.[1]

Traditionally, Chinese scholars have claimed that Hmong-Mien belongs to the Sino-Tibetan language family, along with Chinese, Tibeto-Burman (which includes Tibetan, Burmese, Karen, and many smaller languages of southern and western Asia), and Tai-Kadai (which includes Thai, Lao, Shan, Zhuang, and many smaller languages of Southeast Asia). Most recent Chinese linguistic scholarship supports this view as well (Wang 1986, Pan 2006). Although a genetic relationship between Chinese and Tibeto-Burman (together, Sino-Tibetan) is generally accepted, the belief that the Sino-Tibetan family also includes

[1] See valuable information on late 20th century immigration of Southeast Asians to the United States on the website of the Southeast Asia Resource Action Center (http://www.searac.org/), and information specifically on Hmong immigration on the website of the Hmong Studies Internet Resource Center (http://www.hmongstudies.com/).

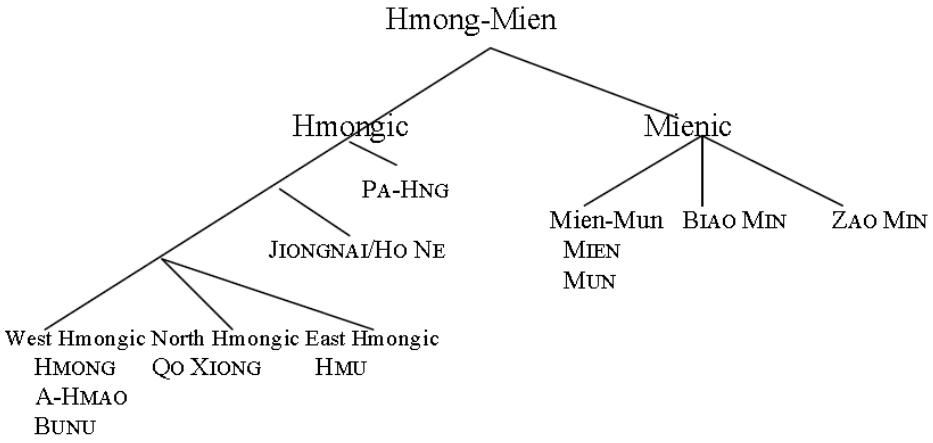
Hmong-Mien and Tai-Kadai is not widely shared by linguists outside China. Despite massive numbers of Chinese loanwords in Hmong-Mien languages, differences in basic vocabulary raise serious doubt that Chinese and Hmong-Mien are related. Furthermore, most linguists reject typological similarities as evidence of genetic relationship; similarities in grammar, word structure, and phonological systems between Chinese and Hmong-Mien languages can be explained by the power of Chinese influence in the area and widespread bilingualism.

Figure 1: *Distribution of Hmong-Mien languages*

Other family connections have been proposed. Forrest (1973 [1948]:93-103), Downer (1963), Haudricourt (1966), and Peiros (1998:155-160) favor the possibility of a family relationship with Mon-Khmer, while Benedict linked Hmong-Mien to Austronesian and Tai-Kadai as part of "Austro-Tai" (Benedict 1942, 1975). Neither of these proposals has gained general acceptance among scholars. Until a careful separation of layers of Chinese

borrowings from native Hmong-Mien vocabulary has been completed and the remaining core has been systematically compared to these other families, the question of wider relationship cannot be resolved. The most prudent position to take in the meantime is that Hmong-Mien constitutes an independent family of languages (see chapter 6).

Within the family, two main sub-families have been identified: the Hmongic sub-family (c. 5 million speakers) and the Mienic sub-family (c. 1.3 million speakers). The Hmongic sub-family is an internally diverse group that includes the following mutually unintelligible languages (some with mutually unintelligible dialects): Hmong (1,800,000 speakers, primarily in Guizhou province, Yunnan province, and Southeast Asia), Hmu (1,100,000 speakers, primarily in Guizhou province), Qo Xiong (770,000 speakers, primarily in Hunan), Bunu (258,000 speakers in the Guangxi Zhuang Autonomous Region), A-Hmao (200,000 speakers in northwestern Guizhou and Yunnan), and Ho Ne, known in China as the "She" language (900 speakers in Guangdong), among others.[2] The Mienic sub-family is smaller and less internally diverse, but is represented over the entire geographical area, from Yunnan province in the southwest to Guangdong province in the southeast, and into northern Southeast Asia. It includes the languages Iu Mien, Mun, Biao Min, and Zao Min. A provisional family tree structure is presented below:



Although the highest-level two-branch structure is not in doubt given the obvious lexical, phonological, and grammatical differences between languages belonging to the two sub-families (Ratliff 1998), more work needs to be done to refine the internal structure of each sub-family (see section 1.4 below).

The designation "Miao-Yao", both the name of these ethnic groups and an alternate name for the language family, is of Chinese origin. It represents the concept of "nationality", which is not a purely linguistic classification but also takes into account cultural practices, politics, and self-identification (Sun 1992). For example, speakers of Mien together with speakers of Bunu, a Hmongic language, and Lakkia, a Tai-Kadai language, are classified in China as members of the Yao nationality (Mao, Meng, and Zheng 1982). Conversely, speakers of the Mun language on Hainan Island are classified as

---

[2] Numbers of speakers taken from Gordon 2005, which in turn is based largely on Wurm et al. 1988. An overview of the individual languages of this family, the locations where they are spoken, and their numbers of speakers can be found in Niederer 1998. When speakers of Hmong-Mien languages in Southeast Asia and in the west are included, the size of the family will undoubtedly prove to be larger than 6.5 million.

members of the Miao nationality despite the fact that their language is Mienic (Shintani and Yang 1990). To avoid confusion of ethnic and linguistic categories, many Western linguists have adopted the name "Hmong-Mien" to refer to this language family, and this practice is followed here. Western anthropologists, however, continue to use the name "Miao-Yao" in reference to the language family insofar as it is the generally accepted name for these communities of speakers in China, and does not arbitrarily elevate the names of two representative languages to the name of the group as a whole. However, naming a language family after two languages from different branches with either wide geographical representation or a large number speakers is one common way language families in the area have been named—compare "Tibeto-Burman" (a language family that contains many more languages than Tibetan and Burmese) and "Mon-Khmer" (a language family that contains many more languages than Mon and Khmer). The name in no way suggests that the Hmong and Mien languages are more significant than the other languages of the family. Furthermore, the use of the designation "Hmong-Mien" in reference to languages does not preclude the use of the traditional designation "Miao-Yao" in reference to peoples.

1.3 Scholarship on Hmong-Mien language history

The present work depends in innumerable ways on the work of other scholars who have published studies on the history of the Hmong-Mien languages. The following is a brief overview of those individuals who have done full and partial reconstructions and have written influential large-scale historical studies on the family.

The earliest serious reconstruction work was undertaken by Kun Chang (Chang 1947, 1953, 1966, 1972)—a series of articles on the history of Hmong-Mien tones that remains the definitive body of work on Hmong-Mien tonology today—and by André G. Haudricourt (1954a), a comparative study of 131 etyma in 8 Hmongic languages, Mien, and Mun. Chang also published a substantial article on Proto Hmongic initials (Chang 1976).

The first reconstruction of Proto Hmong-Mien was the Cornell University PhD dissertation of Herbert C. Purnell (1970). It was a full reconstruction of the protolanguage and the intermediate-level Hmongic and Mienic protolanguages based on an analysis of 1069 sets of cognates. It also included useful synchronic descriptions of the 20 languages upon which it was based. Although much more material is available on individual languages now making this reconstruction less useful today than it once was, for years it was the standard to which others referred.

In 1979, at the 12th International Conference on Sino-Tibetan Languages and Linguistics in Paris, Fushi Wang distributed his reconstruction of the Proto Miao (Proto Hmongic) language family (Wang 1979). His handout at this conference was actually a full manuscript of a book that was later, with some changes, to be published in Tokyo (Wang 1994). The following year, Wang and Zongwu Mao published their reconstruction of Proto Miao-Yao (Proto Hmong-Mien) based on 23 sampling sites—14 Hmongic and 9 Mienic—chosen to represent the diversity within the family (Wang and Mao 1995). This is unquestionably the most important contribution to Hmong-Mien historical studies to date: it pulls together 829 groups of likely cognate forms, and places them within correspondence sets. Its publication has made further historical work on this family possible; one cannot overstate its importance. For example, the data for the present

reconstruction comes primarily from Wang 1994 and Wang and Mao 1995. However, the reconstruction does not look like a natural language, nor do Wang and Mao claim that it should: their reconstructed protolanguage has 260 initials (single consonants and consonant clusters) and 210 finals. Although each correspondence set is assigned a phonetic value, many of these are clearly "place-holders", awaiting further work.

An influential unpublished paper on problems in the reconstruction of the rimes of Proto Hmong-Mien was delivered by Gordon B. Downer at the 15th International Conference on Sino-Tibetan Languages and Linguistics in Beijing (Downer 1982).[3] This was by no means a full reconstruction, but in this paper Downer presented his ideas about how a reconstruction should proceed, and proposed a number of reconstructed forms based on a comparison of four languages, drawing on data from Wang 1979 and on West Hmongic data he had collected himself. In lesser hands, a conference paper would not be worth special mention, but everything Downer wrote about the history of this language family has proved prescient (see also Downer 1963, 1967, 1971, 1973, 1978, 1979).

In 1993, Theraphan L-Thongkum published a masterful and extremely useful reconstruction of Proto Mienic (L-Thongkum 1993). This work was based exclusively on fieldwork she conducted in Thailand and in Guangxi Zhuang Autonomous Region in China, and is thus valuable both for the analysis and for the data upon which it is based. Of special significance for language historians is the inclusion of data on "Northern Mien" spoken in Longwei village, Yangshou County (Guangxi), which, like Biao Min, has preserved consonant clusters lost elsewhere not only in Mienic, but in the family as a whole. A separate reconstruction of Proto Mienic is not included in this work, because L-Thongkum's reconstruction fits quite neatly into the larger framework of Proto Hmong-Mien presented here. In fact, one aspect of her reconstruction has been deliberately borrowed for words attested in Mienic alone: the representation of the Proto Hmong-Mien series *NT-, *NTH-, and *ND- as Proto Mienic *ʔD- *DH- and *ND- respectively (where the capital letters "N", "T", and "D" stand for stops at all places of articulation). This very economically captures pre-nasalization and voicing facts that have distinctive voicing and tone register outcomes in Mienic. For examples, see onset 1.4 in chapter 2, section 2.2, and the discussion that follows.

Finally, in 1998 Barbara Niederer published an indispensable reference tool for linguists working on Hmong-Mien language history: a compilation of all published work on Hmong-Mien languages, including all Chinese scholarship, up to 1994 (Niederer 1998). The book also provides concise descriptions of 40 Hmong-Mien languages, a useful comparison of the reconstructions by the scholars mentioned above, and a record of dialect/language name equivalences that allows one to track the same dialect/language across publications. Niederer has also performed extensive fieldwork on Hmong-Mien languages in China and Vietnam, most notably on two dialects of Pa-Hng, which she has brought into her discussion of historical topics (1997, 1999, 2004).

This is certainly not intended to represent an exhaustive list of those who have published work on Hmong-Mien language history, however. Scholars including Michael Johnson, Yunbing Li, David Mortensen, Ilia Peiros, David Solnit, David Strecker, and Yoshihisa Taguchi have also made important contributions that will be mentioned in the pages to come.

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[3] Reconstruction work at a lower level was also presented in Downer 1979.

1.4 Reconstruction methodology

The present reconstruction differs in a number of important ways from earlier reconstructions. The first three points below reflect foundational ideas about the language contact situation in southern China and the internal structure of this particular family which have had important consequences for the shape of this reconstruction.

1) A major working assumption of the present reconstruction is that Hmong-Mien is not a sub-family of Sino-Tibetan, and that the vast majority of those words which Hmong-Mien and Chinese share are Chinese loanwords, even at the deepest level. This is based on the nature of the words shared by Chinese and Hmong-Mien, which for the most part are cultural rather than basic vocabulary. Identifying and setting aside Chinese loanwords gives us a better picture of the phonological and semantic nature of the native component of the Hmong-Mien lexicon (chapter 7), and also yields insights into the nature of the contact between the two language groups (chapters 3 and 6). No previous reconstruction of Proto Hmong-Mien, Proto Hmongic, or Proto Mienic has attempted to separate out the Chinese element from the native element.[4]

2) The reconstruction of the onsets in this work reflects the assumption that modern monosyllabic-word Hmong-Mien languages descended from a language which had words with a more complex structure. Disyllabic or sesquisyllabic word structure is preserved to some extent in the complex set of Hmong-Mien initial clusters; in some phonologically unusual, but quite regular, initial correspondences sets; and in the segmental and suprasegmental traces of old morphology. It is also retained and refreshed in the prefix-root structure of nouns in specific daughter languages. For discussion and examples, see chapter 2, section 2.1.2.1 on ancient "pre-initials" and chapter 4 on morphology.

3) The dramatic merger of a large number of Proto Hmong-Mien rimes into a small number of Proto Hmongic rimes represents a major Hmongic innovation. It has been used here as a guide in the reconstruction of rimes at both levels. As will be explained in some detail in the introduction to the reconstruction, chapter 2, section 2.1.3, the fact that over 125 Proto Hmong-Mien rimes collapsed into only 28 rimes in the development of Proto Hmongic provides us with a powerful tool in reconstruction. In order for a set of rimes to merge, they must have shared certain phonological features. Therefore, the merger provides a constraint on the reconstruction of sets of Proto Hmong-Mien rimes; such sets must be "merge-able". On the other side of the equation, the reconstruction of the 28 Proto Hmongic rimes is facilitated by "looking above" to the Proto Hmong-Mien rimes that feed into each one. The number of Proto Hmongic rimes is small, but the reflexes of each one are strikingly divergent. The Proto Hmongic rime correspondence 3, for example, here reconstructed as *æw, is represented by the following reflexes: a, ɯ, e, i, a, æ, i, e, ei, o, a. Wang (1994) reconstructs *æ for this set, without regard to the Mienic side of the family. But the Mienic cognates of words in set 3 belong to five sets that must be reconstructed with a back vowel followed by a rounded element, here *æu, *əu, *au, *ɔu, and *uw. The merger to *æw is not implausible, and helps account for the rounded or back reflexes in the most conservative languages in the Hmongic sub-family. No other reconstruction of Proto Hmong-Mien has taken advantage of the rime merger in this way.

The last two points reflect general assumptions about reconstruction methodology:

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[4] Wang and Mao (1995:19) admit that some of the etyma used in their reconstruction might be ancient loanwords from Chinese. But since they also admit the possibility that they might be cognates, they are incorporated into their data set without special distinction.

4) Generalizing from point (3) above, it is the case that higher-level patterns are often easier to discern than lower-level patterns. In this relatively small family, where the fact of relationship is not in question, it has made sense to work on the reconstruction at the level of Hmong-Mien and at the level of each sub-family simultaneously—in advance of detailed work on subgrouping within Hmongic and Mienic and lower-level reconstructions. If a traditional "bottom-up" approach were to be taken, one that holds that each subgroup must be identified and reconstructed before taking the next step back in time, it would be easy to be fooled by local convergence and contact effects that have quite a different historical status from the effects of normal language transmission. It would also be wasteful, in that it would necessitate constant correction of lower-level reconstructions determined without considering all the relevant evidence.

5) Although an artifact, the reification of a hundred intersecting hypotheses, a protolanguage should be natural-looking, and it should be possible to imagine how its descendants could have developed from it through natural processes. Accordingly, efforts were made (1) not to over-reconstruct (the correspondence sets in Wang and Mao 1995 were combined wherever possible), (2) not to "stuff" proto-forms (Matisoff 1990) with segments reflecting every feature of every reflex, and (3) not to reconstruct highly unnatural phoneme inventories (presented in the context of onset and rime inventories in chapter 2, sections 2.2 and 2.3). Typology also served as a guide in another way: wherever possible, simple proto-segments and clusters were reconstructed for well-represented correspondence sets, on the assumption that common segments (defined cross-linguistically) would have been represented in the lexicon with greater frequency than unusual segments.

1.5 Organization of the book

The major component of the book, chapter two, presents the reconstruction. It includes:

- an introduction to the reconstruction, which includes a brief overview of the phonology of present-day Hmong-Mien languages and a discussion of selected issues in the reconstruction of onsets, rimes and tones;
- the Proto Hmong-Mien onset inventory and the onset correspondence sets with discussion of individual sets and notes on individual etyma;
- the Proto Hmong-Mien and Proto Hmongic rime inventories and the rime correspondence sets with discussion of individual sets and notes on individual etyma.

Chapters three through five address selected topics concerning aspects of the protolanguage and the historical development of Hmong-Mien. The historical development of tone is discussed in chapter three. Hmong-Mien tonogenesis is discussed in relation to tonogenesis in Chinese, and it is proposed that that neither group of languages was tonal at the time the first set of Chinese loanwords were borrowed. This chapter also refines the account of tonogenesis and split within the Hmong-Mien family by proposing that two layers of phonation contrasts preceded the development of "tone proper", or tone perceived as distinctive pitch differences. Chapter four examines traces of ancient morphology in the present-day languages. Three cases involve prefixation of increasing age: (1) still-evident nominal prefixes, (2) prenasalized onsets as possible fused prefixes, (3) and prefixes reflected indirectly as an initial voicing contrast in a small number of doublets. There are

also a few doublets that suggest that there may have been an ancient "derivation by tone change" process. Chapter five addresses the reconstruction of three closed classes: numerals, personal pronouns, and demonstratives.

The sixth chapter presents information on language contact and some brief speculation on distant relationships between Hmong-Mien and other language families. This subject is vast, and the summary of observations presented in this chapter is of necessity incomplete and colored by the author's focus on the Hmong-Mien family. The intent is merely to add another voice to the on-going discussion on language contact and genetic relationships in this linguistically crowded and complex part of the world. The chapter begins with a consideration of the effects of Chinese contact on Hmong-Mien, a topic which has long been of interest to sinologists for the potential light Hmong-Mien may shed on the history of Chinese. This section addresses aspects of Sino-Hmong-Mien phonology, reviews the extent and nature of lexical borrowings, and provides an argument that the classifier construction was borrowed from Chinese. The chapter closes with lists of Hmong-Mien words that bear both a phonological and semantic likeness to words in Tibeto-Burman, Tai-Kadai, Mon-Khmer, and Austronesian, along with some speculative remarks about how we might interpret these similarities.

The short seventh chapter pulls together words by semantic field—flora and fauna, hunting, agriculture, reckoning, material culture, non-material culture—which do not show a connection to Chinese, and may thus be useful in reconstructing a picture of the homeland and daily life of Proto Hmong-Mien speakers some 2500 years ago.

The book concludes with a references section and two indices: an English index to the reconstructed forms and a White Hmong index to the reconstructed forms. The second index is included in the hope that this book will be of interest to Hmong scholars and students.

1.6 Future research

Important research projects for the future fall into two areas: further work on the internal history of the language family, and a full exploration of the external connections of this family to language groups in East and Southeast Asia. In the first area of research, a new family tree based on an explicit subgrouping methodology that weighs the relative importance of phonological, grammatical, and lexical innovations needs to be carefully worked out. Patterns that emerged in the process of working on this reconstruction (see especially the discussion of Pa-Hng and Qo Xiong in chapter 2, section 2.1.3) will provide a new starting point for this work. After the subgrouping issue has been addressed, lower-level reconstructions can be undertaken that will certainly necessitate adjustments in the reconstruction proposed here. Finally, an etymological dictionary on the model of the Sino-Tibetan Etymological Dictionary and Thesaurus (http://stedt.berkeley.edu/) will provide detail about language, culture, and history that goes far beyond a reconstruction based on a limited number of etyma.

Determination of how Hmong-Mien is connected to its neighbors through contact—and how it may be related to its neighbors by descent from a common ancestor—represents the greatest and most exciting challenge for future research. Work on strata of loanwords from different Chinese languages on the model of Downer 1973 will be best carried out by those who are specialists in the history of Chinese. And more evidence of common ground between Hmong-Mien and each of the other language families of the south—Mon-Khmer,

Tai-Kadai, Tibeto-Burman, and Austronesian—needs to be added to what has been collected so far, and this evidence needs to be subjected to various tests designed to help discriminate between inheritance and contact (Thomason and Kaufman 1988, Ratliff and Holst 2005). Although the Hmong-Mien language family is comparatively small in size, its central geographic position ensures that this work will be crucial to our understanding of the prehistory of southern China and northern Southeast Asia.

2 *Proto Hmong-Mien*

2.1 Introduction to the reconstruction

2.1.1 Phonological characteristics of present-day languages

The syllable in Hmong-Mien languages is the typical Southeast Asian type:

(C)C {j/w/l}	T
ONSET	{ i̯/u̯} (V)V (C) RIME

The initial consonant or consonants (the "initial") plus the medial approximant (the "medial") make up the "onset". The "final" consists of the vocalic nucleus, which may include a final consonant (the "coda"). The final together with an on-glide, if present, make up the "rime". A particularly difficult problem of both synchronic and diachronic phonology is the assignment of syllable-internal glides to either the medial position (part of the onset) or to the on-glide position (part of the rime). From a historical perspective, this problem is confounded by the fact that over time the allegiance of a syllable-internal glide can change from onset to rime, or from rime to onset. A lexical tone is associated with the nucleus of the rime in all but a few minor morphemes. The two halves of the syllable have been reconstructed here, the onset and the rime, rather than individual consonant and vowel segments, following the custom in work on Asian languages. This usefully reconstructs phonotactics along with phonemes; it is an easy matter to abstract an inventory of individual consonants and vowels from the inventories of onsets and rimes.

In present-day languages, initial obstruents usually show a contrast in aspiration rather than a contrast in voice. In addition, initial stops in Hmongic may be contrastively prenasalized. Voiced obstruents, which must be reconstructed for the protolanguage, are preserved in a few Hmongic languages, and are a secondary development from prenasalized stops in Mienic. Sonorant consonants (nasals and liquids) may show a voiceless/voiced contrast in languages on both sides of the family. Affricates are common across the family (tθ, ts, dz, pʐ, tʃ, dʒ, tɕ, dʑ, etc.), as are palatal consonants. Medial consonants in present-day languages include the approximants -j-, -w-, and -l-. A "back l" [-l̠-] exists in many West Hmongic languages as both a simple onset and a medial consonant (Johnson 2002), and retroflex consonants are also common in Hmongic. Several Hmongic languages also show a contrast between velar and uvular consonants.

Mienic languages display many more rime contrasts than Hmongic languages. Mun languages show length contrasts in several vowels; Mien shows a length contrast in /a/.

Furthermore, Mienic languages may include up to six final consonants in the coda position: -m, -n, -ŋ, -p, -t, -ʔ.[5] In Hmongic languages, there are fewer possible rimes, no vowel length contrasts, and a maximum of two final consonants in the coda: -n and -ŋ.

All Hmong-Mien languages are tonal, and the primary function of tone is lexical discrimination. For the most part, tones are associated with heavy syllables of the "Mandarin" type rather than light syllables of the "Shanghai" type (Duanmu 1999): thus the tones stay with the syllables to which they belong and rarely spread to neighboring syllables (see Ratliff 1992b and 1992c for a discussion of a tone language typology, and the place of Hmong-Mien languages within the typology). There is a limited paradigmatic (replacement) type of tone sandhi in some West Hmongic languages, which appears to be a relic of an older, phonologically-driven tone sandhi process (see Downer 1967 and Ratliff 1992a, chapter 2 for discussion). When it occurs, tone sandhi operates from left to right in West Hmongic languages (i.e., the trigger tone is on the left, and the changed tone is on the right), and from right to left in North Hmongic and Mienic languages. Tone inventories are relatively large: five of the eight Shidongkou Hmu ("Black Miao") tones are level tones at different pitches, a world-record number of pitch level distinctions (Kwan 1966), and Zongdi Hmong has twelve tonal contrasts including both level and contour tones (Wang and Mao 1995). Tones in some languages are characterized by distinctive phonation types (breathy voice, creaky voice, or both) as well as pitch contrasts (Andruski and Ratliff 2000).

This sketch of the phonological characteristics of Hmong-Mien languages naturally leaves out an enormous amount of detail. For a thorough introduction to the segmental phonology of present-day Hmong-Mien languages, consult Niederer 1998. One may also see the bulk of this chapter, sections 2.2 and 2.3, to review representative word forms.

Given the greater number of onsets in Hmongic (uvular consonants, prenasalized consonants, obstruent-liquid clusters) and the greater number of rimes in Mienic (vowel length, coda consonants), a common description of the relationship between the two subfamilies is that Hmongic better preserves the onset of the Proto Hmong-Mien syllable and Mienic better preserves the rime (Purnell 1970:180; Downer 1982). This is true in broad outline, but the details prove to be more complex. For example, Mienic preserves a trace of a Proto Hmong-Mien pre-initial voicing element (here reconstructed as *N-) which leaves no trace in Hmongic. Biao Min (Solnit 1996) and the Yangshou dialect of Northern Mien recorded by L-Thongkum (1993) also show medial -l- after labial and velar initials. The medial -l- of the *kl- clusters in 'horn', 'insect/worm', 'road/way', etc. (onset 5.31) have not been preserved in Hmongic; they can only be reconstructed on the basis of the Mienic evidence. By the same token, it is not always the case that the Proto Hmong-Mien rime can be equated with the Proto Mienic rime. In a number of cases mergers have taken place in Mienic so that evidence from the Hmongic side needs to be brought in to determine the best Hmong-Mien reconstruction (see 2.1.3.1 below).

These and other general issues and challenges in the reconstruction of Hmong-Mien onsets, rimes, and tones will be presented below, with explanations for the decisions taken here. Discussion of problems relating to individual correspondences will be addressed in the reconstruction itself, sections 2.2 (Proto Hmong-Mien onsets) and 2.3 (Proto Hmong-Mien rimes).

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[5] Final -k appears on a few loanwords, but the regular development of Hmong-Mien *-k in Mienic is /-ʔ/.

2.1.2 Issues in the reconstruction of onsets

2.1.2.1 Pre-initials

One of the differences between earlier reconstructions and the one presented here is the assumption of greater disyllabism in the protolanguage. In the four areas taken up below, matter to the left of the main syllable is acknowledged in this reconstruction.

Tight and loose clusters with *N-

Reminiscent of the notion of fused and loosely attached prefixes as reconstructed for Old Chinese by Sagart (1999:13ff.), both tight *NC- and loose *N-C clusters are here reconstructed for the Hmong-Mien protolanguage. This is due in part to the fact that there are two different correspondence patterns for which an initial nasal element is a reasonable reconstruction. Hmong-Mien prenasalized obstruents appear as such in Hmongic, but yield voiced obstruents in Mienic. For example, Hmong-Mien *ntəut 'navel' (2.4/13):[6]

Hmongic							*Mienic*			
tu^{7}	ntu^{7}	ntaɯ^{7}	ntə^{7a}	nʔto^{D}	ntu^{7}	-	dut^{7}	du:t$^{7'}$	din^{7}	-

Loose *N-C clusters also yield voiced obstruents in Mienic (whether from original voiceless or voiced obstruents, as reflected by the tonal register), but leave no trace whatsoever in Hmongic. For example, Hmong-Mien *N-top 'skin' (2.1/13):[7]

Hmongic							*Mienic*			
tu^{3}	tə^{3}	taɯ^{3}	tə^{3a}	to^{B}	-	-	dup^{7}	dup^{7}	din^{7}	dip^{7}

The question of whether or not these pre-initial elements may have played a morphological role in the protolanguage is addressed in chapter 4, section 3.

Voiceless sonorants

Voiceless sonorant consonants are here reconstructed as *hC- rather than as *C̥-. Not only does this make voiceless nasals and liquids comparable to those for which an initial glottal element must be reconstructed (*ʔC-), but it also deliberately suggests that whatever caused the sonorant to de-voice was a pre-initial element, presumably an *S- . External support for this idea comes from borrowings from Tibeto-Burman languages for which an *s- has been reconstructed. According to Benedict, "[p]refixed *s- is the work-horse of the TB/Karen prefixial apparatus, generally directive/causative/intensive with verbal roots and

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[6] Hmong-Mien, Hmongic, and Mienic reconstructions are followed by numbers that indicate the onset and rime correspondence sets to which they belong. Hence *ntəut 'navel' can be located under both onset correspondence set 2.4 (*nt-) in 2.2 of this chapter, and under rime correspondence set 13 (13f: *-əut) in 2.3.

[7] Taguchi (2005) has discovered that Hmongic Pa-na has /tl- / for 'skin', and attributes the voiced initials in Mienic to this medial -l-. This works for the dental/alveolar series, but there is no evidence for a medial -l- in the "loose N-C" pattern at other places of articulation.

playing the role of 'animal prefix' or 'body-part prefix' (< *śɑ 'animal, flesh') with nominal roots but appearing frequently elsewhere." (Benedict 1987b:44).

For example, the following Tibeto-Burman borrowings (Matisoff 2003) form a tight semantic set:

moon/month	Hmong-Mien *hlaH (2.41/4) Tibeto-Burman *s/g-la 'moon/month'
sun/day	Hmongic *hnɛŋ^{A} (2.8/22); Mienic *hnu̯oi^{A} (2.8/11) Tibeto-Burman *s-nəy 'sun'
night	Hmong-Mien *hməŋH (1.8/21) Tibeto-Burman *muːŋ 'cloudy; dark' cf. Burmese hmuìŋ 'very dark' (Benedict 1972:78)

And three Hmong-Mien verbs seem to reflect the Tibeto-Burman *s- prefix with a "directive/causative/intensive" function:

to slice	Hmong-Mien *hlep (2.41/10) Tibeto-Burman *s-lep 'to slice'
to extend tongue[8]	Yanghao l̥hei^{3} , Jiwei l̥ha^{3}, Bunu ɬe^{3}; Mien ɬɛ^{5}, Biao Min ɬia^{5} Tibeto-Burman *s-lyak 'to lick (causative)'
to sniff at	Hmong-Mien *hmjl̥əmH (1.23/18) Tibeto-Burman *s-nam (tr.)/*m-nam (intr.) 'to smell'

More examples can be found in Ratliff 2001a. Although not all Hmong-Mien voiceless sonorants are Tibeto-Burman borrowings, of course, this particular development suggests a possible phonological origin of all sounds of this type, and motivates the choice of the *hC- notation.

Prefix pre-emption

There are certain nouns that show very strange onset correspondences: in fact, these are not "correspondences" at all, since no two pattern alike, but reflect the unpredictable absorption of one of several possible nominal prefixes in one or more of the languages in the set. For example, Hmong-Mien *-bɔuX (1.3/3) 'hand/arm', perfectly regular in both rime and tone, has Hmongic reflexes with labial, coronal, and velar onsets. The Mienic reflexes consistently show a labial onset, which allows the reconstruction given above. All that can be reconstructed of the first syllable is a prefix position, captured by use of the left-edge hyphen. For more discussion and examples, see chapter 4, section 2.

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[8] Forms from The Office of Miao-Yao Research Lexicon (1987). See also White Hmong /hl̥e^{3}/ (*hlev*), 'to extend (tongue)'. Due to the irregular rime correspondence, no reconstruction is attempted.

Other unusual initial correspondences

There are two other types of unusual initial correspondences that point to disyllabic words in the protolanguage. The first involves nasal onsets. There is a clear *m- correspondence (1.9), wherein every language has either a reflex with /m-/ or an understandable deviation from /m-/, and there is a clear *n- correspondence (2.9), wherein every language has a reflex with /n-/. But there are also two words that show /m-/ across the board except in Mun, which has an inexplicable /n-/, and two which have /n-/ across the board except in Pa-Hng, which has an inexplicable /m-/. In these four cases, the "minor" nasal has been reconstructed as a loosely adjoined nasal pre-initial:

to have	Hmong-Mien *n-mɛj (1.9/11)
to go	Hmong-Mien *n-mɯŋ(X) (1.9/30)
bird	Hmong-Mien *m-nɔk (2.9/29)
rain	Hmongic *m-noŋ^{C} (2.9/28)

In the case of 'to have', a Hmong-Mien root *mɛj having to do with possession appears in a family of four words, so the pre-initial may have been a stative prefix (see chapter 4, section 4). The word 'bird' is to be equated with Proto Malayo-Polynesian *manuk 'bird/fowl' (ACD) and Proto Tai *n-lok 'bird' (Li 1977), which clearly shows that the Pa-Hng form has retained a trace of the first syllable of an original disyllabic word.

In another case, in onset series 2.55 (*ʔr-), 2.56 (*hr-), and 2.57 (*r-), all reflexes point to a simple onset except the Hmongic language Jiongnai. Jiongnai has irregular reflexes in these three sets, but frequently shows clusters with a prenasalized velar consonant /ŋkj-/ with an upper-register tone in 2.55, /ŋkh-/ or /ŋkj-/ with an upper-register tone in 2.56, and /ŋkj-/ with a lower register tone in 2.57. The repeated occurrence of this reflex led Wang and Mao to the reasonable reconstruction of *ŋkl-/*ŋkhl-/*ŋgl- for this series in Hmong-Mien, rather than a simple liquid. But the fact that a prenasalized velar only appears in one language argues that this is another pre-initial, not part of the root, and that Jiongnai retains a trace of the first syllable of an original disyllabic word. The difficulty here is that we would not expect to see the same pre-initial in each case unless this were a trace of old morphology, which is highly unlikely given the heterogeneous nature of the group of words in these sets ('liver', 'high/tall', 'sound/noise', 'fern', etc.).

2.1.2.2 Initials

Prenasalized stops

Prenasalized stops and affricates characterize both the present-day Hmongic languages and the Hmong-Mien protolanguage. In the native component of the lexicon, they do not seem to reflect ancient 'fused' morphology of any sort since prenasalization appears on words of all lexical categories (see chapter 4, section 3). These initial nasal elements, therefore, are here reconstructed as phonological elements.

Prenasalization must be reconstructed for both voiceless or voiced obstruents, however typologically odd. The area-wide tone split conditioned by voicing in the initial is conditioned solely by the voicing of the oral stop or affricate to which the nasal is attached: in other words, since we have syllables of the type /mpo^{1}/ and /mpo^{2}/ in the daughter

languages, we must reconstruct both *mpo^{A} and *mbo^{A}, or clusters that have both identical and mixed values for voicing.

Fricatives

A noteworthy aspect of the reconstructed consonant inventory of Proto Hmong-Mien is the relative scarcity of fricatives. Only four fricatives can be reconstructed for native words, here *s-, *sj-, *ɕ-, and *h-, and given the words in these sets, only *h- "feels" native. Half of the words in the first three sets are either clearly Chinese borrowings or are likely to be Chinese borrowings, which throws suspicion on the rest of the words in these sets, none of which belongs to core vocabulary. Some fricatives that exist in the daughter languages derive from affricates or aspirated stops; others derive from glides via fortition: *w- > /v-/, *j- > /ʑ/.

Aspirated stops

Aspirated stops must be reconstructed for the protolanguage, but reconstructed etyma with aspirated stops are not numerous: they seem to have carried a lower functional load than plain voiceless and voiced stops in the protolanguage, and suggest that aspiration may have been a secondary development of some sort. There are correspondence sets of aspirated stops in Wang and Mao 1995 made up entirely of Chinese borrowings: for example, their sets 2 ('CLF–sheets', 'to push aside', 'to split'), 14 ('to dry in the sun', 'to carry in two hands', 'to sweep'), 17 ('to sprinkle'), 38 ('to splash'), 134 ('thousand', 'lacquer'), 137 ('to insert'), 206 ('bucket', 'bellows', 'hoop', 'charcoal'), 254 ('to pull out', 'to insert'), and 350 ('to fry', 'bed', 'otter', 'grain'), etc. Thus any etymon for which an aspirated initial must be reconstructed is a potential loanword. But a number of Hmong-Mien words with complex aspirated onsets have no obvious Chinese connection and must be taken as native (see chapter 7): Hmong-Mien *phlei 'shell' (1.32/12), and Hmongic *mphje^{D} 'daughter/girl' (1.20/10), *mphle^{A} 'finger ring' (1.35/10), *nthaŋ^{A} 'attic' (2.5/24), *nthrɔŋ^{A} 'puttees' (2.50/29).

Coronal co-occurrence restrictions in clusters

Not every medial is reconstructed for every coronal category. The following is a statement of these restrictions:

Plain dental/alveolar ("T") series: no oral stops or fricatives with -l-

Dental/alveolar affricate ("TS") series: no oral stops or fricatives with -l- or -r-

Palatal ("C") series: no oral stops or fricatives with -j-, -l- or -r-

No coronal series is reconstructed with medial -l-, but this does not mean that such clusters do not appear in the daughter languages: see Lyman 1974:35 on Green Hmong /tl-/ as a variant pronunciation of /kl-/, and Taguchi 2005 on /tl-/ and /dl-/ clusters in Pa-na.

Velars and uvulars

Both velars and uvulars appear in Hmongic languages; only velars appear in Mienic languages. All reconstructions to date, including this one, have taken the velar/uvular contrast back to Proto Hmong-Mien and posit a merger of the two in Mienic. However, there is good evidence that some original velars have "fallen back" and become uvulars on the Hmongic side of the family, making it appear that there were many more uvular-initial words in the protolanguage than there actually were.

In support of the idea that velar retraction operated in Hmongic, note first that Chinese borrowings with velar initials frequently appear with uvular initials in Hmongic languages:

甘 'sweet'	OC *[k]ˤam > MC kam > Man. *gān*
	HM *Kam > H *qaŋ^{A} (5-6.1/24)
槁 'dry/withered'	OC *[k^{h}]ˤawʔ > MC khawX > Man. *gǎo*
	HM *KhæwX > H *qhæ^{B} (5-6.2/5)
雞 'chicken'	OC *kˤe > MC kej > Man. *jī*
	HM *Kəi > H *qe^{A} (5-6.1/10)

If these were loans from Middle Chinese, this may reflect the fact that velar retraction was an active rule at the time of borrowing. Or if these words were loans from Old Chinese, it may be that pharyngealized *k- was borrowed as *q- in Proto Hmong-Mien. In either case, this correspondence argues for the source of some Hmongic uvulars in old velars.

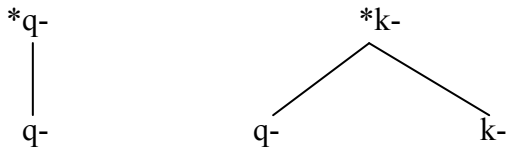
Second, velar retraction has been reported for other languages of the area: Matisoff (2003:20) observes that "[p]ostvelars are generally secondary developments of the TB [Tibeto-Burman] *velar series, as in Black Lahu, where they regularly descend from simple *velars that are not followed by a glide". Solnit (1996:13-14) suggests that this may have also happened in Hmong-Mien, with Hmong-Mien velars becoming uvulars except before medial -r- and back -l-, and "under some other condition, perhaps involving front vowels/glides".

Finally, and most persuasively, this "other condition" has been discovered: it is not a front vowel or glide, but a back rounded vowel or on-glide (u, o, ʉ, u̯) that blocked velar retraction. Note the reconstruction of rimes following *k-, as opposed to those following *K—either *k- or *q-, it is impossible to tell—in the words below, and their White Hmong reflexes:

5.1 *k- (> k-)	5-6.1 *K- (> q-)
*ku̯eiX 'younger brother' > kɯ^{3}	*KæŋX 'frog' > qa^{3}
*kow^{D} 'to gnaw' > kaɯ^{7}	*N-KəjX 'excrement' > qua^{3}
*kuw^{D} 'bamboo hat' > kau^{7}	*N-Kaŋ 'back (vs. front)' > qa^{1}

Back rounded vowels and liquids make a more natural class than front vowels and liquids, and makes the split in *k- understandable. This "retracted" class of sounds prevented a velar from retracting to uvular, a dissimilatory constraint: it was important that the onset be clearly perceived against the following element in the syllable.

Thus some Hmongic words with q- go back to *q-, other Hmongic words with q- go back to *k- . Hmongic words with k- (< *k-) represent the special case: *k- did not retract before liquids and back rounded vowels.



Therefore an unequivocal *k- or a *q- is reconstructed here only before liquids and back rounded vowels. The two dorsals contrast before these segments. But for words with /q/ reflexes in Hmongic, only *K- can be reconstructed before all other vowels: due to the merger, it is impossible in this environment to distinguish /q/s that come from *k- from /q/s that come from *q-.

This account can explain an interesting asymmetry in the reconstruction of Wang and Mao (1995). They reconstruct any correspondence set with q- reflexes in Hmongic by something in the *q- series, and thus have far more words with typologically marked *q- (Maddieson 1984b:32) than with the typologically unmarked *k-. The numbers below indicate the numbers of words in each correspondence set:

*k-	5	*q-	13
*kh-	2	*qh-	5
*g-	1	*G-	7
*nk-	1	*nq-	5
*nkh-	1	*nqh-	1
*ng-	3	*nG-	8

This asymmetry can be easily explained if many of the uvulars were originally velars before unrounded, non-back vowels. The reconstruction of the rimes for each word in these sets supports this hypothesis.

Liquids

Wang and Mao (1995) and Solnit (1996) have taken the contrast between West Hmongic front and back "l" ([l] vs. [ɬ]) as a conservative feature, and have projected the contrast back to the Hmong-Mien protolanguage.[9] But Wang and Mao took words with Proto Hmongic *r- (as reconstructed in Wang 1994) back to their interesting/problematic *ŋkl- series (here onsets 2.55, 2.56, 2.57), and thus do not reconstruct *r- at all at the Proto Hmong-Mien level. They reconstruct Proto Hmong-Mien as a two-liquid language, but the two liquids are the somewhat unnatural pair *l- and *ɬ- , with no *r- .[10]

In this reconstruction, only *r- and *l- are posited for Proto Hmong-Mien, in both initial and medial positions. The "back l-" [ɬ-] of some West Hmongic languages is taken to be a reflex of *lj- (*ʔlj-/*hlj-/*lj-; 2.40.1–2.42.1). For support, note the Chinese loanwords in these sets: Hmong-Mien *ljim (2.42.1/18) 'sickle' (which has a Zongdi reflex of /ɬæin^{2}/) from 鎌 (Middle Chinese ljem); Hmongic *ljɛŋ^{A} (2.42.1/22) 'to measure' (which has a

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[9] Johnson (2002) takes the contrast back to "Proto-Far-West-Hmongic", a well-justified low-level reconstruction.

[10] Based on Mienic correspondences rather than West Hmongic [ɬ], Purnell (1970) reconstructed three liquids for Proto Hmong-Mien (*l_1-, *l_2-, and *r-). Benedict (1975:164) interpreted Purnell's *l_2- as * ɬ- , and used the reconstruction of these two laterals in Hmong-Mien to help connect the family to Austronesian, calling it "a highly distinctive AT [Austro-Tai] feature".

Zongdi reflex of /l̥oŋ^{2}/) from 量 (Middle Chinese ljang); and Mienic *ljo̱ŋ^{B} (2.42.1/26) 'tael (40 grams)' from 兩 (Middle Chinese ljangX).[11] Those correspondence sets for which Wang in 1994 reconstructed Proto Hmongic *ʔr-/*r̥-/*r- and in 1995 reconstructed Proto Hmong-Mien *ŋkl-/*ŋkhl-/*ŋgl- are here reconstructed with *(-)r- at both levels (*ʔr-/*hr-/*r-; 2.55–2.57). See also Taguchi 2006, in which convincing arguments for *r- at the Proto Hmong-Mien level are presented. Support for this analysis comes from the phonetic character of the reflexes—a velar fricative in East Hmongic, retroflex fricatives in North and West Hmongic, and an /l-/ in Biao Min.

2.1.2.3 Medials

Liquids

The decision to reconstruct only two liquids, defended in the section on initial liquids above, also extends to the reconstruction of medial liquids: only two liquids are here reconstructed in medial position, and they are *-l- and *-r- rather than *-l- and *-l̥- . The complex medial *-lj- is also reconstructed. The difficulty in accounting for the array of different correspondences involving dorsal-liquid clusters (see Solnit 1996 and Niederer 1999)—for which a third liquid would come in handy—is made somewhat easier here by the decision to reconstruct these complex clusters as well as a *k-/*q- contrast.

Glides

A palatal glide as a medial is reconstructed here, but not a labial glide. Medial -w- in the daughter languages can be explained as one of three secondary developments. It appears (1) in correspondence patterns that consistently show the association of the rounded element with the rime rather than the onset, (2) after a palatalized labial consonant and before /a/ in certain Mienic languages, and (3) as the labial portion of an "unpacked" labiovelar initial in a Chinese loanword.

For the first case of medial -w- development, see for example Wang and Mao 1995, rime set 242 (in this reconstruction, rime set 8b). All of the words in this set show a medial -w- in Mienic languages: for example, in Jiangdi Mien /mwei^{2}/ '2sg ('you'), /twei^{3}/ 'tail', /tɕwei^{3}/ 'snail', /pwei^{5}/ 'to sleep, /tswei^{5}/ 'smelly'. Wang and Mao place each of these words in an onset group reconstructed with a medial -w- (*mw-, *tw-, *pw-, etc.), but clearly the -w- consistently patterns with the rime (here reconstructed as *-u̯ei). Proper attribution of the appearance of a medial -w- to a rounded element in the rime rather than to the onset also accounts for Jiangdi and Xiangnan Mien words with -w- under Wang and Mao rime sets 39, 75, 77, 207, etc.

Another source of medial -w- in Luoxiang Mien (8) and occasionally in Lanjin Mun (9) is the environment Pj __ /a/ , where "P" stands for any labial consonant. The syllable-internal palatal glide dropped in these Mienic languages, and a -w- developed in its place. The sequence of events is not clear, but the palatal glide appears to be a key feature of the conditioning environment: Luoxiang Mien also has words with a labial next to /a/ in which no medial -w- develops: /m̥aŋ^{3}/ 'night' from Hmong-Mien *hməŋH (1.8/21), /ma^{8}/

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[11] One Tibeto-Burman loanword also shows evidence of *lj-: Hmongic *lje^{D} (which has a Zongdi reflex of /l̥e^{8}/) and Mienic *ljəp^{D} 'lightning flash' can both be related to Tibeto-Burman *(s-)lyap 'flash; lightning' (Matisoff 2003).

'thick/dense' from Mienic *mak^{D} (1.9/4) /pa^{6}/ 'nose' from Hmong-Mien *mbruiH (1.51/8), etc. Although this medial -w- is restricted only to some dialects of Mien and Mun, Wang and Mao reconstruct it back to the Mienic or Hmong-Mien protolanguage in each case.

Mienic	*Luoxiang Mien*	*Lanjin Mun*
*bhi̯ɛk^{D} 'chaff/husk' (1.5/1)	bwa^{7}	
*hmja^{B} 'grass' (1.23/4)	m̥wa^{3}	wa^{3}
*pjat^{D} 'wooden basin' (1.16/4)	pwat^{7}	
*mjæn^{A} 'person/Mien' (1.24/19)	mwan^{2}	
*hmjæn^{B} 'spirit/ghost' (1.23/19)	m̥wan^{3}	ŋwa:n^{3}
*bi̯əŋ^{A} 'flower' (1.3/24)	pwaŋ^{2}	
*mjəŋ^{A} 'wife of mother's brother' (1.24/29)	mwaŋ^{2}	ŋwaŋ^{2}

Finally, a third source of medial -w- is an "unpacked" labiovelar initial of a Chinese loanword. For example:

	Luoxiang Mien	*Lanjin Mun*	*Biao Min*
瓦 tile *ŋ^{w}æX (5'.9/5)	ŋwa^{4}	ŋwa^{4}	ŋɔ^{4}
斤 catty *k^{w}jan (5'.16/20)	tɕwan^{1}	san^{1}	tɕwan^{1}
瓜 cucumber *K^{w}a (5-6'.1/4)	kwa^{1}	kwa^{1}	kwa^{1}

2.1.3 Issues in the reconstruction of rimes

2.1.3.1 Rime mergers[12]

Major rime mergers in Hmongic

The most dramatic story in the phonological history of the languages of this family concerns the large-scale mergers of ancient rimes in the development of Hmongic. One of the main differences between this reconstruction and those of Purnell (1970) and Wang and Mao (1995) is that rime mergers in Hmongic are used to aid in the reconstruction of Proto Hmongic and Proto Hmong-Mien vowel qualities.

Rimes in Hmongic languages average 14 contrasts, and rimes in Mienic languages average 60 contrasts, based on the 40 profiled languages in Niederer (1998:211–212). This is because Mienic languages retain many more features of Proto Hmong-Mien rimes, most notably -m, -n, -p, -t and complex combinations of vowel, on-glide, and off-glide.[13] Mienic languages have also innovated length contrasts (see section 2.1.3.2). Wang (1994) only established 30 rime correspondences for Proto Hmongic, while Wang and Mao (1995) established 210 rime correspondences for Proto Hmong-Mien. In this reconstruction, the number of rime correspondences in Proto Hmongic is reduced from Wang's 30 to 28 (his sets 12 and 17 are combined, and 26 contains only loanwords). The original numbering of

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[12] This section is based on Ratliff 2002.

[13] Final -n in some Hmongic languages is a development internal to Hmongic: Proto Hmongic only had one final nasal (see discussion in 2.1.3.3 below). Proto Hmong-Mien final *-k has weakened to -ʔ in Mienic.

Wang's 30 categories are used to facilitate comparison to this reconstruction; these numbers organize section 2.3 of this chapter into large Hmongic "merger targets". Additionally, the number of rime correspondences in Proto Hmong-Mien is here reduced from Wang and Mao's 210 to 127, of which 9 are represented by Chinese loanwords only.

In principle, the methodology used here is straightforward. Since we know that a group of different Proto Hmong-Mien rimes (reflected fairly directly by the Mienic rime correspondences) merged into each Hmongic rime, we must reconstruct these Proto Hmong-Mien rimes with enough common features to show how a merger to the "target" Proto Hmongic rime would have made sense.

For example, for rime set 3, the reconstruction for Proto Hmongic is *æw. The Mienic correspondence sets reflecting different Proto Hmong-Mien rimes that merged into Proto Hmongic 3 are the following (rime correspondence set numbers from Wang and Mao 1995 are given at the end of each line):

H-M	*Mienic reflexes*									
*au	aːu/au	a/au	aːu	aːu/a	aːu	aːu/au	au	ɔu/a	u	(76, 95)
*ɔu	wo	wə	u	u	u	u	au/u	ɔu	u	(77, 244)
*əu	au	au	au	au	au	au	au/a	ɔu	u	(96)
*æu	ou	əu	eu	a/əu	u/ou	ɔu	au	æ/ɔu	u	(113, 259)
*uw	u	u	o	u	o	u	u	u	u	(115)

Knowing that these five sets reflect rimes that merged in Hmongic, each was reconstructed with a back or low vowel as the first element and a rounded second element, either a *-u or a *-w, depending on whether the reflexes were diphthongs or monophthongs (this will be discussed further in section 2.1.3.3 below). Of course, each particular reconstruction is also constrained by values assigned to other correspondence sets, and the phonetic value of each reconstruction can only be suggestive. The point is that these reconstructed values could all have yielded these particular reflexes, and, at the same time, this set of reconstructed values could have merged to Proto Hmongic *æw quite easily. Wang and Mao had eight sets rather than five, and for them reconstructed *æːu, *aːu, *æu, *ui, *au, *Ai, *ə, and *Au—a less homogeneous set of values; a set less likely to merge.

But beyond this, in practice the method involves "triangulation" rather than a straightforward comparison between a firm reconstruction of a value for a Hmongic correspondence and that of a number of Mienic correspondences. This is because although simple in terms of the total number of correspondences, the reflexes of each Hmongic rime correspondence are strikingly diverse, making the reconstruction of Hmongic rimes more difficult than one might expect. For example, for rime set 3 the Hmongic reflexes given below do not suggest an obvious reconstruction:

a ɯ e i a æ æ i i e ei o a a

For this very well-represented set (43 words display this correspondence in the reconstruction), Wang (1994) reconstructed *æ and Downer (1982), for the subset of West Hmongic reflexes /e i a æ æ i i e ei/, reconstructed *e. But neither reconstruction can account for the North Hmongic /ɯ/ or the Pa-Hng /o/. It becomes clear that a rounded off-glide element must be reconstructed for Proto Hmongic only when one makes reference to

the Proto Hmong-Mien rimes that merged into this one rime (see above) and when one studies the cross-correspondence tendency for both North Hmongic and Pa-Hng to be conservative in their preservation of the end of the Proto Hmong-Mien rime (here a [+back, +high, +round] element). The conservative nature of North Hmongic and Pa-Hng as reflected in their rimes will be discussed further below.

The position adopted here is that in the matter of Hmong-Mien rimes, top-down and bottom-up constraints should used in tandem. As Anttila observed, "It is natural that such triangulation from above and below will often lead to a correct solution that would otherwise have taken much more labor, if it were possible at all." (1972:346). Some historical linguists may prefer a strict "bottom-up" approach to reconstruction that does not look across (which in the matter of Hmong-Mien rimes, given the conservatism of Mienic, is in effect "above") in order to find the best intermediate reconstruction. This methodology is dangerous in one potential application: to justify new proposals for distant genetic relationship. When the question of relationship is open, it is too easy to let the desire to demonstrate the relationship guide the choice of possible reconstructed values, whether consciously or unconsciously. Thus, one should not let the rime value of a reconstructed lookalike Mon-Khmer word subtly shape the reconstruction of a Proto Hmong-Mien rime since this will have the effect of making one's own case for Hmong-Mien–Mon-Khmer stronger. In the case of the Hmong-Mien family, however, which is small and compact compared to the other large language families of the area—Mon-Khmer, Tibeto-Burman, Tai-Kadai, Austronesian—the genetic relationship of the member languages has never been in question: even upon superficial examination, the lexical similarities and interwoven phonological correspondences make the family relationship obvious. There is no need to hypothesize about rime mergers in Hmongic—it is quite clear that they took place—so there is no danger that we might reconstruct particular values in order to bolster a particular hypothesis. And not only are there no negative consequences of using a triangulation methodology, in this case there are negative consequences of *not* doing so. From the Hmongic side, without a willingness to see how Proto Hmongic might best fit into the larger picture of the family as one reconstructs, one will make mistakes that will only have to be corrected at a later stage of the work. From the Mienic side, assuming that these reflexes more closely reflect Proto Hmong-Mien, without a willingness to take the historical fact of the Hmongic mergers into account, one will "hug the ground" too closely in projecting the exact values of the Mienic reflexes back in time, leading to an unconstrained, over-reconstructed Proto Hmong-Mien.

Minor rime mergers in Mienic

Given the fact that Mienic preserves many of the Proto Hmong-Mien rimes intact or changed in only minor ways, Downer (1982) correctly points out that Mienic frequently provides key evidence for Proto Hmong-Mien reconstruction. He provides the following example: in Hmongic, 'liver' and 'high/tall' are homophonous in every language (for example, in White Hmong both are /ʃia^{1}/) and are thus identical at the Proto Hmongic level (*hrin^{A}). But the two are clearly distinguished in Mienic by a coda consonant contrast that is lost in Hmongic: at the Hmong-Mien level they must be reconstructed as *-hrɻ̂ən (2.56/18f) 'liver' vs. *-hrɻ̂əŋ (2.56/18g) 'high/tall'.

But Hmongic is not the only side of the family to have lost key information in the rime. On several occasions, mergers have taken place in Mienic, too, and the only way to arrive

at the Proto Hmong-Mien reconstruction is to use information preserved in Hmongic. One full example of this is presented below, followed by a list of other Mienic rime mergers.

There are two sets of words in Mienic which can only reasonably be reconstructed as *ai in Proto Mienic, as L-Thongkum (1993) has done, since the reflexes do not vary significantly:

	Mienic								
have	ma:i^{2}	ma^{2}	ma:i^{2}	ma:i^{2}	na:i^{2}	na:i^{2}	ma^{2}	mai^{2}	-
買 buy	ma:i^{4}	ma^{4}	ma:i^{4}	mai^{4}	ma:i^{4}	ma:i^{4}	-	mai^{4}	mai^{4}
賣 sell	ma:i^{6}	ma^{6}	ma:i^{6}	mai^{6}	ma:i^{6}	ma:i^{6}	ma^{6}	mai^{6}	mai^{6}
come	ta:i^{2}	ta^{2}	ta:i^{2}	ta:i^{2}	ta:i^{2}	ta:i^{2}	ta^{2}	-	tɛi^{2}
waist	tɕa:i^{3}	ka^{3}	kla:i^{3}	kla:i^{3}	kla:i^{3}	kla:i^{3}	kla^{3}	lai^{3}	lai^{3}

These five words have different Hmongic correspondences, however, and cannot all be reconstructed at the Proto Hmong-Mien level with *ai:

have/buy/sell	ɛ	e	ua	a	u	əŋ	oŋ	a	u	ɔŋ	ə	ɪ	ɔ	ɔ	*u̯ɛ
come/waist	a	ɑ	ua	a	o	u	a	a	a	ɔ	uɔ	a	a	a	*u̯a

I have reconstructed Proto Hmong-Mien *ɛj for the first set, and Proto Hmong-Mien *aj for the second set. The merger of two very similar Proto Hmong-Mien rimes to Mienic *ai is thus not surprising.

	Rime	*Hmongic*		*Hmong-Mien*		*Mienic*
a)	11c	*u̯ɛ	<	*ɛj	>	*ai
	15d	*u̯a	<	*aj	>	*ai

Other Mienic rime mergers appear below:

	Rime	*Hmongic*		*Hmong-Mien*		*Mienic*
b)	1c	*i	<	*i̯æn	>	*æn
	19b	*æn	<	*æn	>	*æn
c)	3c	*æw	<	*əu	>	*əu
	7d	*o	<	*əw	>	*əu
d)	3d	*æw	<	*au	>	*au
	5c	*æ	<	*æw	>	*au
e)	3f	*æw	<	*uw	>	*u
	7c	*o	<	*u̯o	>	*u
	16c	*u	<	*u	>	*u
f)	9d	*uw	<	*ut	>	*ut
	13f	*ow	<	*əut	>	*ut
g)	9e	*uw	<	*uk	>	*ok

	13e	*ow	<	*ok	>	*ok
h)	18g	*in	<	*i̯əŋ	>	*i̯əŋ
	24d	*aŋ	<	*i̯aŋ	>	*i̯əŋ
i)	20e	*en	<	*eŋ	>	*eŋ
	29j	*ɔŋ	<	*u̯eŋ	>	*eŋ
j)	21d	*əŋ	<	*əŋ	>	*u̯əŋ
	29e	*ɔŋ	<	*u̯ɔŋ	>	*u̯əŋ
k)	21g	*əŋ	<	*əuŋ	>	*uŋ
	28b	*oŋ	<	*uŋ	>	*uŋ
l)	21h	*əŋ	<	*əaŋ	>	*aŋ
	24c	*aŋ	<	*aŋ	>	*aŋ
m)	22c	*ɛŋ	<	*ɛŋ	>	*əŋ
	29h	*ɔŋ	<	*u̯əŋ	>	*əŋ

New patterns

To the extent that new cross-correspondence patterns of innovation, retention, and merger come to light, they lend support to the values reconstructed for correspondences using the "triangulation" method of reconstruction described above. As a bonus, once these patterns have been independently established, they can help decide how other problematic sets should be reconstructed. Described below are patterns across correspondence sets that have emerged in the course of work on this project.

Hmongic rounding of rimes ending in -i and -j

The development of Proto Hmongic *u̯ɛ and *u̯a from Proto Hmong-Mien *ɛj and *aj described above may have seemed odd. It is clearly necessary to do something to explain rounded reflexes in Hmongic forms that correspond to a number of Mienic rimes that show no sign of rounding, such as the following:

	Hmongic											*Mienic*										
12/17c	u	ei	ou	au	u	o	ɔ	ou	ou	a	ja	i	i	i	ei	ei	e	ei	ei	ei	i	i	ɛi
15c	a	ɑ	ua	a	o	u	a	a	a	ɔ	uɔ	a	a	a	ai	ai	ai	ai	ai	ai	ai	ai	ai

One could reconstruct a rounded element in Proto Hmong-Mien which was subsequently lost in Mienic. However, such a solution would ignore the pattern evident in the example sets above: in each case, the Mienic reflexes end in /i/. The decision taken here is to attribute the rounded element to a Hmongic innovation, the insertion of a -u̯- on-glide when the Hmong-Mien final ends in either *-i or *-j:

	Hmong-Mien		*Hmongic*
11	*ɛj, *u̯ɛj	>	*u̯ɛ
12	*ei, *æ̂i, *u̯ei, *u̯əi	>	*u̯ei
15	*əj ,*aj, *u̯əj	>	*u̯a

This solution is preferred because not only are rime innovations more common in Hmongic than in Mienic, there is a good parallel development in an unrelated language, arguing that this is a kind of natural dissimilatory process. An identical phonological innovation took place in the development of Old French -ei to Modern French -wa (Posner 1997:252-262):[14]

Latin *lēgem*	>	Early Old French *lei*	>	Modern French *loi*
Latin *mē*	>	Early Old French *mei*	>	Modern French *moi*

Hmongic preserves the first part of complex Hmong-Mien rimes, but Pa-Hng and Qo Xiong often preserve the second part

Not surprisingly, given the better retention of onsets in Hmongic, if Hmongic retains only part of a complex Hmong-Mien rime, it will be the first part.[15] Simplification of complex Hmong-Mien rimes in these cases involves loss or reduction (to a glide) of non-initial vocalic elements:

	Hmong-Mien		*Hmongic*
1	*i, *i̯æn, *i̯əu, *i̯ɛk	>	*i
2	*ɨ, *i̯eu, *eu, *ik, *ek	>	*ɨ
3	*æu, *əu, *au, *ɔu	>	*æw
9	*uj, *up, *ut, *uk, *u̯ɛt, *u̯ɛk	>	*uw
10	*e, *ej, *ep, *et	>	*e

In contrast to the pattern described above, Pa-Hng shows a distinct development across correspondence sets, which, along with conservative aspects of its initial consonantism (Benedict 1986; Strecker 1987a, b; Li and Mao 1997, Niederer 2004), make it appear as the first language to separate from the Hmongic branch. The generalization that Hmongic preserves the first part of the Hmong-Mien rime above can then more precisely be said to apply to "Hmongic proper", or to Hmongic languages other than Pa-Hng. A new discovery of this reconstruction project is that Qo Xiong (representing Northern Hmongic) often patterns with Pa-Hng in this regard, as will be shown below. The archaism of Qo Xiong suggests that the structure of the Hmong-Mien family tree needs to be re-calculated from the beginning, with no preconceptions about Hmongic language sub-grouping.

First, in three sets Pa-Hng and Qo Xiong appear to conserve the second part of Proto Hmong-Mien diphthongs, against the usual pattern for Hmongic, which, if it conserves only part, will conserve the first part (the reflex in parentheses goes against this pattern):

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[14] I am grateful to Geoff Nathan (p.c. 2002) for pointing out the French parallel.

[15] Other possible outcomes are retention of the complete Hmong-Mien rime, or a "compromise" rime, a merger of two Hmong-Mien vowel qualities. What one does not find is loss of the first part and preservation of the last part of the Hmong-Mien rime.

	Hmong-Mien		*Pa-Hng*	*Qo Xiong*
3	*æu, *əu, *au, *ɔu	>	o	ɯ, o, u
11	*ɛj, *u̯ɛj	>	ɪ	e
12/17	*ei, *æ̂i, *u̯əi	>	i, ɪ	i, ei, (ɔ)

Second, in two sets, Pa-Hng and/or Qo Xiong conserve a trace of the coda consonant by making a distinction in vowel quality depending on whether the Hmong-Mien syllable was open or closed.

	Hmong-Mien		*Pa-Hng*	*Qo Xiong*
4	*at	>	e, i	ei, i
	*a	>	a	ɑ
7	*əp, *ət, *u̯ət	>	a	
	*o, *u̯o, *əw, *i̯ou	>	o	

In a third set, Qo Xiong conserves a trace of the coda consonant by making a tone distinction according to whether the Hmong-Mien syllable was open or closed. Recall that in other Hmongic languages (the languages of "Hmongic proper"), it did not matter whether the Hmong-Mien rime was open or closed: the two types of syllable simply merged into one.

	Hmong-Mien		*Qo Xiong*
13	tone 7 (< -p, -t, -k)	>	u
	tones 1, 3, 4, 5, 6	>	ə

In a fourth set, Qo Xiong conserves a trace of a Hmong-Mien rounded on-glide by making a distinction in vowel quality on the basis of its presence or absence. Wang (1994) divided this set into two sets (12, 17) solely on the basis of these two different Qo Xiong reflexes: better reconstructions of the Hmong-Mien rimes that merge into this set reveal the conditioning factor.

	Hmong-Mien		*Qo Xiong*
12/17	*ei, *æi	>	ei, i
	*u̯əi	>	ɔ

The delineation of a new family tree for Hmong-Mien on all relevant criteria is beyond the scope of the present study, but it is clear that these patterns will help us do a better job of sub-grouping than has been done to date. Any new tree that is proposed, however, will be inadequate unless it includes a re-examination of the position of the North Hmongic branch.

Chinese borrowings

If a reconstruction of Hmong-Mien is done well, independent support for the values reconstructed should come from what is known about the form of Chinese words borrowed by Hmong-Mien in the various rime categories. The reconstructed shape of obvious Chinese borrowings should ideally dovetail with those proposed here for Hmong-Mien; to

fall in with a particular rime correspondence set, a given Chinese borrowing must have shared phonological properties with a particular phonologically-defined set of native words (whether Proto Hmong-Mien, Proto Hmongic, or Proto Mienic).

The shape of Middle Chinese (c. 500 CE) is fairly well known (Pulleyblank 1991, Baxter 1992), and progress is being made on the reconstruction of Old Chinese (c. 1500 BCE: Baxter 1992, Sagart 1999, Baxter and Sagart, 2009). The most difficult problems in the reconstruction of Old Chinese involve the onsets rather than the rimes, so support for the reconstruction of Hmong-Mien rimes from Chinese borrowings is accordingly more valuable than support for the reconstruction of Hmong-Mien onsets from Chinese borrowings (in the case of onsets, it may be that Hmong-Mien will be in a better position to help clarify questions of Chinese historical phonology). For each rime correspondence set in section 2.3 below, Chinese borrowings that pattern in the same way as the other words of that set have been included, along with both the Hmong-Mien reconstruction and the most recent reconstruction from either Baxter 2000 for Middle Chinese or Baxter and Sagart 2009 for Old Chinese, whichever the reconstructed Hmong-Mien form resembles most.

2.1.3.2 Vowel length in Mienic[16]

No language in the Hmongic branch has contrastive vowel length, nor do the Biao Min and Zao Min languages of the Mienic branch. On the basis of vowel length contrasts in dialects of the Mien and Mun languages alone, however, the majority view is that vowel length should be reconstructed for Proto Hmong-Mien. Purnell (1970) and Downer (1982) reconstruct only /a/–/a:/ for Proto Hmong-Mien. Wang and Mao reconstruct contrastive vowel length for all vowels, but as they point out in the introduction (1995:15), only dialects of Mun exhibit length contrasts in vowels other than /a/.

Downer held out the hope that reconstructing additional length contrasts could help clear up some of the difficulties in linking Mienic rimes with the severely reduced number of Hmongic rimes: "Since it is necessary to project the Yao length distinction back into PMY [Proto Miao-Yao] (but not PM [Proto Miao]) for the low vowels, a further assumption might be made: that PMY possessed similar length distinctions with other vowels. Such an assumption could then explain some other cases where a single Miao rime corresponds to two different Yao rimes …" (1982:5). But there is no evidence that Proto Hmong-Mien vowel length played a role in the patterns of merger into Proto Hmongic: the quality of nuclear and peripheral vocalic elements alone seem to have determined the outcome of these mergers, as the present reconstruction makes clear.

Reconstructing vowel length is a reasonable idea, especially since Mienic typically conserves rime contrasts which have merged in Hmongic. But Purnell is right: the convenience of setting up Proto Hmong-Mien rimes as equivalent to Proto Mienic rimes (including the length contrasts) "…is merely an attempt to organize the large number of PMY final correspondences in a way that would facilitate further investigation…[it is] not meant to imply that PY has preserved the PMY final system…intact" (1970:183). Nonetheless, most have proceeded under the assumption that it has.

An exception, however, is L-Thongkum, who does not reconstruct vowel length in her 1993 reconstruction of Proto Mienic. She accounts for the development of a phonemic vowel length contrast in /a/ as the result of a Proto Mienic contrast in vowel quality (*-ə >

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[16] This section is based on Ratliff 2007.

-a; *-a > -a:).[17] Under her account, other length contrasts, manifested sporadically, have developed through contact with neighboring languages that have phonemic vowel length contrasts. Interpreting the length contrast as one of vowel quality at the Proto Mienic level would clearly remove motivation for the reconstruction of length at the even earlier stage of Proto Hmong-Mien.

L-Thongkum's contact/diffusion explanation for vowel length in Mienic seems superior, for the following reasons (for further discussion, see Ratliff 2007):

1) Mien and Mun speakers are in contact with speakers of vowel-length languages. Mien speakers in Thailand are in contact with vowel-length languages Standard and Northern Thai (Purnell 1965:3 and L-Thongkum 1993:193). In the provinces of Hunan, Yunnan, Guangdong, Guizhou, Jiangxi, and the Guangxi Zhuang Autonomous Region, Mien and Mun speakers live among Tai vowel-length language speakers (most notably Zhuang) and Chinese. On Hainan Island, Mun speakers are in a contact situation with (among others) speakers of two languages with contrastive vowel length, Hlai (Li) and Cantonese. Furthermore, Mien is not alone in showing a length contrast only in /a/. This is also true of Shan, Tai Lɯ, Wuming Zhuang (Tai-Kadai), Cantonese (Sinitic), Chamic (Austronesian), and undoubtedly other languages of the area.

2) Loanwords with long vowels outnumber native words with long vowels (Kosaka 2002).

3) Although stimulation from contact with vowel-length languages is important for the development of vowel length in non-vowel-length languages, we know from studying tonogenesis that languages must also have an "internal readiness" to develop the prosodic features of neighboring languages. And there is an internal, phonetic reason why an emergent phonemic length contrast should start with [a], as in Mien, and then be extended to other vowels, as in Mun. Gordon (2002:73) has explained the connection between the "well-documented tendency for low vowels to be crosslinguistically longer than high vowels" and the development of phonemic vowel length. The internal subphonemic variability lying ready for exploitation must have been the natural tendency of low vowels to manifest a wider range of length differences than other vowels—but significantly, wide durational differences in [a] are only found in languages which do *not* already have contrastive vowel length: "In virtually all cases, languages without phonemic vowel length display greater durational differences between vowels of different qualities… In languages with phonemic length contrasts there is less room for the intrinsically longer low vowels to enhance their inherent length by undergoing additional lengthening, because additional subphonemic lengthening would potentially lead to neutralization of phonemic length distinctions" (Gordon 2002:72-73). The historical stages in the development of vowel length contrasts must then have been the following:

(a) at first no length contrasts, and low vowels show great variability in length;

(b) this length variability is then exploited (phonologized) in low vowels;

(c) and is then extended by analogy to other vowels.

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[17] In a synchronic study of Mien phonology, Purnell (1965:78ff.) also analyzes short [a] as /ə/, and long [a:] as /a/.

4) Two independent descriptions of Mien (Downer 1961, Purnell 1965) and a note on Mun in Shintani and Yang (1990) show these two vowel length languages are characterized by a prosody that alternates short and long (or light and heavy) syllables. Downer (1961:539) describes Mien ("Highland Yao") as follows: "[Reduced syllables] are of two kinds—regular reduced syllables, and reduced syllables in -a. The two kinds agree in having weaker stress and shorter duration than the following full syllables so that a strong iambic rhythm is imparted to disyllabic words …". Given the iambic rhythm of these languages, not only must non-phrase-final syllables be light, but phrase-final syllables (syntactic heads) must maintain a certain gravity.[18] This may have been a contributing factor in the development of phonemic length contrasts.

Since prosody is the most easily diffused aspect of phonology (Matisoff 2001), it is therefore plausible that Mien and Mun became vowel-length languages in contact with other languages of this type, in the first instance by exploiting the significant inherent length peculiar to the vowel [a] that only occurs in languages that have had no previous vowel length contrasts.

2.1.3.3 Nasal codas in Hmongic

There is no need to reconstruct an *-n/*-ŋ contrast for Proto Hmongic (see also Downer 1982 and Niederer 1998:276). The two final nasals occurred in complementary distribution in Proto Hmongic, with *-n only after front vowels, and *-ŋ elsewhere:

in		ɨŋ	ʉŋ	uŋ
en, ein				oŋ
	ɛŋ	əŋ	ɔŋ	
æn				aŋ

This differs from the Proto Hmongic reconstruction of Wang 1994, where four pairs of rimes contrast *-n and *-ŋ:

in			uŋ
en, eŋ			on, oŋ
	ən, əŋ	ɔn, ɔŋ	
æn		aŋ	ɑŋ

No evidence exists in the Hmongic reflexes for the reconstruction of these four minimal rime pairs above. Comparison with Mienic does not support this reconstruction either, since each rime corresponds either to all three possible nasals (-m, -n, -ŋ), or to a haphazard subset of the three.

There are two possible ways to reflect the lack of contrast of final nasals in Proto Hmongic: reconstruct a single *-N, the value of which is spelled out by the preceding vowel, or reconstruct allophony, as presented here. Either way works: the latter course is chosen here to make the reconstruction more directly informative and to provide a clearer

[18] 135 sentences illustrating basic syntactic types in the Shintani and Yang Hainan Mun dictionary (1990) show a strong correlation between vowel length and phrase-final position (location of the syntactic head of the phrase).

link to Proto Mienic, but this should not be taken to mean that there were two contrastive nasal codas in Proto Hmongic.[19]

2.1.3.4 Vowels or glides?

Another difficult problem in the reconstruction of rimes is to decide, given a particular vowel quality one needs to reconstruct, whether that element should be reconstructed as a full vowel or as a glide. Given the working rule that a coda can contain either an off-glide or a consonant but not both, the following inventory of rime types in the protolanguage is assumed:

monophthong nuclei	V	VC	VG	GV	GVC	GVG
diphthong nuclei	VV	VVC	-	GVV	-	-

Many possible rime types are not typical of the present-day languages nor are they reconstructed. This suggests that there is a certain maximum weight to a Hmong-Mien rime, wherein only the full vowels and the off-glide would count toward the calculation of syllable weight. This would exclude syllable types VVG and GVVG as being too heavy. By this calculation, a GVVC syllable would be theoretically possible, but has not been needed in this reconstruction.

Beyond this, in a fairly impressionistic way, if the reflexes in a particular set show stable diphthongs, a diphthong is reconstructed, but if the reflexes show a mix of monophthongs and diphthongs, a GV or VG is usually reconstructed, with the more lightweight glide assigned to the less stable element across the set.

2.1.3.5 Concluding remarks

A particular reconstructed Proto Hmong-Mien rime can be evaluated in three primary ways:

(1) the Mienic reflexes are derivable from it in a straightforward way;

(2) it fits into a phonologically natural set with the other rimes that have merged into the same Hmongic rime; and

(3) borrowed Chinese words that pattern the same way in Hmong-Mien were phonologically similar to the reconstructed form at an earlier stage.

If these three independent lines converge, we can be fairly confident of the reconstruction; and we will feel even better if cross-correspondence patterns begin to emerge given these reconstructions. Yet there are remaining problems. First, the over-reconstruction of rimes is still troublesome: it will be important to find conditioning factors to reduce the bloated Proto Hmong-Mien rime inventory. Wang and Mao's reconstruction of every possible low

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[19] Some languages have -n and -ŋ in complementary distribution (-n after front vowels and -ŋ after back vowels). Others, like Jiongnai, have developed a true contrast between the two nasals: /an~ai/ from *in and *æn, and /aŋ/ from *əŋ, *ɛŋ, or *ɔŋ.

vowel on the IPA chart (*æ, *a, *A, *ɐ, *ɑ, *ɒ)[20] appears to be a clear example of "over-reconstruction", but one could also say that this reconstruction is just as unnatural: what present-day language makes a distinction between /ei/ and /ej/, between /æi/ and /æj/, or worse, among /ɔu/, /ou/, and /ow/— rimes claimed here to have been distinctive in Proto Hmong-Mien? It is clear that these values are abstractions, and only capture the true nature of the protolanguage in a shadowy fashion. Second, several decisions were fairly arbitrary and may well need to be changed in the light of more evidence or better analysis. For example, the decision to reconstruct Proto Hmongic correspondence 21 as *əŋ and 22 as *ɛŋ was based on very subtle differences in the reflexes of these two proto-phonemes. Also, given secondary rounding in Hmongic, discriminating among the rounded nasal rimes 27–30 at the Proto Hmongic level (*uŋ, *oŋ, *ɔŋ, *ʉŋ) was quite difficult.

2.1.4 Issues in the reconstruction of tones

Hmong-Mien tones are reconstructed as abstract historical tone categories rather than as ancient tones with particular values (high, low, rising, etc.). Given the great variation in the phonetic reflexes of a particular category, few common tone features emerge for any particular category. The categories themselves, however, are remarkably stable, which makes this aspect of the reconstruction the most straightforward.[21] A glance at a page of the rime tables in section 2.3 shows that cognate words typically belong to the same tone category, as represented by superscript numbers from 1 through 8.[22] The occasional form with a non-corresponding tone, whether due to the "promotion" of a tone sandhi variant or for some other reason, does not generally obscure the proper assignment of a word to a particular tone category and thus, to a particular syllable type in the protolanguage. See chapter 3 for a discussion of tonogenesis in Hmong-Mien and the interpretation of historical tone categories.

The major difficulty with the reconstruction of tones (i.e., tone categories) involves those sets of forms—on other measures cognate—that show two different tone reflexes. Often the distribution of tones follows the division between Hmongic and Mienic. For example:

	Hmong-Mien		*Hmongic*	*Mienic*
to eat	??	>	*nuŋ^{A}	*ɲən^{C}
finger	??	>	*nta^{B}	*ʔdok^{D}
crossbow	(*hnək)	>	*hnæn^{B}	*hnək^{D}
3SG (he/she/it)	*n̰iæn(X)	>	*ni^{B}	*næn^{A}
to go	*n-mʉŋ(X)	>	*n-mʉŋ^{B}	*n-mɨŋ^{A}

Although 'to eat', 'finger' and 'crossbow' are undoubtedly Proto Hmong-Mien words, they are listed separately in this work, since they fall into different correspondence sets. In some words that begin with a nasal, like 'crossbow', secondary nasalization in the rime makes

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[20] [A] is not a common IPA symbol. It indicates "a fully open central unrounded vowel" (Pullum and Ladusaw 1996).

[21] Kun Chang (1947, 1953, 1966, 1972) was the first to elucidate the history of tones in Hmong-Mien.

[22] Or by superscript letters in the case of protolanguages and Fuyuan, a Hmongic language that did not split the original 4 tones into 8 upon merger of voiced and voiceless consonants.

Hmongic and Mienic difficult to reconcile at the higher level. But when the tone is the only ambiguous element, as in 'he/she/it' and 'to go', it is reconstructed, with indication (by use of parentheses) that variant forms probably existed in the protolanguage. In the event of a tone mismatch across the Hmongic/Mienic divide, therefore, decisions about whether or not to reconstruct, and how to reconstruct, at the Proto Hmong-Mien level have been made on a case-by-case basis; others may choose to handle these cases differently.

One special case is the mismatch of Mienic tone 7 to Hmongic tone 5, or Mienic tone 8 to Hmongic tone 6. In this case we can confidently reconstruct to the Proto Hmong-Mien level: there is ample evidence to show that there was a merger of Proto Hmong-Mien words with final -k (category D) to the corresponding register of category C in Hmongic (Downer 1967, Chang 1972).[23] This merger did not affect Proto Hmong-Mien words that ended in -p or -t. For example:

	Hmong-Mien		*Hmongic*	*Mienic*
bird	*m-nɔk	>	*m-nɔŋ^{C}	*nɔk^{D}
guest (MC khæk)	*Khæk	>	*qhæ^{C}	*khæk^{D}
hundred (MC pæk)	*pæk	>	*pæ^{C}	*pæk^{D}
strength (OC *kə.rək)	*-rək	>	*-ro^{C}	*khlək^{D}
six (TB *k-ruk)	*kruk	>	*kruw^{C}	*krok^{D}

2.2 Proto Hmong-Mien onsets

	1	2	3	4	5	6	7
1. Stop voiceless	p	t	ts	c	k	q/(q^{w})	ʔ
2. Aspirated	ph	th	tsh	ch	kh		
3. Voiced	b	d	dz	ɟ	g	ɢ	
4. Pre-nasalized stop voiceless	mp	nt	nts	ɲc	ŋk	ɴq	
5. Aspirated	mph	nth	ntsh	ɲch	ŋkh		
6. Voiced	mb	nd	ndz	ɲɟ	ŋg	ɴG	
7. Nasal pre-glottalized	ʔm	ʔn		ʔɲ			
8. Aspirated	hm	hn		hɲ			
9. Voiced	m	n		ɲ/(ɲ^{w})	(ŋ)/(ŋ^{w})		
10. Glide pre-glottalized	ʔw			ʔj			
11. Aspirated	(hw)			hj			
12. Voiced	w			j			
13. Fricative voiceless		s		ɕ			h
14. Aspirated							
15. Voiced					(ɣ)		(ɦ)

-j-	1	2	3	4	5	6	7
16. Stop voiceless	pj	tj	tsj		kj/(k^{w}j)		
17. Aspirated	phj	(thj)	tshj		khj		
18. Voiced	bj	dj	dzj		gj/(g^{w}j)		
19. Pre-nasalized stop voiceless	(mpj)	ntj	ntsj		ŋkj		
20. Aspirated	mphj	nthj	ntshj				
21. Voiced	mbj	(ndj)	ndzj		ŋgj		

[23] For an explanation of "tone C", "tone D", and "register", see chapter 3.

22. Nasal pre-glottalized							
23. Aspirated	hmj	hnj					
24. Voiced	mj				(ŋj)		
25. Glide pre-glottalized							
26. Aspirated							
27. Voiced	wj						
28. Fricative voiceless		sj			(xj)		
29. Aspirated							
30. Voiced					(ɣj)		

l-, -l-	1	2	3	4	5	6	7
31. Stop voiceless	pl/plj				kl/(klj)	ql	
32. Aspirated	phl				khl		
33. Voiced	bl/blj				gl/glj	Gl/(Glj)	
34. Pre-nasalized stop voiceless	mpl/mplj				ŋkl/ŋklj		
35. Aspirated	mphl						
36. Voiced	mbl/mblj				ŋgl/ŋglj	NGl	
37. Nasal pre-glottalized							
38. Aspirated							
39. Voiced	ml						
40. Liquid pre-glottalized		ʔl/ʔlj					
41. Aspirated		hl/hlj					
42. Voiced		l/lj					

r-, -r-	1	2	3	4	5	6	7
46. Stop voiceless	pr	tr			kr	qr	
47. Aspirated	phr	(thr)					
48. Voiced	br	dr			gr	Gr	
49. Pre-nasalized stop voiceless	mpr	ntr			ŋkr		
50. Aspirated		nthr					
51. Voiced	mbr	ndr			ŋgr		
52. Nasal pre-glottalized							
53. Aspirated		hnr					
54. Voiced	mr						
55. Liquid pre-glottalized		ʔr					
56. Aspirated		hr					
57. Voiced		r					

Correspondences sets

The correspondence sets are organized by place of articulation category. The first sets contain no medial consonant. They are followed by correspondence sets for the same place of articulation in combination with each of the medial consonants (-j-, -l-, -r-). Within each set, those etyma that can be reconstructed to Proto Hmong-Mien (PHM) are presented first, followed by etyma that can be reconstructed only to Proto Hmongic (PH), and then etyma that can be reconstructed only to Proto Mienic (PM). Within each subset, etyma with no initial matter are presented before etyma with reconstructed initial matter. Within each of these smaller groups, etyma are ordered first by tone category.

Onsets that contain two medial approximants (e.g. *hlj-) will follow after their single medial approximant counterparts (hence *pl- is 1.31 and *plj- is 1.31.1). The onsets with a third numerical subdivision will all be onsets of this type.

Obvious Chinese loanwords are included in the correspondence sets to which they belong. The entries appear at the end of each list. If a connection to a particular Chinese form is possible but the connection is not straightforward due to a serious mismatch of one or more features (tone, initial, final, or meaning), the form is given in the notes. If a correspondence set contains only Chinese loanwords, this marks the reconstructed onset as belonging to loan phonology, and it appears in parentheses in the chart above. Loan phonology is discussed in chapter 6 on language contact.

Languages

Eleven maximally distinct languages were chosen to represent the 20-30 languages of the Hmong-Mien family. Since Hmongic is more internally diverse than Mienic, seven of the eleven are Hmongic languages. If a form was taken from Wang and Mao 1995, Wang 1994, or the first (primary) source listed, no mention is made of the source of the form.[24] If a form was taken from the second or third source listed, or if another closely related dialect was substituted for the one listed here, the source and dialect will be given in the notes. The eleven criterial languages will be referred to in discussion by the underlined names.

1. East Hmongic (Qiandong): Northern vernacular: Guizhou, Kaili County, Yanghao Township, Yanghao

   Sources: Wang and Mao 1995, language 1 = Wang 1994, language 1

2. North Hmongic (Xiangxi): Western vernacular: Hunan, Huayuan County, Jiwei Township, Jiwei

   Sources: Wang and Mao 1995, language 2 = Wang 1994, language 2

3. West Hmongic (Chuanqiandian): CQD subdialect, #1 vernacular: Laos/Thailand, White Hmong

   Sources: Heimbach 1979, Bertrais 1979 [1964]

4. West Hmongic (Chuanqiandian): Mashan subdialect, Central vernacular: Guizhou Province, Ziyun Miao/Buyi A.C., Zongdi Township, Zongdi

   Sources: Wang and Mao 1995, language 7 = Wang 1994, language 7 (tones 1a, 3a, 5a, 7a < voiceless stop, preglottalized stop, and preglottalized sonorant onsets;

[24] For some reason, not all forms from Wang 1994 were included in Wang and Mao 1995. Unless obvious Chinese loans, they have all been incorporated here.

tones 1b, 3b, 5b, 7b < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)

5. West Hmongic (Chuanqiandian): Luopohe subdialect, #2 vernacular: Guizhou Province, Fuyuan County, Fuyuan

   Sources: Wang and Mao 1995 language 8 = Wang 1994, language 8 (no tone split)

6. Hmongic: Guangxi/Zhuang A. R., Jinxiu Yao A. C., Changdong Township, Jiongnai

   Sources: Wang and Mao 1995, language 13; Mao and Li 2001

7. Hmongic: Guangxi/Zhuang A. R., Miao A.C., Rongshui District, Baiyun Pa-Hng

   Source: Niederer 1997

8. Mienic: Mien, Luoxiang vernacular: Guangxi/Zhuang A. R., Jinxiu Yao A.C., Luoxiang Township, Mien

   Sources: Wang and Mao 1995, language 17; L-Thongkum 1993 "JX" (tone 5 < voiceless stop, preglottalized stop, and preglottalized sonorant onsets; tone 5' < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)

9. Mienic: Jinmen: Guangxi/Zhuang A. R., Lingyun County, Lanjin Township, Mun

   Source: Wang and Mao 1995, language 20 (tones 1, 3, 5, 7 < voiceless stop, preglottalized stop, and preglottalized sonorant onsets; tones 1', 3', 5', 7' < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)

10. Mienic: Biaomin: Guangxi/Zhuang A. R., Quanzhou county, Dongshan Yao Township, Biao Min

    Sources: Wang and Mao 1995, language 21; Solnit 1982

11. Mienic: Zaomin: Guangdong Province, Liannan Yao A. C., Daping Township, Zao Min

    Source: Wang and Mao 1995, language 23

The names for these languages used in the text (underlined above) are those most commonly used in the literature on Hmong-Mien languages. They are therefore not consistent: they are a mix of four Chinese place-names (Yanghao, Jiwei, Zongdi, Fuyuan), one English translation of a Hmong autonym, based on the color of formal dress (White Hmong), and six autonyms in their most common spellings (Jiongnai, Pa-Hng, Mien, Mun, Biao Min, Zao Min). Data from these eleven languages appear beneath the eleven numbered columns in the following correspondence sets.

1. Labials

*1.1 *p-*

PHM *p-	1	2	3	4	5	6	7	8	9	10	11
1. to know *pei	pu[1]	-	pau[1]	pɔ[1a]	-	pe[1]	pɪ[1]	pei[1]	pei[1]	pəi[1]	bɛi[1]
2. molar tooth *pæ	-	pa[2]	pua[1]	-	-	-	-	-	-	-	ba[1]
3. full *pu̯ɛŋX	pɛ[3]	pe[3]	pu[3]	poŋ[3a]	paŋ[B]	paŋ[3]	pɔ̃[3]	pwəŋ[3]	pɔŋ[3]	pɔŋ[3]	baŋ[3]
4. to shoot *pənX	paŋ[3]	pɑŋ[3]	pɔ[3]	poŋ[3a]	poŋ[B]	poŋ[3]	pɔ̃[3]	pwan[3]	fan[3]	-	bun[3]
5. to sleep/lie down *pu̯eiH	pi[5]	pə[5]	pɯ[5]	pu[5a]	pu[C]	pau[5]	pɛ[5]	pwei[5']	fei[5]	-	bui[5]
6. 1PL (we/us) *N-pɔu	pi[1]	pɯ[1]	pe[1]	pæ[1a]	pei[A]	pa[1]	pɯ[5]	-	pu[1]	-	bu[1]
7. husband *N-poX	-	po[3]	-	-	-	-	-	-	-	bu[3]	-
8. soybean *N-peiX	pu[3]	-	pau[3]	-	-	-	-	-	bei[3]	bi[3]	mɛi[3]
9. 百 hundred *pæk	pa[5]	pa[5]	pua[5]	pa[5a]	pi[C]	pa[5]	pe[5]	pɛ[7]	pe[7]	pɛ[7]	ba[7]

PH *p-	1	2	3	4	5	6	7
10. to fall *pɯŋ[A]	-	-	pɔŋ[1]	paŋ[1a]	poŋ[A]	-	-
11. to feed *pɛŋ[A]	pɛ[1]	-	pu[1]	-	-	-	-
12. thigh *pæ[A]	pa[1]	pa[1]	pua[1]	pa[1a]	-	-	pe[1]
13. to open (door) *pow[D]	pu[7]	pu[7]	-	-	po[D]	-	pɔ[7]
14. 風 air *poŋ[C]	poŋ[5]	-	pa[5]	paŋ[5a]	poŋ[C]	-	-

PM *p-	8	9	10	11
15. to burn *pɔu[B]	pu[3]	pu[3]	pau[3]	bu[3]
16. 鞭 whip *pin[A]	biŋ[1]	pin[1]	pin[1]	-
17. 斧 axe *pou[B]	pou[3]	pɔu[3]	bəu[3]	pu[3]
18. hide oneself *piŋ[C] (Cant. /pɛ:ŋ[5]/)	pi:ŋ[5]	-	pjɛ[5]	bɔŋ[5]
19. 放 to let go *puŋ[C]	puŋ[5']	puŋ[5]	pə[5]	bɔŋ[5]

Notes

1. Possibly from Chinese 別 'to separate, distinguish' (OC *N-pret > MC bjet > Man. *bié*).
2. In White Hmong, 'jaw, chin'.
3. Compare Malayo-Polynesian *penuq 'full (as a container)' (ACD).
4. Compare Malayo-Polynesian *panaq 'to shoot', Mon-Khmer *paŋʔ 'to shoot' (Shorto #905). In White Hmong, 'to throw'.
5. The tone subcategory in Luoxiang Mien (8) indicates possibility of aspirated initial.
6. This word is used as a plural suffix in Mien, suggesting an original meaning of 'group'. In Hainan Mun, it is a 1PL exclusive pronoun. The voiced initials in Mienic suggest a pre-initial voicing element.
7. Compare Chinese 父 'father' (OC *[b](r)aʔ > MC bjuX > Man. *fù*). See also Hmong-Mien 'father/male' *pjaX (1.16/4).
10. Possibly from Chinese 崩 'to fall, collapse (of mountain)' (OC *Cə.pˤəŋ > MC pong > Man. *bēng*).

11. In Yanghao (1), ‘to allow’; in White Hmong, ‘to give’. Yanghao (1), Xuyong /po^{1}/ ‘to feed’, Shimen /pu^{1}/ ‘to feed’ from Office of Miao-Yao Research Lexicon (1987).
18. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*1.2 *ph-*

PHM *ph-	1	2	3	4	5	6	7	8	9	10	11
1. 片 CLF-quilts *phəan	phaŋ^{1}	-	phɔ^{1}	-	phoŋ^{A}	-	phɯ^{5}	pha:n^{1}	-	phəu^{1}	-
2. 劈 to split/chop *phek	pha^{1}	pha^{1}	tshi^{1}	-	pho^{A}	-	-	phi^{7}	-	-	-
3. 破 to cut open *phajH	pha^{5}	pha^{5}	phua^{5}	pa^{5b}	pha^{C}	pha^{5}	pha^{5}	pha:i^{5}	pa:i$^{5'}$	pha^{5}	-

PH *ph-	1	2	3	4	5	6	7
4. to push earth aside *phɯ^{A}	phɛ^{1}	-	phua^{1}	pou^{1b}	-	phau^{1}	phɪ^{1}
5. thunder *S-pho^{A}	ho^{1}	so^{1}	sɔ^{1}	so^{1b}	su^{A}	xu^{1}	(mo^{1})
6. thread *S-pho^{B}	fhə^{3}	so^{3}	sɔ^{3}	so^{3b}	su^{B}	-	(mo^{3})
7. to twist/rub *S-phu̯a^{A}	fha^{1}	-	sua^{1}	sa^{1b}	sa^{A}	va$^{1'}$	-

PM *ph-	8	9	10	11
8. 奉 to carry in 2 hands *phu̯ɛŋ^{B}	phwəŋ^{3}	pɔŋ^{3}	phɔŋ^{3}	-
9. 拂 to sweep *phu̯ət^{D}	phut^{7}	-	-	-

Discussion

‘Thunder’ here is probably related to Hmong-Mien *mpuə ‘thunder’ (1.4/16), and the Pa-Hng form for ‘thread’ suggests a similar pattern. A *ph- is reconstructed for ‘thunder’, ‘thread’ and ‘to twist/rub’ on the basis of ph- onsets in other locations: Fengxiang (West Hmongic), Qibainong Bunu, and Yaoli Bunu (9, 10, 11 in Wang and Mao 1995). The Pa-Hng forms in parentheses above pattern with Mienic, and suggest the reconstruction of an initial nasal element, but since the nasal element shows no trace in the other languages above, it may be that the nasal was “detachable”—that is, it was more likely to have been morphological than phonological. Finally, the reconstruction of an aspirated initial for these three words is tentative: Zongdi (4) voiceless “b” tones indicate an original [spread glottis] initial, but an old [spread glottis] initial may have been either an aspirated stop, a voiceless fricative, or a voiceless sonorant. A hypothetical S- prefix might have had the same effect on Zondgi tones as an aspirated initial, thus an original *S-p- for these three words (with secondary aspiration in Fengxiang, Qibainong Bunu, and Yaoli Bunu) is possible. See also ‘chaff/husk’ for a similar split (Hmongic *S-phjæ^{C} (1.17/5) and Mienic/Pa-Hng *mphi̯ək (1.5/1).

Notes

1. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). In White Hmong, this word serves as a classifier for sheets of skin or leather.
2. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This word is pan-Asian: compare Proto Tai *phre:k ‘split open’; Chinese 劈 ‘split, chop, cleave’ (OC *(m-)p^{hʕ}ek > MC phek > Man. *pī*). These forms are probably from Chinese because of the non-correspondence in tones—they suggest an earlier borrowing in Mienic (from a form in * -k), and a later borrowing in Hmongic (after D > A).

*1.3 *b-*

PHM *b-	1	2	3	4	5	6	7	8	9	10	11
1. flower *bi̯aŋ	paŋ^{2}	pei^{2}	pa^{2}	pua^{2}	ven^{A}	pen^{2}	pɛ^{2}	pwaŋ^{2}	faŋ^{2}	pjaŋ^{2}	pjaŋ^{2}
2. to see *bu̯ət	poŋ^{8}	-	pɔ^{8}	po^{8}	mpu^{D}	pu^{8}	pa^{8}	pwat^{8}	fat^{8}	phi^{8}	-
3. 伏 to hatch/embrace *buəH	pə^{6}	-	pua^{6}	pəa^{6}	va^{C}	pu^{6}	po^{6}	pu^{6}	pu^{6}	pu^{6}	pu^{6}

PH *b-	1	2	3	4	5	6	7
4. female/woman *bo^{A}	-	-	pɔ^{2}	-	vu^{A}	-	-
5. to repay *bu̯ei^{A}	pə^{2}	pi^{2}	pau^{2}	pɔ^{2}	vu^{A}	-	-
6. face *bow^{B}	-	-	-	pɯ^{4}	-	-	-
7. mountain *bæw^{B}	pi^{4}	-	pe^{8}	pe^{4}	vei^{B}	-	-
8. bracelet *bɔ^{C}	-	pɔ^{6}	pau^{6}	po^{6}	vu^{C}	-	po^{6}
9. pus *bu̯ei^{C}	pu^{6}	pɔ^{6}	pau^{6}	po^{6}	vu^{B}	pei^{6}	pɪ^{6}
10. shoulder *bɯ^{C}	-	pə^{6}	pɯ^{6}	-	vu^{C}	-	-
11. 腐 bad/spoiled *bu̯a^{B}	pa^{4}	pɑ^{4}	pua^{4}	pəa^{4}	vu^{B}	-	-

PM *b-	8	9	10	11
12. to hold w/2 hands *bou^{A}	pou^{2}	pɔu^{2}	-	-
13. 平 level *beŋ^{A}	pɛŋ^{2}	pe:ŋ^{2}	pɛ^{2}	pɛŋ^{2}
14. 耙 to rake *ba^{A}	pa^{2}	pa^{2}	-	pa^{2}
15. 薄 thin *bi̯ɛk^{D}	pwa^{8}	fa^{6}	-	pjɛ^{8}
16. 白 white *bæk^{D}	pɛ^{8}	pe^{6}	phɛ^{8}	pa^{8}

Discussion

Proto Hmong-Mien 'hand/arm' and Proto Hmongic 'thorn' are best reconstructed with this initial, although the correspondence is obscured by the process of "prefix pre-emption" (Matisoff 1997). See discussion in chapter 2, section 2.1.2 and chapter 4, section 4.2.3.

	1	2	3	4	5	6	7	8	9	10	11
hand/arm *-bɔuX	pi^{4}	tɯ^{4}	te^{4}	ʂe^{4}	wei^{B}	tʃa^{4}	tɛ-pɯ^{4}	pu^{4}	pu^{4}	pau^{4}	pu^{4}
thorn *-bo^{B}	pə^{4}	to^{4}	pɔ^{4}	pɯ^{4}	vu^{B}	-	-				

In addition to the forms above, Hmongic Ho Ne (She) forms belonging to these sets have corresponding rimes and tones, but velar initials ('hand' /khwa^{4}/ and 'thorn' /khɤ^{4}/).

Notes

1. The -w- in Luoxiang Mien (8) is secondary: -j- dropped, then -w- developed between a labial and /a/. Compare Austronesian *buŋa 'blossom of fructifying tree or bush' (ACD), Written Burmese /pwɑŋ^{1}/ 'blossom', and Laqua (Tai-Kadai) /puŋ/ 'flower' (Benedict 1975:295).

3. Compare the semantics of Chinese 抱 *bào* 'hold in arms, embrace; hatch, brood'. The meaning 'to hatch' is attested across the family; the additional meaning 'to embrace' is attested only in Hmongic.

4. Xuyong /po^{2}/, Shimen /po^{2}/ (Office of Miao-Yao Research Lexicon 1987). Perhaps borrowed from Chinese 婦 'wife, married woman' (MC bjuwX > Man. *fù*), although the tones do not correspond.

6. Also Shimen /bey^{4l}/, Qingyan /pau^{4}/, Gaopo /pə^{4}/, Fengxiang /pɔ^{4}/ (Wang and Mao 1995). Xuyong /bleu^{4}/ with medial -l- may also be cognate (in Xuyong /bleu^{4} plho^{7}/, Office of Miao-Yao Research Lexicon [1987]; for the second element, compare White Hmong /phlu^{5}/'cheek').
7. White Hmong 'up there on the slope'. The tone in White Hmong is the result of a recent morphological class formation by tone-shift (geographical feature > locative) (Ratliff 1992a:104-112).
8. Green Mong has been substituted for White Hmong (3).
12. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
15. The -w- in Luoxiang Mien (8) is secondary: see note 1 above.

*1.4 *mp-*

PHM *mp-	1	2	3	4	5	6	7	8	9	10	11
1. thunder *mpuə	-	-	-	-	-	-	mo^{1}	bu^{1}	bu^{5}	-	bjau^{1}
2. to dream *mpeiH	pu^{5}	mpei^{5}	mpau^{5}	mpɔ^{5a}	mʔpu^{C}	mpe^{5}	mi^{5}	bei^{5}	bei^{5}	bəi^{5}	bɛi^{5}
3. name *mpɔuH	pi^{5}	mpu^{5}	mpe^{5}	mpæ^{5a}	mʔpei^{C}	mpa^{5}	mo^{5}	bu$^{5'}$	bu^{5}	bau^{5}	bu^{5}
4. 沸 to boil (INTR) *mpu̯æiH	-	-	mpau^{5}	mpɔ^{5a}	mʔpu^{C}	mpei^{5}	mɪ^{5}	bwei$^{5'}$	vei^{5}	-	bui^{5}

PH *mp-	1	2	3	4	5	6	7
5. to hold in mouth *mpæ^{B}	-	-	mpua^{3}	mpa^{3a}	mʔpzi^{B}	-	-
6. pig *mpæ^{C}	pa^{5}	mpa^{5}	mpua^{5}	mpa^{5a}	mʔpei^{C}	mpei^{5}	me^{5}
7. to throw on (clothes) *mpu̯a^{C}	pa^{5}	-	mpua^{5}	mpa^{5a}	-	-	ma^{5}

PM *ʔb- (< *mp-)	8	9	10	11
8. loud/sound *ʔbuj^{A}	bui^{1}	bu:i$^{1'}$	bəi^{1}	bai^{1}
9. bat (animal) *ʔbuj^{A}	bui^{1}	bu:i$^{1'}$	bəi^{1}	bai^{1}
10. monkey *ʔbiŋ^{A}	biŋ^{1}	bi:ŋ^{1}	-	bjaŋ^{1}
11. grey *ʔbɔu^{B}	bu^{2}	bu^{3}	bau^{3}	-
12. rock *ʔbeŋ^{C}	bɛŋ$^{5'}$	-	bɛ^{5}	bɛŋ^{5}
13. 報 to tell *ʔbo^{C}	bu$^{5'}$	bu^{5}	bu^{5}	bɔu^{3}

Discussion

In this and all subsequent prenasalized onset sets, following L-Thongkum (1993),

Hmong-Mien (*NT-) > Mienic (*ʔD-)
Hmong-Mien (*NTH-) > Mienic (*DH-)
Hmong-Mien (*ND-) > Mienic (*ND-)

Without reconstructing more material than absolutely necessary, this gives enough information to account for (1) the voiced onsets that regularly correspond to Hmong-Mien prenasalization in each case, and (2) the correct tonal register: 1, 3, 5, and 7 after glottalized and aspirated onsets (*ʔD-, *DH-), and 2, 4, 6, and 8 after voiced onsets (*ND-).

Notes

1. This may be related to Hmongic 'thunder' *S-pho^{A}. See discussion under 1.2 above.
2. Jinxiu Mien (8) from L-Thongkum 1993:205.

6. Compare Tibeto-Burman *p^{w}ak 'pig' (Matisoff 2003).
7. In White Hmong, 'to wrap around the body'. Possibly from Chinese 被 'to cover self' (OC *m-p(r)ajʔ > MC bjeX > Man. *bèi*).
8. The Mun (9) tone subcategorization suggests aspirated initial; L-Thongkum reconstructs Proto Mienic *bhui A (1993:215).
10. The Hmongic word for 'monkey' (*ʔlin^{A} 2.40/18) has the same tone and rime as this word, but begins with a different initial. To join the two at the Hmong-Mien level, Benedict (1975:338) reconstructed a cluster: *ʔbliŋ.
11. In Hainan Mun, the cognate means 'blue' and the word for 'grey' is the compound 'white-blue'; in Biao Min, it also means 'mildew, mold' (Solnit 1982).

*1.5 *mph-*

PHM *mph-	1	2	3	4	5	6	7	8	9	10	11
1. chaff/husk *mphi̯ɛk	-	-	-	-	-	-	m̥e^{5}	bwa^{7}	va$^{7'}$	bja^{7}	bjɛ^{7}
2. 噴 to scatter/ sprinkle *mphu̯ənH	-	mphu^{5}	mphɔŋ^{5}	-	mʔphoŋ^{C}	-	-	bwan^{5}	ban^{5}	-	-

PH *mph-	1	2	3	4	5	6	7
3. ant *mphæ^{B}	phen^{3}	mpha^{3}	-	-	-	mphai^{3}	m̥je^{3}

PM *bh- (<*mph-)	8	9	10	11
4. 拍 to clap *bhæk^{D}	bɛ^{7}	be^{4}	bɛ^{7}	-

Notes

1. See Hmongic *S-phjæ^{C} 'chaff/husk' (1.17/5), and discussion of words that pattern similarly under 1.2. The -w- in Luoxiang Mien (8) is secondary: -j- dropped, then -w- developed between a labial and /a/.
2. Changping Mien (Wang and Mao 18) has been substituted for Luoxiang Mien (8).
4. This is probably the source for Hmongic *mbæ^{A} 'to clap' (1.6/5) as well.

*1.6 *mb-*

PH *mb-	1	2	3	4	5	6	7
1. to cover *mbo^{C}	mə^{6}	-	mpɔ^{6}	mpu^{6}	mpu^{C}	-	pho^{5}
2. 拍 to clap *mbæ^{A}	ma^{2}	ma^{2}	mpua^{2}	mpa^{2}	mpzi^{A}	-	-

PM *mb-	8	9	10	11
3. 婦 daughter-in-law/bride *mbu̯ɛŋ^{B}	bwəŋ^{4}	bɔŋ^{4}	bɔŋ^{4}	-
4. 浮 to float *mbi̯əu^{A}	bjeu^{2}	bjɔu^{2}	bjau^{2}	bɛu^{2}

Notes

2. This is probably the source for Mienic *bhæk^{D} 'to clap' (1.5/5) as well.
3. Although this word probably comes from Chinese 婦 'woman/wife' (OC *Cə.[b]əʔ > MC bjuwX > Man. *fù*), Chinese has no final nasal.

*1.7 *ʔm-*

PHM *ʔm-	1	2	3	4	5	6	7	8	9	10	11
1. illness/pain *ʔmun	moŋ^{1}	moŋ^{1}	mɔ^{1}	məŋ^{1a}	ʔmoŋ^{A}	mɐŋ^{1}	mæ̃^{1}	mun^{1}	mun^{1}	mən^{1}	man^{1}

PH *ʔm-	1	2	3	4	5	6	7
2. to grasp *ʔmu̯ɛ^{A}	mɛ^{1}	me^{1}	mua^{1}	muɑ^{1a}	-	-	-

PM *ʔm-	8	9	10	11
3. green/blue *ʔmeŋ^{A}	mɛŋ^{1}	me:ŋ^{1}	mɛ^{1}	mɛŋ^{1}

Notes

2. In Zongdi, ‘to grasp’ has narrowed to mean ‘to take a wife’. There is a morphological relationship between ‘to grasp’ and the more widespread Hmong-Mien word *n-mɛj ‘to have’ (1.9/11) that can be attributed to either a voiceless causative prefix on ‘to grasp’ (of which the glottal element is a trace) or a voiced stative prefix on ‘to have’ (which would account for the /n-/ initial in Mun). For more discussion, see chapter 4.

	1	2	3	4	5	6	7	8	9	10	11
to grasp H *ʔmu̯ɛ^{A} (<*ʔ-mɛj)	mɛ^{1}	me^{1}	mua^{1}	muɑ^{1a}	-	-	-				
to have HM *n-mɛj	mɛ^{2}	me^{2}	mua^{2}	-	ma^{A}	mɔ^{2}	mɪ̃^{2}	ma:i^{2}	na:i^{2}	ma^{2}	-

3. Hmongic *mpru^{A} ‘green/blue’ (1.49/16) may be related.

*1.8 *hm-*

PHM *hm-	1	2	3	4	5	6	7	8	9	10	11
1. flea *hmiəŋ	m̥hen^{1}	-	hm̥ɔ^{1}	məŋ^{1b}	m̥en^{A}	mɔ^{1}	n̥^{1}	mɐŋ^{1}	muŋ$^{1'}$	m̥au^{1}	məŋ^{1}
2. vine *hmein	-	ɕi^{1}	hm̥a^{1}	ma^{1b}	m̥oŋ^{A}	m̥e$^{1'}$	m̥a^{1}	m̥ei^{1}	mei$^{1'}$	m̥əi^{1}	mɛi^{1}
3. to taste/try *hmeiH	m̥hu^{5}	-	-	-	-	-	-	-	-	m̥i^{5}	-
4. night *hməŋH	m̥haŋ^{5}	m̥hɑŋ^{5}	hm̥ɔ^{5}	mɔ^{5b}	m̥oŋ^{C}	-	mæ̃^{4}	m̥aŋ^{3}	-	m̥ɔŋ^{5}	məŋ^{5}

PH *hm-	1	2	3	4	5	6	7
5. Hmong *hmɯŋ^{A}	m̥hu^{1}	ɕoŋ^{1}	hm̥ɔŋ^{1}	maŋ^{1b}	m̥jo^{A}	-	n̥ŋ^{1}
6. wild dog *hmaŋ^{C}	m̥hɑŋ^{5}	-	hm̥a^{5}	ma^{5b}	-	-	-

PM *hm-	8	9	10	11
7. animal fat/oil *hmej^{A}	m̥ei^{1}	mei$^{1'}$	m̥əi^{1}	mi^{1}
8. 面 face *hmien^{A}	mjen^{1}	min$^{1'}$	m̥in^{1}	mɛn^{1}
9. 米 husked rice *hmei^{B}	m̥ei^{3}	mei^{3}	m̥i^{3}	mɛi^{3}

Notes

2. Possibly the same as Chinese 蔓 ‘creeping plant’ (OC *ma[n]-s > MC mjonH > Man. *wàn*).

3. Both ‘to taste/try’ and ‘to sniff at’ (Hmong-Mien *hmjɻəmH, 1.23/18) mean to taste or smell intentionally. Different words exist for ‘to taste’ and ‘to smell’ unintentionally. Possibly related to Chinese 味 ‘taste (n.)’ (OC *m[ə][t]-s > MC mjɨjH > Man. *wèi*).

4. Chinese 晚 'evening' (Man. *wǎn*) > Mien /muən[1]/ seems to be different. More likely connections are to Tibeto-Burman *s-muːŋ 'dark' (Matisoff 2003) or Mon-Khmer *m[h][ɯə]h 'evening, night' (Shorto #264) or *maŋ 'night, evening' (Shorto #638).
5. 'Mien' and its variants is probably from Chinese 民 'people' (OC *mi[n] > MC mjin > Man. *mín*).
6. This word refers variously to 'wolf', 'fox', 'jackal', etc. Compare Proto Tai *hma[1] 'dog' (Li 1977).
7. Compare Austronesian *SimaR 'grease/oil/fat' (ACD).
9. Same as Chinese 米 'husked rice' (OC *[m]ˁijʔ > MC mejX > Man. *mǐ*) and Tibeto-Burman *mey or *may (Matisoff 2003), but the immediate source is unclear because of the voiceless initial. Compare AN *Semay 'cooked rice' (ACD).

*1.9 *m-*

PHM *m-	1	2	3	4	5	6	7	8	9	10	11
1. 2SG (you) *mu̱ei	moŋ^{2}	mɯ^{2}	-	-	-	mɐŋ^{2}	mɯ^{6}	mwei^{2}	mei^{2}	məi^{2}	mui^{2}
2. 2PL (you) *mi̱əu	maŋ^{2}	me^{2}	ne^{2}	mein^{2}	men^{A}	-	mɯ^{5}	-	ŋjou^{2}	-	-
3. fine (flour) *mənX/H	moŋ^{4}	mɑŋ^{4}	mɔ^{4}	-	-	-	mæ̃^{4}	mwən^{6}	-	mun^{6}	mun^{6}
4. eye *mu̱ɛjH	mɛ^{6}	me^{6}	mua^{6}	moŋ^{6}	ma^{C}	mɔ^{6}	mĩ^{6}	mwei^{6}	ŋwei^{6}	mi^{6}	mai^{2}
5. to have *n-mɛj	mɛ^{2}	me^{2}	mua^{2}	-	ma^{A}	mɔ^{2}	mĩ^{2}	maːi^{2}	naːi^{2}	ma^{2}	-
6. to go *n-mɯŋ(X)	moŋ^{4}	moŋ^{4}	mu^{4}	məŋ^{4}	mu^{B}	ŋŋ^{4}	nĩ^{2}	miŋ^{2}	niŋ^{2}	-	mi^{2}
7. 買 to buy *mɛjX	mɛ^{4}	-	mua^{4}	-	ma^{B}	mɔ̰^{1}	mĩ^{6}	maːi^{4}	maːi^{4}	-	mai^{4}
8. 賣 to sell *mɛjH	mɛ^{4}	me^{6}	mua^{6}	moŋ^{6}	ma^{C}	mɔ^{4}	mĩ^{6}	maːi^{6}	maːi^{6}	ma^{6}	mai^{6}
9. 蠓 fly (N.) *məuŋX	-	mɑŋ^{4}	mɔ^{4}	moŋ^{4}	moŋ^{B}	mɐŋ^{4}	mæ̃^{4}	-	-	mə^{4}	mɔŋ^{4}
10. 望 to look at *maŋH	-	-	-	-	-	-	-	-	ŋwaːŋ^{6}	mə^{6}	mɔŋ^{6}

PH *m-	1	2	3	4	5	6	7
11. persimmon *min^{B}	mi^{4}	mɛ^{4}	-	-	men^{B}	-	-
12. wheat *muŋ^{C}	maŋ^{4}	-	mɔ^{6}	məŋ^{6}	mu^{C}	-	-
13. female *min^{D}	mi^{8}	-	nia^{8}	mi^{8}	men^{C}	mai^{8}	mɛ̃^{7}

PM *m-	8	9	10	11
14. bee *mu̱ei^{B}	mwei^{4}	ŋwei^{4}	mi^{4}	mui^{4}
15. brother *məu^{B}	mai^{4}	-	mau^{4}	mu^{4}
16. carrying pole *mu̱əŋ^{B}	moŋ^{5}	muŋ^{4}	mɔŋ^{4}	-
17. to return home *mu^{B}	mu^{4}	mu^{4}	mu^{4}	mu^{4}
18. thick/dense *mak^{D}	ma^{8}	ma^{6}	-	məu^{8}
19. 霧 fog *mow^{C}	mou^{6}	-	-	mu^{6}
20. 廟 temple *miu^{C}	miu^{6}	miu^{6}	-	miu^{6}

Notes

1. Similar to the Austronesian 2PL root *-mu (ACD); the 2PL root was extended to the 2SG in Austronesian. Western Hmongic has a different root: *gɯ^{A} 'you' (5.3/8).
2. The Hmongic forms except for Pa-Hng (7) are from Wang 1994: the Pa-Hng is from Niederer 1997. The Mun form (9) is from Shintani and Yang 1990.
4. Possibly from Chinese 目 'eye' (OC *[m][u]k > MC mjuwk > Man. *mù*).

5. On the relationship of 'to grasp' and 'to have', see note 2 under 1.7 above.
5 & 6. A pre-initial *n- is tentatively reconstructed for these two words on the basis of initial n- in Mun.
10. Hmongic cognates of this word may also be Ho Ne (She) /mɔ^{8}/ and Shimen (West Hmongic) /mauɯ^{5}/, so it is given here as Proto Hmong-Mien.
13. In White Hmong, 'mother'.
19. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Compare Cantonese /mou^{6}/.
20. There is a Bunu cognate /mjɔ^{6}/ 'temple', but this does not give enough evidence to place this word in one of the major rime sets.

*1.10 *ʔw-*

PHM *ʔw-	1	2	3	4	5	6	7	8	9	10	11
1. son-in-law *ʔweiX	-	-	vau^{3}	wɔ^{3a}	ʔwu^{B}	ve^{3}	vi^{3}	vei^{3}	-	-	vɛi^{3}
2. 冠 crest/comb *ʔwi̯æn	-	-	ʔi^{1}	-	ʔwe^{A}	-	-	-	-	-	vɔn^{1}

PH *ʔw-	1	2	3	4	5	6	7
3. cherry *ʔwa^{A}	va^{1}	wɑ^{1}	-	ʑi^{1a}	-	-	-
4. winnowing fan *ʔwaŋ^{A}	vaŋ^{1}	wei^{1}	va^{1}	wua^{1a}	ʔwen^{A}	ven^{1}	vɛ^{1}
5. to cover self *ʔwo^{B}	-	-	vɔ^{3}	wo^{3a}	ʔwu^{B}	-	va^{3}
6. wife/elder sister *ʔwæw^{B}	vi^{3}	-	vi^{3}	-	-	va^{3}	vo^{3}

PM *ʔw-	8	9	10	11
7. that *ʔwe^{B}	wa^{3}	va^{3}	wə^{3}	vɛi^{3}
8. 碗 bowl *ʔwən^{B}	van^{3}	van^{3}	wan^{3}	vjɛn^{3}
9. 抉 to dig *ʔwet^{D}	vet^{7}	veːt$^{7'}$	wun^{7}	vɛt^{7}

Notes

1. Changping Mien (Wang and Mao 18) has been substituted for Luoxiang Mien (8). Compare Tibeto-Burman *krwəy 'son-in-law' (Matisoff 2003). This connection is strengthened by the parallel 'sister-in-law/daughter-in-law' *ʔɲam (4.7/24) which closely resembles Tibeto-Burman *nam 'daughter-in-law' (Benedict 1987a).
2. See also /vi^{1}/ (West Hmongic Gaopo, Fengxiang) and /vai^{1}/ (West Hmongic Bunu). This is from Chinese 冠 'cap' (OC *[k]^{ʕ}on > MC kwan > Man. *guān*, as in *jī guān* 'cockscomb').
6. In White Hmong (3), 'elder sister'.

*1.11 *hw-*

	1	2	3	4	5	6	7	8	9	10	11
1. 園 garden *hwun^{A}								hun^{1}	vin$^{1'}$	hun^{1}	von^{1}

Notes

1. The same word was borrowed separately into Hmongic as *waŋ^{A} (1.12/24).

*1.12 *w-*

PHM *w-	1	2	3	4	5	6	7	8	9	10	11
1. sky/heaven *wɛŋ	vɛ^{2}	-	-	-	-	-	vɔ̃^{2}	-	-	-	vaŋ^{2}
2. 芋 taro *wouH	vu^{6}	wə^{6}	vaɯ^{6}	wɯ^{6}	wo^{C}	vau^{6}	vɔ^{6}	hou^{6}	hɔu^{6}	-	vu^{6}

PH *w-	1	2	3	4	5	6	7
3. 1SG (I/me) *wɛŋ^{B}	vi^{4}	we^{4}	-	-	-	va^{4}	vɔ̃^{4}
4. 園 garden *waŋ^{A}	vaŋ^{2}	-	va^{2}	wua^{2}	-	vi^{2}	ɦje^{2}
5. 萬 ten thousand *wi̯aŋ^{C}	vaŋ^{6}	-	va^{8}	waŋ^{6}	waŋ^{C}	-	-

PM *w-	8	9	10	11
6. 皇 yellow *wi̯əŋ^{A}	waŋ^{2}	vaŋ^{2}	waŋ^{2}	vjaŋ^{2}

Notes

1. This is part of a very irregular set with Hmong-Mien *ɴgɛuŋ 'sky/heaven' (6.6/22) and Hmong-Mien *ndɛuŋ 'sky/heaven' (2.6/22).
4. The same word was borrowed separately into Mienic as *hwun^{A} (1.11/27).
6. Hmongic borrowed 'yellow' from Chinese 黃 (see 5-6'.3/24).

*1.16 *pj-*

PHM *pj-	1	2	3	4	5	6	7	8	9	10	11
1. three *pjɔu	pi^{1}	pu^{1}	pe^{1}	pæ^{1a}	pzi^{A}	pa^{1}	po^{1}	pu^{1}	pu^{1}	pau^{1}	bu^{5}
2. bedbug *pji	-	-	-	-	-	pi^{1}	pɪ^{5}	pi^{1}	pi^{1}	pi^{1}	bɛi^{1}
3. father/male *pjaX	pa^{3}	pɑ^{3}	tsi^{3}	pi^{3a}	pa^{B}	pe^{3}	pa^{7}	pwa^{3}	fa^{3}	-	-
4. fruit *pji̯əuX	tsen^{3}	pi^{3}	tsi^{3}	pei^{3a}	pze^{B}	pi^{3}	pje^{3}	pjeu^{3}	pjɔu^{3}	pjau^{3}	bɛu^{3}

PH *pj-	1	2	3	4	5	6	7
5. crop of bird *pjin^{B}	pi^{3}	-	tsia^{5}	pjein^{5a}	pu^{B}	pai^{3}	pɛ̃^{1}
6. to bear fruit *pji^{C}	tsen^{5}	-	tsi^{5}	pei^{5a}	pze^{C}	-	-

PM *pj-	8	9	10	11
7. wooden basin *pjat^{D}	pwat^{7}	-	-	-

Notes

1. In addition to Fuyuan (5), forms suggesting -j- are Shimen /tsi^{1}/, Fengxiang /tsi^{1}/.
2. Forms with -j- appear in Ho Ne /pji^{3}/, Jiangdi Mien /pje^{1}/, and Xiangnan Mien /pje^{1}/.
3. Compare Chinese 父 'father' (OC *[b](r)aʔ > MC bjuX > Man. *fù*). See also Hmong-Mien 'husband' *N-poX (1.1/7).
4. See also West Hmongic Xuyong /tsɿ^{5}/, Shimen /tsi^{5}/ and Bunu /pi^{5}/ (Office of Miao-Yao Research Lexicon 1987). Compare the Hmongic derivative *pji^{C} 'to bear fruit' (1.16/1).
6. 'To bear fruit' is a C-tone derivative of Hmong-Mien *pji̯əuX 'fruit' (1.16/1); see chapter 4.
7. *pj- is reconstructed on the basis of Mien forms /pjet^{7}/ and /pje^{7}/ (Wang and Mao 15 and 16).

*1.17 *phj-*

PH *phj-	1	2	3	4	5	6	7
1. burn (TR) *phjæw^{B}	phi^{3}	-	-	-	-	ɣa^{3}	pho^{3}
2. half *phje^{C}	-	-	-	pje^{7b}	phje^{C}	-	-
3. chaff/husk *S-phjæ^{C}	fha^{5}	sa^{5}	sua^{5}	sa^{5b}	si^{B}	ɣei^{5}	(m̥e^{5})

Notes

3. Compare Hmong-Mien *mphi̯ɛk 'chaff/husk' (1.5/1) and see discussion of words that pattern similarly under 1.2.

*1.18 *bj-*

PHM *bj-	1	2	3	4	5	6	7	8	9	10	11
1. to enter *bjɯ̯ɛk	pə^{6}	pɔ^{5}	-	-	-	pɔ^{6}	pɯ^{6}	pja^{8}	-	phja^{8}	pjɛ^{8}

*1.19 *mpj-*

PHM *mpj-	1	2	3	4	5	6	7	8	9	10	11
1. 補 to repair/mend *mpjaX	pu^{3}	mpɑ^{3}	ntsi^{3}	mpi^{3a}	mʔpa^{B}	mpan^{3}	ma^{3}	bwa^{3}	va^{3}	bja^{3}	bjɛ^{3}

*1.20 *mphj-*

PH *mphj-	1	2	3	4	5	6	7
1. daughter/girl *mphje^{D}	phi^{7}	mphɑ^{7}	ntshai^{7}	mpje^{7b}	mʔphje^{D}	phai^{7}	phe^{7}

*1.21 *mbj-*

PHM *mbj-	1	2	3	4	5	6	7	8	9	10	11
1. 辮 to braid/a braid *mbjinX	mi^{4}	-	ntsia^{4}	mpjein^{4}	mpen^{4}	pjen^{6}	ma^{1}	bin^{4}/bin^{5}	bin^{4}	-	pin^{4}/bjɛn^{6}

PM *mbj-	8	9	10	11
2. young man *mbjau^{A}	bja:u^{2}	ba:u^{2}	-	-

Notes

1. A number of languages (including Mien (8) and Zao Min (11) above) have differentiated this word based on the verb/noun distinction (they appear in this order), or, more likely, have borrowed the verb and noun separately from Chinese. In most locations, the same word is used for both noun and verb, or only one or the other is attested.
2. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*1.23 *hmj-*

PHM *hmj-	1	2	3	4	5	6	7	8	9	10	11
1. footprint/track *hmjænX	m̥ha^{3}	-	hn̥ɛŋ^{3}	mein^{3a}	m̥a^{B}	-	-	m̥wan^{3}	ŋwa:n$^{3'}$	m̥jɛn^{3}	-
2. tooth *hmjinX	m̥hi^{3}	ɕɛ^{3}	hn̥ia^{3}	mi^{3b}	m̥jen^{B}	m̥ai^{3}	mĩ^{3}	-	-	mjen^{3}	-
3. to sniff at *hmjɻəmH	m̥hi^{5}	-	hn̥ia^{5}	mi^{5b}	m̥jen^{C}	m̥ai^{5}	mi^{5}	hom^{5}	hɔ:m$^{5'}$	m̥ja^{5}	-

PM *hmj-	8	9	10	11
4. grass *hmja^{B}	m̥wa^{3}	wa^{3}	m̥ja^{3}	mjɛ^{3}
5. spirit/ghost *hmjæn^{B}	m̥wan^{3}	ŋwa:n^{3}	m̥jɛn^{3}	mjɛn^{3}

Notes

1. Compare Tibeto-Burman *naŋ ‘to follow’, *s-naŋ ‘to follow/with’ (Matisoff 2003), Kachin /mənaŋ/ ‘companion’, Lai /neʔ-hnɑŋ/ ‘footprint’ (Kenneth Van Bik, p.c.).
2. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
3. Both ‘to sniff at’ and ‘to taste/try’ (Hmong-Mien *hmeiH, 1.8/12) mean to smell or taste intentionally. Different words exist for ‘to smell’ and ‘to taste’ unintentionally. Compare Tibeto-Burman *s-nam ‘to smell’ (‘directive, causative, intensive’ s- prefix; see Matisoff 2003:99 ff.).
5. The -w- in Luoxiang Mien (8) and Lanjin Mun (9) is secondary: -j- dropped, then -w- developed between a labial and /a/.

*1.24 *mj-*

PH *mj-	1	2	3	4	5	6	7
1. horse *mjæn^{B}	ma^{4}	-	nɛŋ^{4}	mein^{4}	ma^{B}	me^{4}	mĩ^{4}

PM *mj-	8	9	10	11
2. person/Mien *mjæn^{A}	mwan^{2}	mun^{2}	min^{2}	min^{2}
3. wife of mother’s brother *mjəŋ^{A}	mwaŋ^{2}	ŋwaŋ^{2}	mjaŋ^{2}	mjaŋ^{2}

Notes

1. Although Hmongic ‘horse’ is ultimately related to Chinese 馬 (OC *mˁraʔ > MC mæX > Man. *mǎ*), these forms suggest a more direct connection to some Tibeto-Burman language (TB *mraŋ, Matisoff 2003). Furthermore, the rime matches Hmong-Mien *hmjænX ‘footprint/track’ (1.23/19), which is probably also a Tibeto-Burman borrowing. Mienic words for ‘horse’ are all borrowings from Chinese.
2. See also Mien dialects Jiangdi (Wang and Mao 15) /mjen^{2}/ and Xiangnan (Wang and Mao 16) /mjəŋ^{2}/. Pa-Hng /mjɛ^{2}/ patterns with Mienic here as it does in a number of other instances (see ‘chaff/husk’ and ‘thunder’). The probable source of the Mienic autonym, which takes the variant forms ‘Mien’, ‘Mun’, and ‘Min’, is Chinese 民 ‘people’ (OC *mi[ŋ] > MC mjin > Man. *mín*). Wang and Mao link these Mienic forms in m- that mean both ‘person’ and ‘group’ to the Hmongic *næn^{A} ‘person’ (2.9/19) since the rimes and tones correspond. The Hmongic word for ‘person’ is entered separately here for the time being.

2 & 3. The -w- in Luoxiang Mien (8) and Lanjin Mun (9) is secondary: -j- dropped, then -w- developed between a labial and /a/.

*1.27 *wj-*

PH *wj-	1	2	3	4	5	6	7
1. cooking pot/pan *wjin^{B}	vi^{4}	wɛ^{4}	jia^{4}	ʑein^{4}	wen^{B}	van^{4}	vɪ̃^{4}

Discussion

The only word in this set patterns like *j- in White Hmong (3) and Zongdi (4), and like *w- elsewhere.

*1.31 *pl-*

PHM *pl-	1	2	3	4	5	6	7	8	9	10	11
1. four *plei	l̥u^{1}	pʐ̩ei^{1}	plau^{1}	plɔ^{1a}	plou^{A}	ple^{1}	pi^{1}	pje^{1}	pjei^{1}	plɘi^{1}	pɛi^{5}

PH *pl-	1	2	3	4	5	6	7
2. stomach *plaŋ^{A}	-	-	pla^{1}	-	-	-	-
3. flour *plu̯ei^{B}	-	-	-	plɔ^{5a}	plou^{B}	-	-
4. owl *ploŋ^{D}	l̥ioŋ^{5}	-	pla^{7}	-	-	-	-

PM *pl-	8	9	10	11
5. to bury *plop^{D}	plop^{7}	plɔp^{7}	-	-

Notes

1. From Tibeto-Burman *b-ləy (Matisoff 2003). See chapter 5.
3. Compare Proto Malayo-Polynesian *palu ‘sago flour’ (ACD).
4. Yanghao (1) from Office of Miao-Yao Research Lexicon (1987).
5. Hainan Mun (Shintani and Yang 1990) has been substituted for Lanjin Mun (9).

*1.31.1 *plj-*

PHM *plj-	1	2	3	4	5	6	7	8	9	10	11
1. hair *pljei	l̥u^{1}	pi^{1}	plau^{1}	plɔ^{1a}	plou^{A}	ple^{1}	pi^{1}	pje^{1}	pjei^{1}	pli^{1}	pɛi^{1}

PH *plj-	1	2	3	4	5	6	7
2. heart *pljow^{B}	l̥u^{3}	-	plaɯ^{3}	plə^{3b}	plo^{B}	-	-
3. wildcat *pljɨ^{D}	l̥aŋ^{7}	-	pli^{7}	plei^{5a}	ple^{C}	-	-

Notes

3. Perhaps the same as Chinese 狸 ‘wildcat’ (OC *[m]ə.rə > MC li > Man. *lí*) from a variant *bù lái* indicating an initial *pə- (Sagart 1999:88). In Hmong-Mien the word would have had a final -p or -t, so this may be a loan from Hmong-Mien to Chinese.

*1.32 *phl-*

PHM *phl-	1	2	3	4	5	6	7	8	9	10	11
1. shell/covering *phlei	l̥hu^{7}	-	phlau^{1}	-	phlau^{C}	-	-	-	-	-	fɔu^{1}

PH *phl-	1	2	3	4	5	6	7
2. cheek/face *phl-^{C}	-	phɑ^{5}	phlu^{5}	-	-	-	-
3. to stroke *phlɯ^{C}	l̥hɛ^{5}	phzə̱^{5}	phlɯ^{7}	plou^{5b}	phlu^{C}	-	-

PM *phl-	8	9	10	11
4. to stroke *phlun^{A}	phjun^{1}	-	phlən^{1}	-
5. to play (flute) *phlu̯əm^{B}	pwəm^{3}	pjɔm^{3}	-	-

Notes

1. Yanghao (1) from Office of Miao-Yao Research Lexicon (1987). Most other West Hmongic cognates have tone 1. In both Yanghao (1) and Fuyuan (5), the meaning has narrowed to 'soft membrane inside shell'. Compare Proto Tai *pl-k 'shell, bark' (Li 1977).
3 & 4. Although the rimes and tones do not correspond, these are probably the same word. Hmongic forms from Wang 1994 except White Hmong (3) from Heimbach 1979; Mien (8) from Office of Miao-Yao Research Lexicon (1987), and Biao Min (10) from Solnit 1982. Compare Chinese 撫 'to caress' (OC *[pʰ](r)aʔ > MC phjuX > Man. *fǔ*).
5. Changping Mien (Wang and Mao 18) /phləm^{3}/. Compare the similar Hmongic *phro^{C} 'to play (flute)' (1.47/7).

*1.33 *bl-*

PHM *bl-	1	2	3	4	5	6	7	8	9	10	11
1. forehead *bl-^{A}	-	-	plia^{2}	-	-	-	-	pɔŋ^{2}	plɔŋ^{2}	plə^{4}	paŋ^{2}

PH *bl-	1	2	3	4	5	6	7
2. mussel/clam *blin^{C}	l̥iə^{6}	pɹɛ^{4}	plia^{6}	-	-	-	-

Notes

1. Jinxiu Mien (8) from L-Thongkum 1993. Biao Min form (10) from Office of Miao-Yao Research Lexicon (1987). Compare Proto Tai *ph(r/l)aak (Li 1977).
2. Yanghao (1) and Jiwei (2) from Office of Miao-Yao Research Lexicon (1987).

*1.33.1 *blj-*

PH *blj-	1	2	3	4	5	6	7
1. soul/spirit *blja^{A}	l̥u^{2}	pjə^{2}	pli^{6}	plɪ^{6}	vlo^{A}	-	pjɔ^{2}

Notes

1. Compare Tibeto-Burman *b-la 'demon, soul' > Nung /phəla/ (Benedict 1972). Tone 6 forms can be explained as sandhi form promotions, but the rime is highly irregular.

*1.34 *mpl-*

PHM *mpl-	1	2	3	4	5	6	7	8	9	10	11
1. butterfly *mpleuH	-	-	-	mpei^{5a}	mʔple^{C}	-	-	bjeu$^{5'}$	blɔu$^{5'}$	bja^{4}	-

PM *ʔbl- (<*mpl-)	8	9	10	11
2. blind *ʔblɔu^{B}	bu^{3}	bu^{4}	-	-

Notes

2. The medial *-l- is reconstructed on the basis of Hainan Mun /blou^{4}/ (Shintani and Yang 1990). This could also be *mbl- since both upper and lower register tones are attested.

*1.34.1 *mplj-*

PH *mplj-	1	2	3	4	5	6	7
1. twin *mplje^{A}	pi^{1}	-	ntsai^{1}	mpje^{1a}	mʔple^{A}	-	-

*1.35 *mphl-*

PH *mphl-	1	2	3	4	5	6	7
1. finger ring *mphle^{A}	-	-	mphlai^{1}	-	-	mʔphle^{A}	-

*1.36 *mbl-*

PHM *mbl-	1	2	3	4	5	6	7	8	9	10	11
1. rice plant/paddy *mbləu	na^{2}	nɯ^{2}	mple^{2}	mplæ^{2}	-	mpla^{2}	mjo^{2}	blau^{2}	blau^{2}	blau^{2}	bjau^{2}
2. smooth/glossy *mbl̥iəŋH	-	mjɛ^{6}	mpla^{6}	mplein^{6}	mplen^{C}	-	wĩ^{6}	-	bjaŋ^{6}	-	-
3. glutinous /sticky *mblut	nə^{8}	nu^{8}	mplau^{8}	mplu^{8}	mplo^{D}	-	-	but^{8}	blut^{8}	blun^{8}	bit^{8}
4. tongue *mblet	ŋi^{8}	mjɑ^{8}	mplai^{6}	mple^{8}	mple^{D}	mpli^{8}	mje^{8}	bjet^{8}	bjet^{8}	blin^{8}	bɛt^{8}

PH *mbl-	1	2	3	4	5	6	7
5. leaf *mbləŋ^{A}	nə^{2}	nu^{2}	mplɔŋ^{2}	mplaŋ^{2}	mploŋ^{A}	mplɔŋ^{2}	mjɔ̃^{2}
6. whip *mblow^{D}	-	-	mpləɯ^{8}	mplə^{8}	mʔplo^{D}	-	-

PM *mbl-	8	9	10	11
7. to shed leaves/drop *mbl̥uei^{C}	blwei^{6}	blei^{6}	-	-
8. rain *mbluŋ^{C}	bluŋ^{6}	buŋ^{6}	blə^{6}	biŋ^{6}

Notes

2. In White Hmong, ‘brilliant’.
3. In Hmongic, this is used for sticky rice, and in Mienic it means both ‘glutinous’ and ‘snot’. Compare Proto Malayo-Polynesian *belit/*bulit ‘viscous, sticky’ (ACD) and Chinese 秫 ‘glutinous millet’ (OC *m.lut > MC zywit > Man. *shú*) (Sagart 1999:79).
4. Probably from Chinese 舌 ‘tongue’ (OC *m.lat > MC zyet > Man. *shé* (Sagart 1999:79); see parallel with ‘glutinous’ above.

5. Compare Malayo-Polynesian *buluŋ ‘medicinal herbs’ which has come to be used as ‘leaf’ in many Austronesian languages (ACD). The Hmongic word for ‘leaf’ may be related to Mienic *nɔm^{A} (2.9/29), given the match in rime and tone.
8. Compare Khmer /phliəŋ/ ‘rain, to rain’. Possibly related to Hmongic *m-noŋ^{C} ‘rain’ (2.9/28), since they belong to the same rime set.

*1.36.1 *mblj-*

PHM *mblj-	1	2	3	4	5	6	7	8	9	10	11
1. fan *mbljæp	zen^{8}	mjɑ^{7}	ntsua^{8}	mpja^{8}	mpzi^{D}	mpli^{8}	mi^{8}	bjap^{8}	bja:p^{8}	bjɛn^{8}	dzjɛp^{8}

PH *mblj-	1	2	3	4	5	6	7
2. crazy *mbljɔŋ^{A}	-	-	-	mpjaŋ^{2}	mpzoŋ^{A}	-	-
3. to have food w/rice *mbljæ^{C}	-	-	ntsua^{6}	mpje^{6}	mpji^{C}	-	-

Notes

2. A medial -l- appears in Gaopo /mploŋ^{2}/ (West Hmongic, Wang and Mao 6).
3. A medial -l- appears in Gaopo /mplɑ^{6}/ (West Hmongic, Wang and Mao 6).

*1.39 *ml-*

PHM *ml-	1	2	3	4	5	6	7	8	9	10	11
1. soft *mlɥɛjH	mɛ^{6}	ne^{6}	mua^{6}	noŋ^{6}	mja^{C}	mɔ^{6}	mɪ̃^{6}	mwei^{6}	ŋwei^{6}	mi^{6}	mai^{6}

Notes

1. Medial *-l- reconstructed on the basis of Gaopo /mləŋ^{6}/ (West Hmongic, Wang and Mao 6). Compare Proto Malayo-Polynesian *ma-lumu ‘soft, tender, gentle’ (ACD).

*1.46 *pr-*

PHM *pr-	1	2	3	4	5	6	7	8	9	10	11
1. five *pra	tsa^{1}	pʐɑ^{1}	tʂi^{1}	pʐɪ^{1a}	pja^{A}	pui^{1}	pja^{1}	pla^{1}	pja^{1}	pla^{1}	pjɛ^{5}
2. house *prəuX	tsɛ^{3}	pʐɯ^{3}	tʂe^{3}	pʐæ^{3a}	pei^{B}	pja^{3}	pjo^{3}	pjau^{3}	pjau^{3}	pla^{3}	pju^{3}
3. stick *praX	-	pʐɑ^{3}	-	-	-	-	pja^{3}	pla^{3}	pja^{3}	-	-

PH *pr-	1	2	3	4	5	6	7
4. to sow *præw^{A}	-	pʐo^{1}	tʂe^{1}	pʐæ^{1a}	pji^{A}	-	-
5. to winnow *prɔŋ^{B}	-	pʐu^{3}	tʂɔŋ^{3}	pʐaŋ^{3b}	pjoŋ^{B}	pjɔŋ^{3}	-
6. to pour *pra^{C}	tsɑ^{5}	pʐa^{5}	tʂi^{5}	-	-	-	-
7. to wring *pro^{C}	-	pʐo^{5}	-	pʐo^{5a}	pju^{C}	-	pja^{5}
8. dark *pruw^{D}	tsə^{7}	pʐu^{7}	tʂau^{7}	pʐu^{7a}	pjo^{D}	pjɔu^{7}	-

Notes

1. From Tibeto-Burman *b-r-ŋa (Benedict 1987a). See chapter 5.
6. Forms taken from Office of Miao-Yao Research Lexicon (1987).

*1.47 *phr-*

PHM *phr-	1	2	3	4	5	6	7	8	9	10	11
1. head *S-phreiX	fhu^{3}	pʐei^{3}	hau^{3}	wɔ^{5b}	hu^{B}	-	pɦi$^{3'}$	pje^{3}	pjei^{3}	pli^{3}	pɛi^{3}

PH *phr-	1	2	3	4	5	6	7
2. to blow *phru^{A}	tsho^{1}	phʐo^{1}	tʂhua^{1}	pʐa^{1b}	phja^{A}	phu^{1}	phjo^{1}
3. play (flute) *phro^{B}	-	-	tʂhɔ^{3}	pʐo^{3b}	-	-	-
4. tree *S-phru^{A}	fhu^{3}	-	-	wa^{1b}	-	-	-

Notes

1. Extended semantically in White Hmong to ‘base, root, origin’ as well as ‘summit’ (tone 3) and ‘leader, headman’ (tone 5). Mienic and Hmongic words have the same rime and tone, but slightly different initials, presumably the effect of the prefix in Hmongic.
2 & 3. These are clearly similar in form and meaning, but their rimes and tones differ.
3. Compare the similar Mienic *phlu̱əm^{B} ‘to play (flute)’ (1.32/29).
4. This word is primarily found in West Hmongic and patterns like ‘head’ above. The Yanghao (1) form is a classifier for vegetation (Office of Miao-Yao Research Lexicon 1987), as is the Shimen (West Hmongic) word /faɯ^{1}/.

*1.48 *br-*

PH *br-	1	2	3	4	5	6	7
1. noose/trap *bri^{B}	-	-	tʂi^{4}	-	-	-	-
2. rat *bru̱a^{C}	-	-	tʂua^{6}	pʐəa^{6}	vja^{B}	-	-

Discussion

Both of these words have a medial -l- in Gaopo (West Hmongic, Wang and Mao 6): /pli^{4}/ ‘noose/trap’ and /plu^{6}/ ‘rat’.

Notes

1. Xianjin Hmong (Wang and Mao 3) has been substituted for White Hmong (3). Other forms appear in Wang 1994.

*1.49 *mpr-*

PH *mpr-	1	2	3	4	5	6	7
1. green/blue *mpru^{A}	zo^{2}	mʐo^{1}	ɳtʂua^{1}	mpʐa^{1a}	mʔpja^{A}	-	mjo^{1}
2. lung *mpru̱^{C}	zɛ^{6}	mʐə^{5}	ɳtʂɯ^{7}	mpʐou^{5a}	mʔpju^{C}	-	mɔ^{5}

*1.51 *mbr-*

PHM *mbr-	1	2	3	4	5	6	7	8	9	10	11
1. ear *mbræu	zɛ^{2}	mʐɯ^{2}	ɳtʂe^{2}	mpʐæ^{2}	mpji^{A}	mpja^{2}	mjo^{2}	-	-	blau^{2}	bju^{2}
2. fish *mbrəuX	zɛ^{4}	mʐɯ^{4}	ɳtʂe^{4}	mpʐe^{4}	mpji^{B}	mpja^{4}	mjo^{4}	bjau^{4}	bjau^{4}	bla^{4}	bju^{4}
3. bamboo shoot/ orphan *mbrəjH	za^{6}	mʐɑ^{6}	ɳtʂua^{6}	mpʐəa^{6}	mpja^{C}	mpja^{6}	mje^{6}	bje^{6}	bjai^{6}	blai^{6}	bɛi^{6}
4. nose *mbruiH	zɛ^{6}	mʐə^{6}	ɳtʂɯ^{6}	mpʐu^{6}	mpju^{C}	mpjau^{6}	mjɔ^{6}	pa^{6}	-	bli^{6}	-
5. spicy *mbrat	za^{8}	mʐei^{8}	ɳtʂi^{8}	mpʐɪ^{8}	mpja^{D}	mpwai^{8}	mje^{8}	bla:t^{8}	bjat^{8}	blan^{8}	bjɛt^{8}

PH *mbr-	1	2	3	4	5	6	7
6. to groan/ moan *mbraŋ^{A}	zaŋ^{2}	mʐei^{2}	ɳʈʂa^{2}	mpʐua^{2}	mpen^{A}	mpwen^{2}	-
7. ant *mbrɔ^{D}	-	-	ɳʈʂau^{8}	mpʐɔ^{8}	mpju^{D}	-	-

Notes

2. Compare Proto Tai *pla A1 (Li 1977), Proto Kam-Sui *mprai 3 (Thurgood 1988).
3. This root also means ‘orphan, widow(er)’ in all Hmongic languages except Jiongnai, Ho Ne and Pa-Hng. It may be that ‘bamboo shoot’ is basic, and ‘orphan, widow(er)’ is a derived meaning since the distribution of ‘bamboo shoot’ is wider. However, given Proto Tai *br[a] ‘orphan’ (Li 1977), perhaps ‘orphan/widow(er)’ is the basic meaning.
4. Compare Chinese 鼻 ‘nose’ (OC *m-[b]i[t]-s > MC bjijH > Man. *bí*).
7. Compare Mon-Khmer *srmuuc (Shorto #873), Proto Tai *mu̯it D2S (Li 1977), Malay /semut/.

*1.54 *mr-*

PHM *mr-	1	2	3	4	5	6	7	8	9	10	11
1. to listen *(S-)mru̯ɔŋH	-	-	mlɔŋ^{6}	mzʐəŋ^{6}	-	-	mæ̃^{5}	moŋ^{5}	muŋ$^{5'}$	m̥ɔŋ^{5}	maŋ^{5}

Notes

1. Biao Min (10) from Office of Miao-Yao Research Lexicon (1987). Mienic and Pa Hng tone 5, the Mun tone subcategory, and the Biao Min voiceless nasal suggest a voiceless prefix that devoiced the initial in some languages.

2. Dentals

*2.1 *t-*

PHM *t-	1	2	3	4	5	6	7	8	9	10	11
1. to answer *tau	ta^{1}	tɯ^{1}	te^{1}	tæ^{1a}	ti^{A}	ta^{1}	no^{1}	-	tau^{1}	-	du^{1}
2. son/boy *tu̯ɛn	tɛ^{1}	te^{1}	tu^{1}	toŋ^{1a}	taŋ^{A}	-	tɔ̃^{1}	-	tɔ:n^{1}	twan^{1}	dan^{1}
3. body louse *tɛmX	tɛ^{3}	te^{3}	tu^{3}	toŋ^{3a}	taŋ^{B}	taŋ^{3}	nɔ̃^{3}	tam^{3}	tam^{3}	dan^{3}	dam^{3}
4. rib *tamX	taŋ^{3}	-	ta^{3}	tua^{3a}	ten^{B}	-	-	-	ta:m^{3}	-	-
5. tail *tu̯eiX	tɛ^{3}	tə^{3}	tɯ^{5}	tou^{3a}	tu^{B}	ðau^{3}	tɛ^{3}	twei^{3}	tei^{3}	dwai^{3}	dui^{3}
6. to kill *təjH	ta^{5}	tɑ^{5}	tua^{5}	ta^{5a}	-	ta^{5}	ta^{5}	tai$^{5'}$	tai^{5}	tai^{5}	dai^{5}
7. to snap *tɛŋH	tɛ^{5}	te^{5}	tu^{5}	toŋ^{5a}	taŋ^{C}	taŋ^{5}	tɔ̃^{5}	-	-	taŋ^{5}	daŋ^{5}
8. earth *N-təu	ta^{1}	tɯ^{1}	te^{1}	tæ^{1a}	ti^{A}	ta^{1}	to^{1}	dau^{1}	-	-	-
9. deep *N-tu̯o	to^{1}	to^{1}	tɔ^{1}	to^{1a}	tu^{A}	ðu^{1}	to^{1}	do^{1}	du^{1}	du^{1}	-
10. skin *N-top	tu^{3}	tə^{3}	taɯ^{3}	tə^{3a}	to^{B}	-	-	dup^{7}	dup^{7}	din^{7}	dip^{7}
11. wing *N-tat	ta^{7}	tei^{7}	ti^{7}	ti^{7a}	ta^{D}	ðe^{7}	te^{7}	da:t^{7}	da:t^{7}	-	dɔt^{7}
12. 擣 to husk/pound rice *tuX	to^{3}	-	tua^{3}	ta^{3a}	ta^{B}	tu^{3}	to^{3}	-	tau^{3}	tau^{3}	-
13. 得 to get/gain *təuk	tɛ^{5}	tɔ^{5}	tau^{5}	tɔ^{5a}	tu^{C}	tei^{5}	tɯ^{5}	tu^{7}	tu^{7}	tu^{7}	-

PH *t-	1	2	3	4	5	6	7
14. thick *tæ^{A}	ta^{1}	ta^{1}	tua^{1}	ta^{1a}	ti^{A}	tei^{1}	te^{1}
15. gourd *tuw^{A}	-	tɔ^{1}	tau^{1}	tu^{1a}	to^{A}	-	-
16. skirt *tin^{A}	tei^{1}	tɛ^{1}	tia^{1}	tæin^{1a}	ten^{A}	ðai^{1}	tĩ^{1}
17. to hold/grasp hand *tæ^{B}	-	-	tua^{3}	ta^{3a}	ti^{B}	-	-
18. frost *tæw^{C}	ta^{5}	tɯ^{5}	te^{5}	tæ^{5a}	ti^{C}	ða^{5}	no^{5}
19. axe *tu̯ei^{C}	to^{5}	tɔ^{5}	tau^{7}	tɔ^{5a}	tu^{C}	ðei^{5}	ti^{5}
20. foot *tow^{C}	tu^{5}	tə^{5}	taɯ^{5}	tə^{5a}	to^{C}	-	-
21. to ignite/light *tow^{D}	tu^{7}	-	taɯ^{7}	te^{7a}	to^{D}	-	-
22. to pick up/clamp *te^{D}	-	tɑ^{7}	tai^{7}	te^{7a}	te^{D}	-	nãe^{6}

PM *t-	8	9	10	11
23. 酒 liquor *tiu^{B}	tiu^{3}	tiu^{3}	tiu^{3}	diu^{3}
24. 碓 tilt-hammer/pestle *tu̯ɔi^{C}	tɔi$^{5'}$	tɔ:i^{5}	twai^{5}	dui^{5}
25. 凳 stool/bench *təŋ^{C}	taŋ$^{5'}$	taŋ^{5}	taŋ^{5}	daŋ^{5}

Discussion

'Earth', 'deep', 'skin', and 'wing' show voiced stops in Mien and Mun. Since the source of voiced stops in Mien and Mun is usually prenasalization in Hmongic, I have proposed a "loosely-adjoined" voicing element for these words (*N-), one which did not survive in Hmongic (these pre-initials have been reconstructed for words with other initials as well: see 2.3, 3.1, 3.6, 4.1, etc.). These four words also consistently show a voiced fricative initial in Jiongnai (6), a conservative Hmongic language. On the basis of the presence of Jiongnai voiced fricative initials in 'skirt', 'frost', and 'axe', it seems reasonable to think that there may have been a loosely adjoined voicing element in in these words as well, although they are not reconstructed here. Fieldwork on the West Hmongic language Pa-na

language reported in Tagachi 2005 suggests that a medial -l- may account for the voiced initials in Mienic; however, there is no evidence that a medial -l- can account for words with this pattern at other places of articulation.

Notes

6. Yanghao (1) from Office of Miao-Yao Research Lexicon (1987). This word is important in the reconstruction of morphology in Hmong-Mien, as it bears a morphological relationship to 'to die' (*dəjH, 2.3/15), see chapter 4. These two words are also to be related in some fashion to proto-Austronesian *pa-aCay 'to kill' and *ma-aCay 'to die' (ACD).
8. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
23. The Ho Ne cognate /tiu^{3}/ 'liquor' alone does not give enough information to allow us to place this word in one of the major rime sets. See Hmongic *cow^{B} (4.1/13), borrowed independently from the same word.

*2.2 *th-*

PHM *th-	1	2	3	4	5	6	7	8	9	10	11
1. 桶 bucket *thɔŋ(X)	-	-	thɔŋ^{1}	-	thoŋ^{A}	-	thɔ̃^{7}	thoŋ^{3}	tɔŋ^{3}	dɔŋ^{3}	tuŋ^{5}
2. 炭 charcoal *thanH	thɛ^{5}	the^{5}	thɛŋ^{5}	tæin^{5b}	thaŋ^{C}	thɔu^{3}	thæ̃^{5}	tha:n^{5}	ta:n$^{5'}$	than^{5}	tan^{3}

PH *th-	1	2	3	4	5	6	7
3. to boil (TR) *tho^{A}	tho^{1}	-	-	to^{1b}	thu^{A}	-	-
4. bellows *thoŋ^{B}	thoŋ^{3}	thɑŋ^{3}	-	thaŋ^{3b}	thoŋ^{B}	-	tho^{3}
5. hoop *thɨ^{C}	tha^{5}	-	thi^{5}	tei^{5b}	the^{C}	-	-

Notes

4. This word bears a slight resemblance to Chinese 橐 'sack, bellows' (MC thak > Man. *tuó*).
5. Possibly from Chinese 帶 'belt, girdle' (MC tajH > Man. *dài*), although the Chinese initial is not aspirated.

*2.3 *d-*

PHM *d-	1	2	3	4	5	6	7	8	9	10	11
1. elder brother *da	ta^{2}	-	ti^{2}	ti^{2}	ða^{A}	-	-	-	ta^{2}	-	-
2. to come *daj	ta^{2}	-	tua^{2}	ta^{2}	ða^{A}	-	te^{2}	ta:i^{2}	ta:i^{2}	ta^{2}	tɛi^{2}
3. fire *douX	tu^{4}	tə^{4}	tauɯ^{4}	tɯ^{4}	ðo^{B}	tau^{4}	tɤ^{4}	tou^{4}	tɔu^{4}	təu^{4}	tu^{4}
4. to explode *douH	tu^{6}	tə^{6}	tauɯ^{6}	tɯ^{6}	ðo^{C}	-	tɤ^{6}	-	tɔ^{6}	-	-
5. to die *dəjH	ta^{6}	tɑ^{6}	tua^{6}	təa^{6}	ða^{C}	ta^{6}	te^{6}	tai^{6}	tai^{6}	tai^{6}	tai^{6}
6. tortoise *duH	-	-	-	-	-	-	-	to^{6}	tu^{6}	-	-
7. to bite *dəp	tə^{8}	to^{8}	tɔ^{8}	to^{8}	ðu^{D}	-	ta^{8}	tap^{8}	tap^{8}	than^{8}	-
8. to put on/wear (shoes) *dap	-	-	-	-	-	tei^{8}	-	ta:p^{8}	ta:p^{8}	-	-
9. half (of day) *N-dam(X)	taŋ^{4}	-	ta^{4}	-	-	-	-	da:m^{2}	da:m^{2}	-	-
10. 蹄 hoof *dej	-	-	-	-	-	tei^{2}	-	tei^{2}	tei^{2}	təi^{2}	tɛi^{2}
11. 銅 copper *dɔŋ	tə^{2}	toŋ^{2}	tɔŋ^{2}	taŋ^{2}	ðoŋ^{A}	twaŋ^{2}	tɔ̃^{2}	toŋ^{2}	tɔŋ^{2}	tɔŋ^{2}	tuŋ^{2}
12. 荅 bean *dup	tə^{8}	-	tau^{8}	tu^{8}	no^{D}	tɔ^{8}	tuɯ^{8}	top^{8}	tɔp^{8}	thən^{8}	tup^{8}

PH *d-	1	2	3	4	5	6	7
13. level *din^{A}	-	-	tia^{2}	tæin^{2}	-	-	-
14. to sink *dəŋ^{A}	taŋ^{2}	-	tɔ^{6}	toŋ^{6}	toŋ^{A}	-	tæ̃^{4}
15. bowl *de^{B}	-	-	tai^{4}	te^{4}	-	-	ta^{4}
16. CLF-horses *dɛŋ^{B}	tɛ^{4}	-	tu^{4}	toŋ^{4}	ðaŋ^{B}	-	-
17. to wait *dəŋ^{B}	taŋ^{4}	tɑŋ^{4}	tɔ^{4}	toŋ^{4}	ðoŋ^{B}	-	te^{4}
18. which *dɯ^{C}	tei^{6}	-	tɯ^{6}	tu^{6}	ðu^{B}	-	ti^{1}
19. 蹋 to step on/tread *dæ^{D}	ten^{8}	tɑ^{8}	tua^{8}	ti^{8}	-	-	-

PM *d-	8	9	10	11
20. to soak *do^{A}	tu^{2}	-	ta^{2}	tɔu^{2}
21. to put on/wear (jewelry) *dəŋ^{A}	taŋ^{2}	taŋ^{2}	-	-
22. back (of body) *dan^{B}	tan^{4}	tan^{4}	-	-
23. pig *duŋ^{B}	tuŋ^{4}	tuŋ^{4}	twə^{4}	tiŋ^{4}
24. 頹 to fall (of rain) *duj^{A}	tui^{2}	-	tui^{2}	-
25. 袋 bag *di^{C}	ti^{6}	ti^{6}	ti^{6}	-
26. 地 non-irrigated land *dej^{C}	tei^{6}	tei^{6}	təi^{6}	ti^{6}

Notes

1. Compare Chinese 弟 *dì* ‘younger brother’, used in the compound 弟兄 *dìxiong* to mean ‘brothers’.
2. In White Hmong, ‘to come back to a place other than one’s home’. Compare Hmong-Mien *ləwX (2.42/7): ‘to come back to one’s home’.
3. Also ‘firewood’ in White Hmong.
3 & 4. ‘Fire’ and ‘to explode’ are morphologically related; see chapter 4.
5. This word is important in the reconstruction of morphology in Hmong-Mien, as it bears a morphological relationship to ‘to kill’ (*təjH, 2.1/15); see chapter 4. These two words are also to be related in some fashion to proto-Austronesian *ma-aCay ‘die’ and *pa-aCay ‘kill’ (ACD).
6. Reconstructed to Proto Hmong-Mien on the basis of its appearance in Mienic and Qibainong Bunu /tu^{6}/ (Wang and Mao 10).
7. Compare Malayo-Polynesian *ketep ‘to bite’ (ACD).
8. Compare Chinese 踏 ‘to step into or on to’ (MC thop > Man. *tà*).
19. In White Hmong, ‘to kick backward with foot (as of a horse)’.
20. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
23. Perhaps from Chinese 豚 ‘young pig’ (OC *[d]ˤu[n] > MC dwon > Man. *tún*), although the tones and final nasals do not correspond.

*2.4 *nt-*

PHM *nt-	1	2	3	4	5	6	7	8	9	10	11
1. fragrant *ntaŋ	-	-	-	-	-	nten^{1}	nɛ^{1}	da:ŋ^{1}	da:ŋ^{1}	daŋ^{1}	dɔŋ^{1}
2. wet *ntu̯ɛn	-	nte^{1}	ntu^{1}	ntoŋ^{1a}	nʔtaŋ^{A}	ntaŋ^{1}	tɔ̃^{4}	-	dɔ:n^{1}	-	-
3. cloth *ntei	-	ntei^{1}	ntau^{1}	ntɔ^{1a}	nʔtu^{A}	nte^{1}	ni^{1}	di^{1}	-	di^{1}	dɛi^{1}
4. long *ntauX	ta^{3}	ntɯ^{3}	nte^{3}	ntæ^{3a}	nʔti^{B}	ða^{3}	to^{3}	da:u^{3}	da:u^{3}	da^{3}	du^{3}
5. to chop *ntəwX	to^{3}	-	ntɔ^{3}	nto^{3a}	nʔtu^{B}	ntu^{3}	no^{3}	-	-	dau^{3}	dau^{3}
6. to flip with finger *ntik	-	-	nti^{3}	ntei^{5a}	-	ntai^{5}	na^{5}	dit^{7}	-	-	-
7. to warm self by fire *ntauH	ta^{5}	ntɯ^{5}	nte^{5}	ntæ^{5a}	nʔti^{C}	nta^{5}	no^{5}	-	da:u^{5}	dau^{5}	du^{5}
8. to put on/wear (cap) *ntɔŋH	tə^{5}	ntu^{5}	ntɔŋ^{5}	ntaŋ^{5a}	nʔtoŋ^{C}	ntwaŋ^{5}	no^{5}	doŋ$^{5'}$	dɔŋ^{5}	dɔŋ^{5}	dɔŋ^{5}
9. to weave *ntət	to^{7}	nto^{7}	ntɔ^{7}	-	-	ntu^{7}	na^{7}	dat^{7}	dat^{7}	dan^{7}	dat^{7}
10. navel *ntəut	tu^{7}	ntu^{7}	ntaɯ^{7}	ntə^{7a}	nʔto^{D}	ntu^{7}	-	dut^{7}	du:t$^{7'}$	din^{7}	-
11. 擔 to carry on shoulder *ntam	-	-	-	-	-	tã^{1}	tæ̃^{5}	da:m^{1}	da:m^{1}	da^{1}	dɔm^{1}

PH *nt-	1	2	3	4	5	6	7
12. to float *ntaŋ^{A}	-	nten^{1}	nta^{1}	-	-	-	-
13. finger *nta^{B}	ta^{3}	ntɑ^{3}	nti^{3}	nti^{3a}	nʔta^{B}	-	-
14. paper *ntow^{B}	tu^{3}	ntə^{3}	ntaɯ^{3}	ntə^{3a}	nʔto^{B}	ntau^{3}	nɔ^{3}
15. many/much *ntɔ^{C}	nɛ^{5}	-	ntau^{5}	ntɔ^{5a}	nʔtu^{C}	ntei^{5}	-
16. to beat (someone) *ntuw^{D}	-	-	ntau^{7}	ntu^{7a}	-	-	ta^{7}

PM *ʔd- (< *nt-)	8	9	10	11
17. deaf *ʔduŋ^{A}	-	duŋ^{1}	dwə^{1}	dɔŋ^{1}
18. to ladle *ʔdəm^{B}	dam^{3}	-	-	da^{3}
19. to fly *ʔdəi^{C}	dai^{5}	dai$^{5'}$	dai^{5}	-
20. finger *ʔdok^{D}	do^{7}	dɔ^{7}	dɔ^{7}	-
21. 底 lower level *ʔdi^{B}	di^{3}	di^{3}	ti^{3}	di^{3}
22. 脫 to peel off/ escape *ʔdut^{D}	-	dut$^{7'}$	dun^{7}	-

Notes

1. Compare Kam /taaŋ^{1}/ and Mak /taaŋ^{1}/ ‘fragrant’ (Downer 1978).
6. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
8. Compare ‘tree’ (2.19/29), which is exactly the same in Hmongic (Hmongic *ntɔŋ^{C}), but differs in onset at the higher level (Hmong-Mien *nt- ‘to put on/wear (cap)’ vs. Hmong-Mien *ntj- ‘tree’).
13 & 20. These two sets of forms for ‘finger’ may be related, but they differ in rime and tone, and thus are listed separately.
15. Compare Mun /du:ŋ^{5}/ ‘many/much’.
18. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Possibly from Chinese 斟 ‘to ladle out’ (OC *t.[q][ə]m > MC tsyim > Man. *zhēn*).

*2.5 *nth-*

PH *nth-	1	2	3	4	5	6	7
1. attic *nthaŋ^{A}	-	-	ntha^{1}	ntua^{1b}	nʔthen^{A}	-	-
2. to open out/undo *nthu̯a^{B}	tha^{3}	nthɑ^{3}	nthua^{3}	-	nʔtha^{B}	-	-
3. to weed/hoe *nthu^{C}	-	ntho^{5}	nthua^{5}	-	-	-	-

*2.6 *nd-*

PHM *nd-	1	2	3	4	5	6	7	8	9	10	11
1. sky/heaven *ndɛuŋ	-	-	ntu^{2}	ntoŋ^{2}	-	-	-	-	-	-	-
2. sweet potato *ndu̯əj	na^{2}	-	-	-	-	-	-	du^{2}	dɔ:i^{2}	dwai^{2}	dai^{2}
3. to lay eggs *ndəuH	na^{6}	-	nte^{6}	nte^{6}	nti^{C}	tei^{5}	no^{6}	-	-	dau^{6}	du^{6}
4. ramie/hemp *nduH	no^{6}	no^{6}	ntua^{6}	ntəa^{6}	nta^{C}	ntu^{6}	mjo^{6}	do^{6}	du^{6}	du^{6}	-

PH *nd-	1	2	3	4	5	6	7
5. long sword *ndaŋ^{A}	-	-	nta^{2}	ntua^{2}	nten^{A}	-	-

PM *nd-	8	9	10	11
6. river *ndai^{A}	-	-	da^{2}	dɔi^{2}
7. table *ndɔu^{A}	du^{2}	nu^{2}	-	-
8. in front *ndaŋ^{C}	da:ŋ^{6}	da:ŋ^{6}	-	-

Notes

1. Part of a very irregular set with Hmong-Mien *wɛŋ ‘sky/heaven’ (1.12/22) and Hmong-Mien *ɴGɛuŋ ‘sky/heaven’ (6.6/22). Representing Mienic, see Changping Mien /ðuŋ^{2}/ (Wang and Mao 18).
4. The labial initial in Pa-Hng (7) suggests an ancient prefix or disyllabic form.

*2.7 *ʔn-*

PHM *ʔn-	1	2	3	4	5	6	7	8	9	10	11
1. snake *ʔnaŋ	naŋ^{1}	nei:^{1}	na^{1}	na^{1a}	ʔnen^{A}	nen^{1}	nẽ^{1}	na:ŋ^{1}	na:ŋ^{1}	naŋ^{1}	nɔŋ^{1}
2. this *ʔneinX	noŋ^{3}	nei^{3}	nɔ^{5}	na^{3a}	ʔnoŋ^{B}	ne^{3}	n̩^{3}	nei^{3}	nei^{3}	na^{3}	na^{3}
3. cold *ʔnu̯ɔmH	-	noŋ^{5}	nɔ^{5}	nɔ^{5a}	-	nɐŋ^{5}	ŋ̃^{5}	nam$^{5'}$	nam^{5}	nan^{5}	nam^{5}

PM *ʔn-	8	9	10	11
4. CLF-bowls/houses *ʔnɛɔm^{A}	nɔm^{1}	nɔ^{1}	nɔ^{1}	na^{1}
5. short *ʔnəŋ^{B}	naŋ^{3}	niŋ^{3}	naŋ^{3}	naŋ^{3}
6. to swallow *ʔnək^{D}	na^{7}	na^{7}	na^{7}	-
7. 拗 to break *ʔnəu^{B}	nau^{3}	nau^{3}	-	-

Notes

3. In Mienic, the meaning is ‘cool (water)’.
4. Compare Hmongic *ʔlɛŋ^{A} ‘CLF-bowls/houses’ (2.40/22) and see discussion in chapter 6, section 6.2.1.

5. Compare Hmongic *ʔlɛŋ^{B} ‘short’ (2.40/22) and see discussion in chapter 6, section 6.2.1.
7. Compare Hmongic *ʔlo^{B} from the same Chinese word under (2.40/7) and see discussion in chapter 6, section 6.2.1.

*2.8 *hn-*

PHM *hn-	1	2	3	4	5	6	7	8	9	10	11
1. grain head/bag *hnɔn	ɳ̊haŋ^{1}	ɳ̊hei^{1}	hɳ̊a^{1}	na^{1b}	ɳ̊en^{A}	ɳ̊en$^{1'}$	ɳ̊ẽ^{1}	-	nɔ^{1}	nan^{1}	-
2. to hear *hnəumX	ɳ̊haŋ^{3}	ɳ̊hɑŋ^{3}	hɳ̊ɔ^{3}	nɔ^{3b}	ɳ̊u^{B}	ɳ̊ɐŋ^{3}	ɳ̊õ^{3}	nom^{3}	num^{3}	ɳ̊ən^{3}	-
3. to put on/wear (clothes) *(h)naŋX	naŋ^{4}	ɳ̊hei^{3}	hɳ̊a^{3}	na^{3b}	-	nen^{4}	nẽ^{3}	-	-	-	nɔŋ^{3}
4. to cough *hnɔp	ŋo^{4}	-	hɳ̊ɔŋ^{7}	naŋ^{7}	ɳ̊o^{D}	-	-	ɳ̊op^{7}	-	ɳ̊ən^{7}	-

PH *hn-	1	2	3	4	5	6	7
5. sun/day *hnɛŋ^{A}	ɳ̊hɛ^{1}	ɳ̊he^{1}	hɳ̊u^{1}	noŋ^{1b}	ɳ̊a^{A}	ɳ̊ɔ$^{1'}$	ɳ̊ẽ^{1}
6. crossbow *hnæn^{B}	ɳ̊hen^{3}	-	hɳ̊ɛŋ^{3}	nein^{3b}	ɳ̊a^{B}	-	ɳ̊ẽ^{3}
7. to forget *hnuŋ^{B}	ɳ̊hoŋ^{1}	noŋ^{3}	hɳ̊ɔ^{3}	na^{3a}	ɳ̊oŋ^{A}	ɳ̊ɐŋ^{3}	nõ^{3}
8. perilla (*sū má*) *hnaŋ^{B}	ɳ̊haŋ^{3}	ɳ̊hen^{3}	hɳ̊a^{3}	-	ɳ̊en^{B}	-	-

PM *hn-	8	9	10	11
9. sun/day *hnu̯ɔi^{A}	ɳ̊ɔi^{1}	nɔːi$^{1'}$	ɳ̊wai^{1}	nai^{1}
10. to resemble *hnəŋ^{B}	ɳ̊aŋ^{2}	naŋ$^{3'}$	-	-
11. to lift *hniŋ^{C}	niŋ^{5}	niŋ$^{5'}$	-	-
12. crossbow *hnək^{D}	ɳ̊ak^{5}	na$^{7'}$	-	-
13. 泥 mud *hni^{A}	ni^{1}	ni$^{1'}$	ɳ̊i^{1}	nɛi^{1}
14. to think of *hnəm^{B}~*hləm^{B}	-	lam^{3}	-	-

Discussion

The reconstructions for two words in this set—‘sun/day’ and ‘crossbow’—are entered separately for Hmongic and Mienic, even though these forms undoubtedly go back to single words in Proto Hmong-Mien. Their rimes are difficult to reconcile due to secondary nasalization in Hmongic. The oral rime/nasal rime pair for ‘to cough’ is easier to reconstruct at the Hmong-Mien level given the appearance of both in rime set 29. ‘To forget’ behaves much the same way, but since its Mienic counterpart has a palatal initial (*hɲou^{B}), it is entered under 4.8 below.
The apostrophe after the tone number in Mun (9) marks a tone subcategory conditioned by aspiration in the initial.

Notes

1. Chinese 囊 ‘bag’ (OC *nˤaŋ > MC nang > Man. *náng*) may have been borrowed from Hmong-Mien, since it shows only the derivative meaning (see chapter 7). Yet compare Tibeto-Burman *s-nam ‘ear of grain’ (Matisoff 2003).
3. Since tones 3 and 4 are both attested, the initial h- is placed in parentheses. Chang (1972:563) thought this tonal alternation could be traced back to an initial voicing contrast that might in turn have been caused by an old prefix (see chapter 4).
4. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
8. Perilla is a medicinal herb in the mint family (also known as “shiso”).

10. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
11. Despite the tone mismatch, this is probably the same word as Chinese 拎 'to carry, lift' (Cant. /nɪŋ1/, Man. *līng*).
12. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
14. This is a borrowing from Cantonese /nɐm^{3}/ (~lɐm^{3}/) (Downer 1973:19). The variation between n- and l- in Cantonese is reflected in Mienic (Jiangdi Mien /n̥am^{3}/, Luoxiang Mien /lam^{3}/, Changping Mien /lam^{3}/).

*2.9 *n-*

PHM *n-	1	2	3	4	5	6	7	8	9	10	11
1. 3SG (he/she/it) *nɨæn(X)	nen^{2}	-	nɯ^{4}	ŋ̊i^{4}	nen^{B}	nɐŋ^{4}	nɯ^{4}	nan^{2}	nen^{2}	nin^{2}	-
2. mother's brother *neuŋX	nen^{4}	ne^{4}	nu^{4}	noŋ^{4}	ŋ̊i^{B}	nɔ^{4}	nɯ^{4}	nau^{4}	nau^{4}	nau^{4}	nuŋ^{4}
3. bird *m-nɔk	nə^{6}	nu^{6}	nɔŋ^{6}	nəŋ^{6}	no^{C}	nwaŋ^{6}	mõ^{6}	nu^{8}	nɔ^{6}	n̥ɔ^{8}	nɔu^{8}

PH *n-	1	2	3	4	5	6	7
4. to eat *nuŋ^{A}	naŋ^{2}	noŋ^{2}	nɔ^{2}	nɔ^{2}	noŋ^{A}	nɐŋ^{2}	nɔ^{2}
5. person *næn^{A}	nɛ^{2}	ne^{2}	nɛŋ^{2}	-	na^{A}	nai^{2}	-
6. mouse/rat *naŋ^{B}	naŋ^{4}	nei^{4}	na^{4}	-	-	nen^{4}	nĩ^{4}
7. to ask *nɛŋ^{C}	nɛ^{6}	ne^{6}	nu^{6}	noŋ^{6}	na^{C}	nɔ^{6}	nĩ^{6}
8. rain *m-noŋ^{C}	noŋ^{6}	noŋ^{6}	na^{6}	naŋ^{6}	noŋ^{C}	nɐŋ^{6}	mõ^{6}

PM *n-	8	9	10	11
9. leaf *nɔm^{A}	nɔm^{2}	nɔ:m^{2}	nan^{2}	num^{2}
10. mouse/rat *nau^{B}	na:u^{4}	-	nɔ^{4}	-
11. to ask *nu̯ai^{C}	na:i^{6}	na:i^{6}	na^{6}	nɔi^{6}
12. 膿 pus *nɔŋ^{C}	noŋ^{6}	nuŋ^{6}	nɔŋ^{6}	nɔu^{6}

Notes

3. The final -k of 'bird' is reflected in a velar nasal in Hmongic (the shift to a final nasal conditioned by the nasal initial). Since the Hmong-Mien rimes are organized by the large sets of merged rimes in Hmongic, this word appears under set 29, a nasal rime set. Compare Proto Malayo-Polynesian *manuk 'bird/chicken' (ACD) and Proto Tai *n-lok 'bird' (Li 1977).
4. Mienic *n̥ən^{C} (4.9/27) is probably related to these forms for 'to eat'.
5. Wang and Mao link these Hmongic forms in n- that mean only 'person' to the Mienic forms in m- that mean both 'person' and serve as autonyms for the different Mienic groups. This Mienic word *mjæn^{A} (1.24/19) is entered separately here. Pa-Hng /mjɛ^{2}/ with a labial initial patterns with Mienic, as it does in a number of other instances (see 'chaff/husk' and 'thunder').
6 & 10. Forms for 'mouse/rat' are entered separately under Hmongic and Mienic due to differences in rime even though the two sets probably represent a single word.
7 & 11. Forms for 'to ask' are entered separately under Hmongic and Mienic even though these forms probably represent a single word.
8. Possibly related to Mienic *mbluŋ^{C} 'rain' (1.36/28), since they belong to the same rime set.

9. The Mienic word for 'leaf' may be related to Hmongic *mblɔŋ^{A} (1.36/29), given the match in rime and tone.
10. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8), and Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).

*2.13 *s-*

PHM *s-	1	2	3	4	5	6	7	8	9	10	11
1. first day of month *seŋ	-	-	sia^{1}	sæin^{1b}	sen^{A}	-	-	-	-	-	hɛŋ^{1}
2. sour *suj	ɕhu^{1}	ɕɔ^{1}	-	su^{1b}	so^{A}	θjɔ^{1}	sɯ^{1}	ɕui^{1}	tθui$^{1'}$	swəi^{1}	si^{1}
3. 送 to send/deliver *suŋH	shoŋ^{5}	-	sa^{5}	saŋ^{5b}	soŋ^{C}	θɐŋ^{5}	sõ^{5}	θuŋ^{5}	tθuŋ^{5}	swə^{5}	hiŋ^{5}

PH *s-	1	2	3	4	5	6	7
4. to shut (door) *sow^{D}	shu^{7}	-	-	ʂə^{7}	-	-	-

PM *s-	8	9	10	11
5. stomach *si^{A}	ɕi^{1}	tθi$^{1'}$	-	sɛi^{1}
6. quilt *sụɛŋ^{C}	ɕwəŋ^{5}	tθɔŋ$^{5'}$	sɔŋ^{5}	suŋ^{5}
7. thread *suj^{C}	ɕui^{5}	tθu:i$^{5'}$	sui^{5}	si^{5}
8. centipede *səp^{D}	ɕap^{7}	tθap$^{7'}$	sən^{7}	tsap^{7}
9. near *sət^{D}	θat^{7}	tθat^{7}	-	-
10. straw sandals *səuk^{D}	ɕu^{7}	tθu$^{7'}$	ʇu^{7}	-
11. 髭 beard *sụam^{A}	ɕwam^{1}	tθɔ:m$^{1'}$	-	tsam^{1}
12. 心 heart *sim^{A}	θim^{1}	tθim^{1}	ɕɛn^{1}	-
13. 箴 needle *sim^{A}	ɕim^{1}	tθim$^{1'}$	ʇɕɛn^{1}	tsum^{1}
14. 雙 pair *suŋ^{A}	ɕuŋ^{1}	tθuŋ$^{1'}$	swə^{1}	hiŋ^{1}
15. 聲 sound *siŋ^{A}	ɕiŋ^{1}	tθi:ŋ$^{1'}$	ɕɛ^{1}	-
16. 醒 to sober up *siŋ^{B}	-	tθiŋ^{3}	ɕɛ^{3}	-
17. 細 small/fine *sæi^{C}	-	-	-	hɛi^{5}
18. 赤 red *sek^{D}	ɕi^{7}	tθi$^{7'}$	ɕi^{7}	sjɛ^{7}
19. 刷 to wipe *sot^{D}	ɕot^{7}	-	-	-

Discussion

The Mun (9) reflexes of voiceless fricatives fall into two large sets: those with tθ- and those with s-. The words with a Mun reflex of tθ- have been placed together here and have been reconstructed at both the Proto Hmong-Mien and Proto Mienic level as *s- . The words with a Mun reflex of s- have been reconstructed at the Proto Hmong-Mien level as either *sj- (2.28) or *ɕ- (4.13), merging at the Proto Mienic level as *ɕ-. The distinction between Hmong-Mien *sj- and *ɕ- is based on developments in Western Hmongic: *sj- > ʂ- and *ɕ- > ɕ-.

The messiness of the fricative correspondences led Wang and Mao to reconstruct eleven voiceless fricatives for the protolanguage, but since the daughter languages are not characterized by large numbers of fricatives, it seems reasonable to assume that the protolanguage did not have many fricatives, either. There are many Chinese loanwords in these sets, some with unique patterns, that obscure the native correspondences.

Notes

2. This may come from Chinese 酸 'sour' (OC *[s]ˤo[r] > MC swan > Man. *suān*).
4. This word patterns like no other: the retroflex fricative in Zongdi seems to be an irregularity.
8. There are similar forms in both Tai-Kadai (Lao /khep^{7}/) and Mon-Khmer (Khmer /kʔæp/).

*2.16 *tj-*

PHM *tj-	1	2	3	4	5	6	7	8	9	10	11
1. 種 to grow *n-tjuɛŋH	-	-	-	-	-	-	ɳʁ^{5}	tɕwəŋ^{5}	sɔŋ^{5}	ʇɔŋ^{5}	tsuŋ^{5}

PM *tj-	8	9	10	11
2. to wait *tjɔu^{B}	tɕu^{3}	ʇu^{3}	ʇu^{3}	-
3. 粢 millet *tjəi^{A}	tɕai^{1}	ʇai^{1}	ʇai^{1}	tɛi^{1}
4. 煮 to boil (TR) *tjou^{B}	tɕou^{3}	ʇɔu^{5}	ʇəu^{3}	tsu^{3}
5. 紙 paper *tjej^{B}	tɕei^{3}	ʇei^{3}	ʇəi^{3}	tsi^{3}
6. 粥 porridge *tjuok^{D}	tɕwo^{7}	su^{7}	-	-
7. 捉 to take *tjɔk^{D}	-	ʇɔ^{7}	-	-

Notes

2. See also Jiangdi Mien (Wang and Mao 15) /tswo^{3}/ for evidence supporting the reconstruction of both this onset and this rime.

*2.17 *thj-*

PHM *thj-	1	2	3	4	5	6	7	8	9	10	11
1. 漆 lacquer *thjet	shei^{7}	tshei^{7}	-	se^{7b}	tshe^{C}	ʃai^{7}	sʁ^{7}	θjet^{7}	-	tshan^{7}	tat^{7}

Notes

1. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7). Although not well represented in this small set of languages, the medial -j- is widely represented elsewhere in Mienic.

*2.18 *dj-*

PHM *dj-	1	2	3	4	5	6	7	8	9	10	11
1. seven *djuŋH	ɕoŋ^{6}	tɕoŋ^{6}	ɕa^{5}	tɕaŋ^{6}	zoŋ^{C}	ʃɐŋ^{6}	tɕʁ^{6}	sje^{6}	-	-	-

PM *dj-	8	9	10	11
2. thigh *djuj^{A}	tɕui^{2}	ʇuːi^{2}	-	si^{2}
3. 遲 late *djæi^{A}	tɕai^{2}	-	ʇai^{2}	-
4. 是 to be *djej^{B}	tɕei^{4}	ʇei^{4}	ʇəi^{4}	sɛi^{4}
5. 柿 persimmon *djəi^{B}	tɕai^{4}	ʇai^{6}	-	-
6. 灼 to burn *djiɛk^{D}	tɕa^{8}	sa^{8}	ʇha^{8}	sa^{8}
7. 熟 cooked/ripe *djuok^{D}	tɕwo^{8}	-	ʇhɔ^{8}	-

Notes

1. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). The onset seems to tie the Mien form to the Hmongic set, but the rime does not agree. Mienic *ŋ̊ji^{C} (5.24/1) may be related, but the correspondence is difficult. Hmong-Mien 'seven' is from Tibeto-Burman *s-nis 'seven' according to Benedict (1987a:13); see chapter 5.

*2.19 *ntj-*

PHM *ntj-	1	2	3	4	5	6	7	8	9	10	11
1. tree *ntjo̱əŋH	tə^{5}	ntu^{5}	ntɔŋ^{5}	-	nʔtoŋ^{C}	ntwaŋ^{5}	-	djaŋ$^{5'}$	gjaŋ^{5}	djaŋ^{5}	djaŋ^{5}

PM *ʔdj- (< ntj-)	8	9	10	11
2. to drip *ʔdjɛp^{D}	djep^{7}	-	djan^{7}	dɛp^{7}

Notes

1. Compare 'to put on/wear (cap)' (2.4/29), which is exactly the same in Hmongic (*ntɔŋ^{C}), but differs in onset at the Hmong-Mien level (*nt- 'to put on/wear (cap)' vs. *ntj- 'tree'). Perhaps the same as Chinese 樹 'tree' (OC *m-toʔ-s > MC dzyuH > Man. *shù*), but compare Mon-Khmer *t$_2$ʔɔɔŋ 'tree' (Shorto #491).

*2.20 *nthj-*

PHM *nthj-	1	2	3	4	5	6	7	8	9	10	11
1. 秤 balance *nthjo̱əŋH	-	-	-	-	-	-	ŋ̊õ^{5}	ʤaŋ^{5}	ɖaŋ$^{5'}$	ɖaŋ^{5}	dzaŋ^{5}

PM *dhj- (< *nthj-)	8	9	10	11
2. to sharpen/grind *dhjæu^{C}	ʤeu^{5}	gjɔu$^{5'}$	ɖau^{5}	dziu^{5}

Notes

2. Compare Chinese 剉 'to file' (MC tshwaH > Man. *cuò*).

*2.21 *ndj-*

PM *ndj-	8	9	10	11
1. 慈 mother/aunt *ndji^{B}	ʤi^{4}	-	ɖai^{4}	-

*2.23 *hnj-*

PHM *hnj-	1	2	3	4	5	6	7	8	9	10	11
1. heavy *hnjeinX	ŋ̊hoŋ^{3}	hei^{3}	hŋ̊a^{3}	ŋ̊a^{3b}	ŋ̊oŋ^{B}	ŋ̊e^{3}	ŋ̊a^{3}	ŋ̊i^{3}	ni^{3}	ŋ̊i^{3}	nɛi^{3}

Notes

1. This word is reconstructed with *hnj- instead of *hŋ- (4.8) because most reflexes in Mienic do not show palatal nasals.

*2.28 *sj-*

PHM *sj-	1	2	3	4	5	6	7	8	9	10	11
1. light(weight) *-sjɻeu	fha^{1}	ɕa^{1}	ʂi^{1}	sei^{1b}	se^{A}	ɣuai$^{1'}$	fɤ^{1}	ɕeu^{1}	sɔu$^{1'}$	hjau^{1}	-
2. to stand/get up *sjouX	ɕhu^{3}	ɕə^{3}	ʂaɯ^{3}	sə^{3b}	so^{B}	θjau^{3}	sɤ^{3}	ɕou^{3}	-	səu^{3}	fu^{3}
3. 暑 warm *sjɻouX	ɕhə^{3}	ɕo^{3}	ʂɔ^{3}	so^{3b}	su^{B}	-	-	-	sɔu^{3}	sau^{3}	sju^{3}

PH *sj-	1	2	3	4	5	6	7
4. thin *sjɔŋ^{A}	-	ɕu^{1}	ʂɔŋ^{1}	saŋ^{1b}	soŋ^{A}	θjɔŋ^{1}	-
5. on top of *sju^{A}	-	-	-	sa^{1b}	sa^{A}	-	-
6. sinew *sjɻei^{B}	ɕhu^{3}	ɕi^{3}	-	sɔ^{3b}	su^{B}	-	si^{3}
7. cooked/ripe *sjen^{B}	ɕhaŋ^{3}	ɕɛ^{3}	ʂia^{3}	sæin^{3b}	sen^{B}	θeŋ^{3}	sĩ^{3}
8. midday meal *sjɛŋ^{C}	-	-	ʂu^{5}	soŋ^{5b}	saŋ^{C}	-	-
9. to rest *sjo^{C}	tɕhə^{5}	ɕo^{5}	ʂɔ^{5}	so^{5b}	su^{C}	θjeu^{5}	-
10. to wipe *sjəŋ^{C}	ɕhaŋ^{5}	ɕɑŋ^{5}	ʂɔ^{5}	soŋ^{5b}	soŋ^{C}	-	-
11. 廝 RECIPROCAL *sjɨ$^{A-D}$	ɕi^{5}	-	ʂi^{1}	-	si^{A-D}	-	-
12. 升 measure for grain *sjin^{A}	ɕhen^{1}	-	ʂia^{1}	sæin^{1b}	sen^{A}	-	tɕhɔ̃^{1}
13. 收 to receive/ gather in *sjuw^{A}	ɕhu^{1}	-	ʂau^{5}	-	su^{A}	-	-

Discussion

The Mun (9) reflexes of voiceless fricatives fall into two large sets: those with tθ- and those with s-. The words with a Mun reflex of tθ- have been placed together and have been reconstructed at both the Proto Hmong-Mien and Proto Mienic level as *s- (2.13). The words with a Mun reflex of s- have been reconstructed at the Proto Hmong-Mien level as either *sj- (here) or *ɕ- (4.13), merging at the Proto Mienic level as *ɕ-. The distinction between Hmong-Mien *sj- and *ɕ- is based on developments in Western Hmongic: *sj- > ʂ- and *ɕ- > ɕ-.

The messiness of the fricative correspondences led Wang and Mao to reconstruct eleven voiceless fricatives for the protolanguage, but since the daughter languages are not characterized by large numbers of fricatives, it seems reasonable to assume that the protolanguage did not have many fricatives, either. There are many Chinese loanwords in these sets, some with unique patterns, that obscure the native correspondences.

Notes

1. The labiodental initials in Yanghao, Jiongnai, and Pa-Hng are difficult to explain. Wang and Mao reconstructed a *phs- initial for their set 59, in which this word appears, although this word is the only one to show only labial fricatives rather than labial stops.

5. There are retroflex onsets for ‘on top of’ in West Hmongic Xianjin and Shimen (Wang and Mao 3 & 4). It may be that White Hmong saum /ʂau^{8}/ ‘above’ is related, although neither the rime nor tone corresponds.

*2.40 *ʔl-*

PH *ʔl-	1	2	3	4	5	6	7
1. CLF-bowls/houses *ʔlɛŋ^{A}	lɛ^{1}	le^{1}	lu^{1}	noŋ^{1a}	ʔlaŋ^{A}	xoŋ^{1}	lɔ̃^{1}
2. monkey *ʔlin^{A}	lei^{1}	-	lia^{1}	læin^{1a}	-	lai^{1}	-
3. red *ʔlin^{A}	-	-	lia^{1}	læin^{1a}	ʔlen^{A}	-	-
4. short *ʔlɛŋ^{B}	lɛ^{3}	le^{3}	lu^{3}	loŋ^{3a}	ʔlaŋ^{B}	laŋ^{3}	lɔ̃^{3}
5. to squeeze/pinch *ʔlɨ^{C}	la^{5}	lɑ^{5}	li^{5}	lei^{5a}	-	l̥i^{5}	la^{5}
6. CLF-mouthfuls *ʔlo^{C}	lo^{5}	-	lɔ^{5}	lo^{5a}	-	lu^{5}	-
7. 拗 to break *ʔlo^{B}	lo^{3}	-	lɔ^{3}	lo^{3a}	ʔlu^{B}	lu^{3}	ljõ$^{3'}$

PM *ʔl-	8	9	10	11
8. CLF-fields *ʔlɻ̩əu^{C}	lau$^{5'}$	-	-	-

Notes

1. Compare Mienic *ʔnɛɔm^{A} ‘clf-bowls/houses’ (2.7/22) and see discussion in chapter 6, section 6.2.1.
2. The Mienic word for ‘monkey’ (*ʔbiŋ^{A} 1.4/18) shares the same tone and rime with this word, but begins with a different initial, suggesting the possibility of an ancient disyllabic source. Compare Proto Tai *liŋ ‘monkey’ (Li 1977).
2 & 3. These may be the same word, if the monkey was referred to as ‘the red one’. How the connection between ‘monkey’ and ‘red’ may relate to the connection suggested above between the Hmongic and Mienic words for ‘monkey’ is unclear. Probably one connection or the other is correct, but not both.
4. Compare Mienic *ʔnəŋ^{B} ‘short’ (2.7/22) and see discussion in chapter 6, section 6.2.1.
7. Compare Mienic *ʔnəu^{B} from the same Chinese word (2.7/7) and see discussion in chapter 6, section 6.2.1.
8. Also Jiangdi Mien /ljou^{5}/ and Xiangnan Mien /ljəu^{5}/. Compare Gaopo (Hmongic) /loŋ^{5}/ ‘field’ and Tibeto-Burman *low ‘field’ (Matisoff 2003). The tone subcategory of Luoxiang Mien indicates that this word should be reconstructed with *hl-, but given the evidence from these other forms, it is provisionally placed here.

*2.40.1 *ʔlj-*

PH *ʔlj-	1	2	3	4	5	6	7
1. to pour *ʔlju̯ei^{A}	l̥u^{1}	-	lau^{1}	l̥o^{1a}	ʔlu^{A}	-	-
2. rabbit *ʔlju^{B}	-	-	lua^{3}	l̥a^{3a}	ʔla^{B}	-	-
3. male *ʔljuw^{B}	-	-	lau^{5}	l̥u^{3a}	ʔlo^{B}	-	-

Notes

2. In White Hmong, the words for ‘rabbit’ and ‘donkey’ are homophonous: *luav* /lua^{3}/. A *luav-nees* ‘donkey-horse’ is a mule. Another word for ‘mule’ (White Hmong *luj* /lu^{2}/, attested across the family) is clearly a loanword from Chinese 騾 ‘mule’ (Man. *luó*). Connections among these are unclear.
3. In White Hmong, *lau* /lau^{5}/ is male of birds, while *laug* /lau^{6}/is male of sheep, goat, cow.

*2.41 *hl-*

PHM *hl-	1	2	3	4	5	6	7	8	9	10	11
1. bamboo *hləwX	l̥ho^{3}	l̥ho^{3}	hl̥ɔ^{3}	-	-	-	-	l̥au^{3}	lɔu^{3}	ɬau^{3}	lau^{3}
2. plum *hliə̯ŋX	-	-	-	-	-	-	le^{3}	gaŋ^{3}	-	ɬaŋ^{3}	ŋɔŋ^{3}
3. moon/month *hlaH	l̥ha^{5}	l̥hɑ^{5}	hl̥i^{5}	li^{5b}	l̥a^{C}	l̥e^{5}	l̥a^{5}	la^{5}	la^{5}	ɬa^{5}	lɔu^{5}
4. to slice *hlep	l̥hei^{7}	l̥hɑ^{7}	hl̥ai^{7}	le^{7b}	-	l̥ai^{7}	-	le^{7}	-	-	-

PH *hl-	1	2	3	4	5	6	7
5. marrow/brains *hlɯ^{A}	l̥hɛ^{1}	l̥hə^{1}	hl̥ɯ^{1}	lou^{1b}	l̥u^{A}	-	-
6. bridge *hlæ^{A}	-	-	-	la^{1b}	-	-	-
7. rope *hlæ^{C}	l̥ha^{5}	l̥ha^{5}	hl̥ua^{5}	la^{5b}	l̥i^{C}	l̥ei^{5}	l̥e^{5}
8. 湯 to scald *hlaŋ^{A}	-	-	hl̥a^{1}	lua^{1b}	l̥en^{A}	-	la^{6}
9. 鐵 iron *hluw^{C}	l̥hə^{5}	l̥hɔ^{5}	hl̥au^{5}	lu^{5b}	l̥o^{C}	l̥ɔ^{5}	l̥ɯ^{5}

PM *hl-	8	9	10	11
10. petal *hlem^{C}	ɬim^{5}	le:m^{5}	-	ɬiŋ^{5}
11. which *[hl]ai^{C}	la:i^{5}	-	ha^{5}	-

Notes

2. This may be from Chinese 李 ‘plum’ (MC liX > Man. *lǐ*). Hmong-Mien *l- > g- in Luoxiang Mien and Mun before high vowels and glides (Solnit 1996:9–10).
4. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Compare Tibeto-Burman *(s-)lep ‘to slice’ (Matisoff 2003).
5. According to Sagart (1999:67), this is the same as Chinese 髓 ‘marrow’ (OC *s-lojʔ > MC sjweX > Man. *suǐ*).
6. See also Shimen /l̥a^{1}/, Qingyan /l̥o^{1}/, and Gaopo /l̥hɑ^{1}/ ‘bridge’ (all West Hmongic). Compare Tibeto-Burman *(s-)ley ‘bridge, ladder’ (Matisoff 2003), which is a closer semantic match than Chinese 梯 ‘wooden steps, stairs’ (OC *l̥[ə]j > MC thej > Man. *tī*).
9. See Mienic *hrɛk^{D} ‘iron’ (2.56/9). These were borrowed separately from Old Chinese *l̥^{ʕ}ik.
10. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
11. The placement of Mienic ‘which’ in this set is tentative. The reflexes show either l- or h-; Wang and Mao (1995) reconstruct the word with an *h-.

*2.41.1 *hlj-*

PHM *hlj-	1	2	3	4	5	6	7	8	9	10	11
1. big *hljo	l̥hə^{1}	-	hl̥ɔ^{1}	l̥o^{1b}	l̥u^{A}	l̥jeu$^{1'}$	l̥o^{1}	lo^{1}	lu$^{1'}$	ɬu^{1}	lɔu^{1}
2. sash/cord/rope *hljaŋ	l̥haŋ^{1}	-	hl̥a^{1}	l̥ua^{1b}	-	-	-	l̥a:ŋ^{1}	la:ŋ$^{1'}$	ɬaŋ^{1}	-

PH *hlj-	1	2	3	4	5	6	7
3. young *hljæ^{D}	-	-	hl̥ua^{7}	l̥a^{7b}	-	-	-
4. 燎 to burn (mountain) *hljow^{B}	-	-	hl̥aɯ^{3}	l̥e^{3b}	-	-	-

Discussion

Luoxiang Mien and Lanjin Mun do not show initial g- in 'big' and 'sash/cord/rope' as would be expected since the regular development of *l- before a high vowel or glide is g- in these dialects (Solnit 1996:9–10). It may be that *lj was not a liquid-glide cluster, but rather a palatal lateral.

Notes

1. In White Hmong, *hlob* /hl̥ɔ^{1}/ is 'to grow; elder; great in volume, proud'. The simple word for 'big' is *loj* /lɔ^{2}/, which appears to have the same root. The tonal and onset difference may be attributed to a prefix that devoiced the initial of 'to grow': *hlj- yielded upper-register tone 1, while *lj- yielded lower-register tone 2 (see chapter 4).
2. The meaning 'sash/cord/belt' is associated with this word in Hmongic; the meaning 'rope' is associated with this word in Mienic. Hmongic forms are from Wang 1994. Possibly from Chinese **繩** 'string, cord' (OC *m.ləŋ > MC zying > Man. *shéng*).

*2.42 *l-*

PHM *l-	1	2	3	4	5	6	7	8	9	10	11
1. long (time) *ləu	la^{2}	luɯ^{2}	le^{2}	læ^{2}	li^{A}	la^{2}	lo^{2}	lau^{2}	lau^{2}	-	lu^{2}
2. CLF-people *lan	lɛ^{2}	le^{1}	lɛŋ^{2}	læ^{2}	-	laŋ^{1}	læ̃^{2}	la:n^{2}	la:n^{2}	-	na^{1}
3. to come back *ləwX	lo^{4}	lo^{4}	lɔ^{4}	lu^{4}	lu^{B}	lɔu^{4}	lo^{4}	lau^{4}	lau^{4}	lau^{4}	lau^{4}

PH *l-	1	2	3	4	5	6	7
4. to rot *lɯ^{A}	la^{2}	-	luɯ^{2}	lou^{2}	len^{A}	-	-
5. old *l̥uei^{B}	lu^{4}	-	lau^{4}	lo^{4}	lau^{B}	-	-
6. late *li^{C}	-	-	li^{6}	li^{6}	-	-	lɦe^{6}
7. **聾** deaf *loŋ^{A}	l̥oŋ^{2}	-	la^{6}	-	loŋ^{A}	-	lõ^{2}
8. **兩** tael (40 grams) *l̥iaŋ^{B}	laŋ^{4}	-	la^{4}	-	laŋ^{B}	-	ljɔ̃^{6}
9. **露** dew *lɯ^{C}	-	-	luɯ^{6}	lu^{6}	-	-	-

PM *l-	8	9	10	11
10. bellows *lou^{A}	lou^{2}	lɔu^{2}	ləu^{2}	lu^{2}
11. **累** lazy *l̥uei^{C}	lwei^{6}	lei^{6}	lwəi^{6}	-

Notes

1. The Green Mong form meaning 'a long time ago' has been substituted for White Hmong (3).
2. Compare Chinese *láng* **郎** 'young man' (in Min dialects a homophonous word means 'person').
3. In White Hmong, 'to come back to one's home'; compare 2.3/15 'to come (back to a place other than one's home)'.
5. The individual forms look very much like Chinese **老** 'old' (MC lawX > Man. *lǎo*), but at the Hmongic level the rime does not correspond.
6. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
8. See Mienic *l̥jo̱ŋ^{B} 'tael' (2.42.1/26) from the same source.
10. Possibly from Chinese **蘆** 'reed' (MC lu > Man. *lú*), since Hmong and Mien bellows are made from a cylinder with a pump inside (Lemoine 1972:130–131).

*2.42.1 *lj-*

PHM *lj-	1	2	3	4	5	6	7	8	9	10	11
1. field *ljiŋ	ɭi^{2}	-	lia^{2}	ɭæin^{2}	len^{A}	leŋ^{2}	lĩ^{2}	giŋ^{2}	gi:ŋ^{2}	ljɛ^{2}	ljaŋ^{2}
2. 鎌 sickle *ljim	ɭen^{2}	-	lia^{6}	ɭæin^{2}	len^{A}	ljen^{2}	-	lim^{4}	-	ljɛn^{2}	dzjam^{2}
3. 里 half kilometer *ljɨX	ɭi^{4}	-	-	-	li^{B}	-	-	-	-	ljaŋ^{4}	li^{4}

PH *lj-	1	2	3	4	5	6	7
4. to bury *ljəŋ^{B}	ɭaŋ^{4}	ɭɑŋ^{4}	lɔ^{4}	ɭoŋ^{4}	loŋ^{B}	-	lɛ̃^{4}
5. to be used to *ljɯa^{C}	ɭa^{6}	ɭɑ^{6}	-	ɭəa^{6}	la^{C}	-	-
6. lightning flash *lje^{D}	ɭi^{8}	ɭɑ^{8}	lai^{8}	ɭe^{8}	le^{D}	-	-
7. 量 to measure (rice) *ljɛŋ^{A}	ɭi^{2}	-	lu^{2}	ɭoŋ^{2}	laŋ^{A}	-	-

PM *lj-	8	9	10	11
8. lightning flash *ljəp^{D}	gap^{7}	-	-	dzjɛp^{8}
9. to sew *ljɯɛn^{A}	gwən^{2}	gɔn^{2}	-	-
10. 兩 tael (40 grams) *ljɨoŋ^{B}	guŋ^{4}	guŋ^{4}	lwə^{4}	liŋ^{4}

Notes

1. Compare the almost identical Chinese 田 ‘field; to hunt’ (OC *l^{s}iŋ > MC den > Man. *tián*) and Tibeto-Burman *liŋ ‘field’ (Matisoff 2003). Both Haudricourt and Strecker (1991) and Sagart (1999:183–184) entertain the possibility that this was a loan from Hmong-Mien to Chinese.
4. This may be from Chinese 斂 ‘to dress a corpse’ (Man. *liàn*), although the tones do not correspond.
6 & 8. The Hmongic word would have ended in either -p or -t (Hmong-Mien tone 8 words ending in -k merged with tone 6 in Hmongic), so these two words are clearly related. Compare to Tibeto-Burman *(s-)lyap ‘flash; lightning’ (Matisoff 2003).
10. See Hmongic *ɭiaŋ^{B} ‘tael’ (2.42/26) from the same source.

*2.46 *tr-*

PH *tr-	1	2	3	4	5	6	7
1. to return *trəŋ^{B}	ʈaŋ^{3}	-	ʈɔ^{3}	ʈoŋ^{3a}	tʂoŋ^{B}	-	-
2. *houttuynia cordata* *truw^{D}	ʈu^{7}	ʈu^{7}	ʈau^{7}	ʈu^{7a}	tʂo^{D}	-	-
3. 張 CLF-tools *traŋ^{A}	ʈaŋ^{1}	ʈei^{1}	ʈa^{1}	ʈua^{1a}	tʂen^{A}	tʃen^{1}	-
4. 蹄 hoof/claw/nail *truɯei^{C}	-	ʈa^{5}	ʈau^{5}	ʈɔ^{5a}	-	-	-
5. 著 to put on/wear (shoes) *trɔ^{C}	ʈi^{5}	ʈɔ^{5}	ʈau^{5}	ʈɔ^{5a}	tʂu^{C}	-	tɕɯ^{5}

PM *tr-	8	9	10	11
6. 張 CLF-tools *truŋ^{A}	-	ʈuŋ^{1}	ʈwə^{5}	-

Notes

2. Also known as 魚腥草 (Man. *yú xīng cǎo*), this is a plant used primarily for medicinal purposes (see chapter 7).

3 & 6. This classifier for tools has been independently borrowed from the same source in the two sub-families.
5. Compare Hmongic *drɔ^{C} 'to hit target' (2.48/6) from a different form of the same Chinese root (chapter 4, section 4).

*2.47 *thr-*

PHM *thr-	1	2	3	4	5	6	7	8	9	10	11
1. 插 to insert *threp	ʈhi^{7}	-	ʈhai^{7}	ʈe^{7}	tʂhe^{D}	ʃai^{7}	-	θip^{7}	tip^{7}	tɕhɛn^{7}	hɛp^{7}

PH *thr-	1	2	3	4	5	6	7
2. 抽 to pull out *thro^{C}	ʈhə^{5}	ʈho^{5}	ʈho^{5}	ʈo^{5b}	tʂhu^{C}	-	-

Notes

1. Occasional voiced initials in Mienic (not represented here) suggest the presence of a voiced pre-initial.

*2.48 *dr-*

PHM *dr-	1	2	3	4	5	6	7	8	9	10	11
1. 箸 chopsticks *drouH	ʈu^{6}	ʈɯ^{6}	ʈaɯ^{6}	ʈɯ^{6}	ʐo^{C}	ʃau^{6}	tɕɔ^{6}	tɕou^{6}	ʈɔu^{6}	ʈəu^{6}	tau^{6}

PH *dr-	1	2	3	4	5	6	7
2. firm/durable *dru^{A}	-	-	ʈua^{2}	ʈa^{2}	-	-	-
3. step *dro^{A}	ʈə^{2}	ʈo^{2}	ʈɔ^{2}	ʈo^{2}	ʐu^{A}	tʃa^{2}	tɕa^{6}
4. table/bench *drɔŋ^{A}	-	-	ʈɔŋ^{2}	ʈaŋ^{2}	ʐoŋ^{A}	-	tɕe^{2}
5. bamboo *drow^{D}	-	-	ʈaɯ^{8}	ʈə^{8}	-	-	-
6. 筒 flute/tube *droŋ^{A}	ʈoŋ^{2}	ʈoŋ^{2}	ʈa^{2}	-	ʐoŋ^{A}	-	-
7. 著 to hit target *drɔ^{C}	-	ʈɔ^{6}	ʈau^{6}	ʈo^{6}	-	-	tɕɯ^{6}

Notes

3. The Jiwei (2) form is from Office of Miao-Yao Research Lexicon (1987).
7. Compare Hmongic *trɔ^{C} 'to put on/wear (shoes)' (2.46/6) from a different form of the same Chinese root (chapter 4, section 4).

*2.49 *ntr-*

PHM *ntr-	1	2	3	4	5	6	7	8	9	10	11
1. 中 center/middle *ntroŋ	ʈoŋ^{1}	ɳʈoŋ^{1}	ɳʈa^{1}	ɳʈaŋ^{1a}	ɳʔtʂoŋ^{A}	-	ɳʈɕy^{1}	toŋ$^{5'}$	tɔŋ^{5}	tɔŋ^{5}	-

PH *ntr-	1	2	3	4	5	6	7
2. breast/chest *ntrəŋ^{A}	-	-	ɳʈɔ^{1}	ɳʈoŋ^{1a}	-	-	-
3. to be wedged in *ntrin^{C}	-	ɳʈhɑ^{7}	-	ɳʈei^{5b}	-	-	-
4. to butt (of bulls) *ntruw^{C}	ʈu^{5}	-	ɳʈau^{5}	ɳʈu^{5a}	ɳʔtʂo^{C}	-	-

Notes

1. The Hmongic and Mienic tones do not correspond. They appear to have been borrowed from different forms of Chinese 中.

4. This is probably from Chinese 鬥 ‘fight, wrangle’ (MC tuwH > Man. *dòu*).

*2.50 *nthr-*

PH *nthr-	1	2	3	4	5	6	7
1. puttees *nthrɔŋ^{A}	ʇhu^{1}	ɳʈhu^{1}	ɳʈhɔŋ^{1}	ɳʈaŋ^{1b}	ɳʔtʂhoŋ^{A}	ɳʈʃwaŋ$^{1'}$	ɳ̊ɔ̃^{1}

Notes

1. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).

*2.51 *ndr-*

PHM *ndr-	1	2	3	4	5	6	7	8	9	10	11
1. drum *ndruX	ɳə^{4}	ɳɑŋ^{4}	ɳʈua^{4}	ɳʈəa^{4}	ɳʈʂa^{B}	ɳʈʃu^{4}	mjo^{4}	dʑo^{4}	ɖu^{4}	du^{4}	-

PH *ndr-	1	2	3	4	5	6	7
2. plain (level ground) *ndroŋ^{B}	-	-	ɳʈa^{4}	-	ɳʈʂoŋ^{B}	-	-
3. interior *ndrəŋ^{C}	ɳaŋ^{6}	ɳɑŋ^{6}	ɳʈɔ^{6}	-	-	-	-
4. to track *ndro^{C}	-	ɳɑŋ^{6}	ɳʈɔ^{6}	-	-	-	-
5. young man *ndrɻei^{C}	ɳo^{6}	-	ɳʈau^{6}	ɳʈo^{6}	ɳʈʂu^{C}	ɳʈʃĭ^{6}	-
6. 摘 to strip leaves *ndrɻei^{C}	ɳu^{4}	ɳei^{4}	-	ŋko^{4}	ɳʈʂu^{B}	-	-

Notes

4. White Hmong *nrog* means ‘to accompany; with’ (‘to track’ > ‘to follow’ > ‘to accompany’ > ‘with’).

*2.53 *hnr-*

PHM *hnr-	1	2	3	4	5	6	7	8	9	10	11
1. seed *hnrɻem	ɳ̊hu^{1}	ɳu^{1}	nɔŋ^{1}	ɳaŋ^{1a}	ŋ̊o^{A}	nwaŋ^{1}	ɳõ^{1}	ɳem^{1}	ŋjim$^{1'}$	ŋ̊jɛn^{1}	num^{1}
2. cooked rice *hnrəaŋH	-	-	hŋ̊ɔ^{5}	ŋɔ^{5b}	-	-	-	na:ŋ^{5}	naŋ$^{5'}$	ŋ̊aŋ^{5}	nɔŋ^{5}

Notes

1. Downer (1973) noted the similarity between this word and Cantonese /ŋan/ ‘seed’.
2. Possibly from Chinese 饟 ‘bring food to workers in the field’ > ‘food brought to workers in the field’ (OC *ŋ̊aŋ(ʔ)-s > MC syangH > Man. *xiǎng*).

*2.55 *ʔr-*

PHM *ʔr-	1	2	3	4	5	6	7	8	9	10	11
1. stone *-ʔrəu	ɣi^{1}	ʐɯ^{1}	ʐe^{1}	ʐæ^{1a}	ʔwji^{A}	ŋkja^{1}	jo^{1}	gau^{1}	gjau^{1}	lau^{1}	dzu^{1}
2. tender *ʔrəunH	ɣaŋ^{5}	ʐɑŋ^{5}	-	-	-	ɳʈʃoŋ^{5}	-	gun$^{5'}$	-	lun^{5}	in^{5}
3. good *-ʔrɔŋH	ɣu^{5}	ʐu^{5}	ʐɔŋ^{5}	ʐaŋ^{5a}	ʔwjoŋ^{C}	ŋwaŋ^{5}	jɔ̃^{5}	gwəŋ$^{5'}$	gɔŋ^{5}	lɔŋ^{5}	dzɔŋ^{5}
4. vegetable *ʔræi	ɣu^{1}	ʐei^{1}	ʐau^{1}	ʐɔ^{1a}	ʔwju^{A}	ji^{1}	ɦji^{1}	gai^{1}	gjai^{1}	lai^{1}	ɛi^{1}

PH *ʔr-	1	2	3	4	5	6	7
5. to dry in sun *ʔrin^{A}	-	-	ʐia^{1}	ʐæin^{1a}	-	-	-
6. honey *ʔra^{A}	va^{1}	-	ʐi^{1}	ʐɪ^{1a}	ʔwja^{A}	-	-
7. forest *-ʔrɔŋ^{B}	ɣu^{3}	ʐu^{3}	ʐɔŋ^{3}	-	ʔwjoŋ^{B}	ŋkjɔŋ^{3}	jɔ̃^{3}

8. to look after *ʔro^{B}	ɣə^{3}	-	ʐɔ^{3}	ʐo^{3a}	ʔwju^{B}	-	-
9. near *-ʔræw^{C}	ɣi^{5}	ʐɯ^{5}	ʐe^{5}	ʐæ^{5a}	ʔwji^{C}	ŋkja^{5}	jo^{5}
10. to conceal *ʔre^{D}	ɣi^{7}	ʐɑ^{7}	ʐai^{7}	ʐe^{7a}	ʔwje^{D}	vwei^{7}	ɛ^{7}

PM *ʔr-	8	9	10	11
11. clothes *ʔruj^{A}	gui^{1}	gui^{1}	lwəi^{1}	-

Discussion

The *r- initials 2.55, 2.56, 2.57 are historially very interesting, and the interpretation of the patterns is challenging. On the basis of prenasalized velar stops in Jiongnai (6), Wang and Mao reasonably reconstruct clusters with velar stops for this series: *ŋkl- , *ŋkhl- , *ŋgl- . In this reconstruction, following the pattern of other correspondence sets where there is evidence for loosely-adjoined initial material, this material has not been explicitly reconstructed. But unlike the case of Hmong-Mien *-bɔuX ‘hand/arm’ above (1.3/3), the evidence does not point to a variety of prefixes which have obscured the original onset correspondence in the root syllable, since in every case the Jiongnai forms point to an ancient dorsal (the velar initials in Mienic are a secondary development of the original liquid). Reasonable alternate reconstructions would be *K-r-, *Kh-r, *G-r-.

Notes

1. Also ‘grindstone’ in White Hmong.
4. Perhaps Chinese 卉 ‘herbs, vegetation’ (MC xjwɨjH > Man. *hui*). See correspondence to ‘to conceal’, this set.
7. Jiongnai (6) from Mao and Li 2001.
10. Perhaps Chinese 諱 ‘taboo; to conceal’ (MC xjwɨjH > Man. *hui*). See correspondence to ‘vegetable’, this set.

*2.56 *hr-*

PHM *hr-	1	2	3	4	5	6	7	8	9	10	11
1. liver *-hrɻən	xhi^{1}	ʂɛ^{1}	ʂia^{1}	ʐæin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	hĩ^{1}	gan^{1}	gjen$^{1'}$	łan^{1}	-
2. high/tall *-hrɻəŋ	xhi^{1}	ʂɛ^{1}	ʂia^{1}	ʐæin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	hĩ^{1}	gaŋ^{1}	gjaŋ$^{1'}$	łaŋ^{1}	dzɔŋ^{1}

PH *hr-	1	2	3	4	5	6	7
3. sound/noise *-hru^{A}	xhə^{1}	ʂo^{1}	ʂua^{1}	ʐɑ^{1b}	sa^{A}	ŋkjeu$^{1'}$	saŋ^{1}
4. fern *-hru^{A}	xhə^{1}	ʂo^{1}	ʂua^{1}	ʐɑ^{1b}	sa^{A}	ŋkjeu$^{1'}$	-
5. artemisia *hrɛŋ^{B}	xhi^{3}	-	-	ʐoŋ^{3b}	saŋ^{B}	-	-
6. quick *hre^{C}	xhi^{5}	ʂɑŋ^{5}	ʂai^{5}	-	se^{C}	ɣwei^{5}	-
7. to write *hrɻei^{C}	xho^{5}	ʂei^{5}	ʂau^{5}	ʐɔ^{5b}	-	-	-

PM *hr-	8	9	10	11
8. to measure (rice) *hrau^{A}	ga:u^{1}	ga:u$^{1'}$	ła^{1}	dzau^{1}
9. 鐵 iron *hrɛk^{D}	gja^{7}	gja$^{7'}$	łja^{7}	ljɛ^{7}

Discussion

See discussion of this series under 2.55.

Notes

7. Compare Chinese 鏤 'to incise' (OC *[r]ˤo-s > MC luwH > Man. *lòu*).
9. See Hmongic *hluw^{C} 'iron' (2.41/9). These were borrowed independently from Old Chinese *l̥ˤik.

*2.57 *r-*

PHM *r-	1	2	3	4	5	6	7	8	9	10	11
1. nest *-rəuX	ɣi^{4}	ʐɯ^{4}	ʐɐ^{4}	ʐɐ^{4}	wjɨ^{B}	ŋkja^{4}	-	gau^{4}	gjau^{4}	la^{4}	-
2. urine *-raX	va^{4}	ʐɑ^{4}	ʐɨ^{4}	ʐɨ^{4}	wja^{B}	ŋkwe^{4}	ve^{4}	wa^{4}	va^{4}	lɔ^{4}	vjɛ^{4}
3. pangolin *rɔiH	ɣo^{6}	ʐɔ^{6}	ʐau^{6}	ʐo^{6}	wjoŋ^{A}	-	ɦje^{6}	gai^{6}	gjai^{6}	-	-
4. sharp *-rajH	ɣa^{6}	ʐɑ^{6}	ʐua^{6}	-	wja^{C}	ŋkja^{6}	-	gai^{6}	gjai^{6}	lai^{6}	hɛi^{6}
5. 龍 dragon *-roŋ	ɣoŋ^{2}	ʐoŋ^{2}	ʐa^{2}	ʐaŋ^{2}	wjoŋ^{A}	ŋkjaŋ^{2}	jõ^{2}	-	-	ljuŋ^{2}	luŋ^{2}
6. 梨 pear *rəj	ɣa^{2}	ʐɑ^{2}	-	ʐa^{2}	wja^{A}	-	ɦje^{2}	gei^{2}	gei^{4}	lai^{2}	dzai^{2}
7. 里 village *rəŋX	ɣaŋ^{4}	ʐɑŋ^{4}	ʐɔ^{4}	ʐoŋ^{4}	wjo^{B}	-	-	gaŋ^{4}	gjaŋ^{4}	laŋ^{4}	dzɔŋ^{4}
8. 廩 barn/granary *rɛmX	-	ʐɐ^{4}	-	ʐoŋ^{4}	wjaŋ^{B}	-	-	gam^{4}	gjam^{4}	lan^{4}	dzum^{4}
9. 力 strength *-rək	ɣə^{6}	ʐo^{6}	ʐɔ^{6}	ʐu^{6}	wju^{C}	ŋkjeu^{6}	ja^{6}	[kha^{7}	-	khla^{7}]	dzja^{6}

PH *r-	1	2	3	4	5	6	7
10. comb *ræ^{C}	ɣa^{6}	ʐa^{6}	ʐua^{6}	ʐəa^{6}	wjɨ^{C}	vi^{6}	ɦji^{6}
11. grind (grain) *ro^{D}	-	ʐo^{8}	ʐɔ^{8}	ʐo^{8}	wju^{D}	-	-

PM *r-	8	9	10	11
12. pair *reŋ^{C}	-	ge:ŋ^{6}	lɛ^{6}	dzaŋ^{6}
13. 淋 to water *rəm^{A}	gjem^{2}	-	ljen^{2}	dzum^{2}
14. 流 to flow rɨ̂əu^{C}	gjeu^{6}	gjɔu^{6}	ljɔu^{6}	-
15. 立 to erect rɨ̂ɛp^{D}	gjep^{8}	gjap^{8}	-	-
16. 笠 bamboo hat rəp^{D}	gap^{8}	gjap^{8}	łan^{8}	dzup^{8}

Discussion

See discussion of this series under 2.55.

Notes

2. Although the initials in Mien (8) and Mun (9) are irregular, it is not clear that a different initial should be reconstructed for this word.
6. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
9. Xiangnan Mien (Wang and Mao 16) has been substituted for Luoxiang Mien (8). The preinitial element in 'strength' must have been aspirated, unlike the other preinitial elements in this set, to account for the upper register Mien and Biao Min forms (M *khləkD, 5.32/7).
13 & 14. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).

3. Dental affricates

*3.1 *ts-*

PHM *ts-	1	2	3	4	5	6	7	8	9	10	11
1. 竈 stove *N-tsoH	so^{5}	-	tsɔ^{7}	so^{5b}	-	tsu^{7}	tɕɔ^{1}	do$^{5'}$	du^{5}	tsu^{5}	tɔu^{5}
2. 接 to receive/ borrow *tsep	sei^{7}	-	tsai^{7}	se^{7a}	tse^{D}	tʃei^{7}	-	-	tθip^{7}	tɕin^{7}	tɛp^{7}

PH *ts-	1	2	3	4	5	6	7
3. billhook *tsæ^{C}	sa^{5}	-	tsua^{7}	sa^{7a}	tsi^{C}	-	-
4. to join *tsæ^{D}	sen^{7}	tshɑ^{7}	tsua^{7}	sa^{7a}	-	-	-
5. 騣 mane *tsɯŋ^{A}	soŋ^{1}	tsoŋ^{3}	tsɔŋ^{1}	saŋ^{1a}	pjoŋ^{A}	-	-

PM *ts-	8	9	10	11
6. grave/tomb *tsou^{B}	θou^{3}	tθɔu^{3}	tsəu^{3}	-
7. to dry (clothes) *tsek^{D}	-	si^{7}	tɕi^{7}	tsaŋ^{1}
8. bland/tasteless *tsam^{B}	θa:m^{3}	tθa:m^{3}	tsan^{3}	tɔm^{3}
9. 隻 CLF-birds *tsi̯ɛk^{D}	-	sa$^{7'}$	ʇa^{7}	tsa^{7}
10. 識 to know/ recognize *tsi̯ɛk^{D}	-	sa^{1}	ʇa^{7}	tsa^{7}
11. 織 to weave *tsi̯ɛk^{D}	tɕa^{7}	sa^{7}	ʇa^{7}	-

Discussion

There are many Chinese loanwords in this series. Once all the etymologies have been thoroughly researched, it may be possible to assign dental affricates to the "loan phonology" component of the inventory.

Notes

1. Since irregular, probably borrowed at different times.
3. A 'billhook' is a tool with a curved blade used for heavy cutting work.
8. From an Early Min word that means 'tasteless, insipid' (/tsjäm/ in the Jíyùn dictionary: Norman 1988:232).

*3.2 *tsh-*

PHM *tsh-	1	2	3	4	5	6	7	8	9	10	11
1. bone *tshuŋX	shoŋ^{3}	soŋ^{3}	tsha^{5}	saŋ^{3b}	tshoŋ^{B}	θɐŋ^{3}	sõ^{3}	θuŋ^{3}	tθuŋ^{3}	swə^{3}	hiŋ^{3}
2. 瘡 sore/boil/blister *tshaŋ	shaŋ^{1}	-	tsha^{1}	sua^{1b}	tshen^{A}	-	-	-	-	saŋ^{1}	-
3. 千 thousand *tshi̯en	shaŋ^{1}	tshɛ^{1}	tshia^{1}	tɕein^{1b}	tshen^{A}	ʃen^{1}	ɕɛ^{5}	θin^{1}	tin$^{1'}$	tɕhin^{1}	hun^{1}

PH *tsh-	1	2	3	4	5	6	7
4. steel *tshæw^{A}	sha^{1}	sɯ^{1}	-	sæ^{1b}	-	-	tɕo^{1}
5. husked rice/millet *tshɛŋ^{B}	shɛ^{3}	se^{3}	tshu^{3}	soŋ^{3b}	tshaŋ^{B}	-	-
6. tin *tshæ^{D}	-	-	tshua^{7}	sa^{7b}	-	-	-

Notes

6. In White Hmong, ‘lead metal’.

*3.3 *dz-*

PHM *dz-	1	2	3	4	5	6	7	8	9	10	11
1. 錢 money *dzi̯en	saŋ^{2}	-	tsia^{2}	sæin^{2}	zen^{A}	ʃiŋ^{2}	tɕĩ^{2}	θin^{2}	tθin^{2}	tsən^{2}	hɛn^{2}
2. 匠 craftsman *dzi̯ɔŋH	ɕaŋ^{6}	tɕɑŋ^{6}	-	saŋ^{6}	zaŋ^{C}	-	-	θɛŋ^{6}	tθa:ŋ^{6}	tsaŋ^{6}	-
3. 漬 to soak *dzeiH	-	-	-	-	-	-	tɕi^{6}	θei^{6}	tθei^{6}	-	hɛi^{6}
4. 鑿 chisel *dzəuk	so^{6}	-	tsau^{6}	so^{6}	zu^{C}	ʃu^{8}	tɕĩ^{4}	θu^{8}	tθu^{6}	tshu^{8}	hiu^{8}

PH *dz-	1	2	3	4	5	6	7
5. able *dzow^{A}	su^{2}	-	tsaɯ^{2}	sə^{2}	-	-	-
6. cool (water) *dzin^{B}	sei^{4}	tsɛ^{4}	tsia^{4}	sein^{4}	-	ʧai^{4}	tɕĩ^{4}
7. 慚 ashamed *dzaŋ^{A}	-	tsei^{2}	tsa^{2}	sua^{2}	zen^{A}	-	tɕe^{2}
8. 造 to reach/arrive at *dzo^{C}	so^{6}	-	tsɔ^{6}	-	zu^{C}	-	θu^{5}

PM *dz-	8	9	10	11
9. firewood *dzaŋ^{A}	θa:ŋ^{2}	tθa:ŋ^{2}	tsaŋ^{2}	hɔŋ^{2}
10. 槽 trough *dzu^{A}	θou^{2}	-	tsu^{2}	-
11. 坐 to sit *dzu̯ei^{B}	θwei^{4}	tθei^{4}	tswei^{4}	hɛi^{4}
12. 緻 beautiful *dzej^{C}	-	-	tsəi^{6}	-

Notes

9. Downer (1973:21) says this is a loanword from Chinese 柴 ‘firewood’ (MC dzrɛ > Man. *chái*), one of a number that show a relationship between final -i or -u in Middle Chinese and final -ŋ in Mien.

12. Other Mienic forms for ‘beautiful’ have voiced initials, so this word probably had a voiced pre-initial.

*3.4 *nts-*

PHM *nts-	1	2	3	4	5	6	7	8	9	10	11
1. 早 early *ntsi̯ouX	so^{3}	ntso^{3}	ntsɔ^{3}	ntso^{3a}	nʔtsu^{B}	ɳʧu^{3}	ɳo^{3}	dju̯eu^{3}	gi̯ɔu^{3}	dji̯əu^{3}	du^{3}
2. 澡 wash (hands) *ntsæwX	sa^{3}	ntsa^{3}	ntsua^{3}	ntsa^{3a}	nʔtsi^{B}	ɳʧei^{3}	ɳe^{3}	da:u^{5}	da:u$^{5'}$	dza^{3}	dɔu^{3}

PH *nts-	1	2	3	4	5	6	7
3. husked rice *ntsuw^{C}	-	ntsɔ^{5}	-	-	-	ɳʧei^{5}	ɳɯ^{5}
4. grave/tomb *ntsaŋ^{C}	saŋ^{5}	ntsei^{5}	ntsa^{5}	ntsua^{5a}	-	-	ɳe^{5}
5. to suck *ntse^{D}	-	-	ntsai^{7}	-	-	-	-

PM *ʔdz- (<*nts-)	8	9	10	11
6. boat/ship *ʔdzaŋ^{B}	da:ŋ^{3}	da:ŋ^{3}	dzaŋ^{3}	dɔŋ^{3}
7. 騸 mane *ʔdzɔŋ^{A}	θoŋ^{1}	dɔŋ^{1}	tsɔŋ^{1}	dzəŋ^{1}

Notes

4. In Yanghao (1), 'to store a body before burial' (Wang 1994).
5. This word is also found in West Hmongic Shimen /ntsai^{7}/, Gaopo /nze^{7}/, and Fengxiang /zɛ^{7}/ (Wang and Mao 4, 6, 9).

*3.5 *ntsh-*

PHM *ntsh-	1	2	3	4	5	6	7	8	9	10	11
1. to launder *ntshuH	sho^{5}	ntsho^{5}	ntshua^{5}	ntsa^{5b}	nʔtsha^{C}	ɳʈʃu^{5}	ɳ̊o^{5}	do^{5}	du$^{5'}$	dzu^{5}	du^{5}

PH *ntsh-	1	2	3	4	5	6	7
2. clean *ntshɨ^{A}	sha^{1}	ntsha^{1}	-	ntsei^{1b}	nʔtshe^{A}	θei^{1}	-
3. rough/coarse *ntsha^{A}	sha^{1}	ntshɑ^{1}	ntshi^{1}	ntsi^{1b}	nʔtsha^{A}	-	-
4. steep *ntshoŋ^{A}	shoŋ^{1}	ntshoŋ^{1}	ntsha^{1}	ntsaŋ^{1b}	nʔtshoŋ^{A}	ɳʈʃɐŋ^{3}	-
5. elephant *ntshɯ^{C}	shɛ^{5}	-	ntshɯ^{5}	-	nʔtshu^{C}	-	-

PM *dzh- (<*ntsh-)	8	9	10	11
6. to disperse *dzhan^{C}	da:n^{5}	da:n$^{5'}$	dzan^{5}	-

Notes

1. In White Hmong, 'to scrub'.
3. Compare Chinese 粗 'coarse' (OC *s.[r̥]ˤa > MC tshu > Man. *cū*).

*3.6 *ndz-*

PHM *ndz-	1	2	3	4	5	6	7	8	9	10	11
1. to play *N-dzæwH	-	tsa^{4}	-	-	-	-	-	dzja:u^{6}	dza:u^{6}	dza^{6}	-

PH *ndz-	1	2	3	4	5	6	7
2. thin (person) *ndzu̥ei^{C}	su^{5}	ntsei^{5}	ntsau^{6}	ntso^{6}	-	ɳʈʃe^{6}	nʑi^{6}

PM *ndz-	8	9	10	11
3. root *ndzuŋ^{A}	duŋ^{2}	du:ŋ^{2}	-	-
4. word/character *ndzaŋ^{C}	-	daŋ^{6}	dzaŋ^{6}	-
5. 齹 salty *ndzai^{A}	da:i^{2}	da:i^{2}	dza^{2}	dɔi^{2}
6. 淨 clean *ndzəŋ^{C}	daŋ^{6}	dðaŋ^{6}	-	-

Notes

1. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
3. In Jiangdi Mien and Xiangnan Mien (Wang and Mao 15 & 16), the initial is dz- . This may be related to Hmongic *ɟoŋ^{A} 'root' (4.3/28), but if so, there must have been a pre-initial that caused voicing in Mienic (the Hmongic onset is not prenasalized).

4. This is probably from Chinese 字 'word, character' (OC *Cə-[dz]ə-s > MC dziH > Man. *zì*), despite the difference in rime. Downer (1973:21) cites this as one of a number of examples where Middle Chinese -i or -u corresponds to Mienic -ŋ.
6. In Jiangdi Mien and Xiangnan Mien (Wang and Mao 15 & 16), the initial is dz- .

*3.16 *tsj-*

PHM *tsj-	1	2	3	4	5	6	7	8	9	10	11
1. gall bladder *tsjɻəu	ɕen^{1}	tɕi^{1}	tʂi^{1}	sei^{1a}	tse^{A}	-	tɕe^{1}	-	-	-	tɛu^{1}
2. malodorous *tsjɻeiH	-	tɕə^{5}	tʂɯ^{5}	sou^{5a}	tsu^{C}	tʃau^{5}	tɕɔ^{5}	θwei$^{5'}$	tθei^{5}	tswəi^{5}	ti^{5}
3. 甑 rice steamer *tsjɛŋH	ɕi^{5}	tɕe^{5}	tʂu^{5}	soŋ^{5a}	tsaŋ^{C}	tʃjaŋ^{5}	tɕɔ̃^{1}	θaŋ$^{5'}$	tθaŋ^{5}	tsaŋ^{5}	taŋ^{5}

PH *tsj-	1	2	3	4	5	6	7
4. what *tsjɨ^{B}	ɕi^{3}	-	tʂi^{5}	si^{7b}	tsi^{B}	-	-
5. to let go *tsjəŋ^{C}	ɕaŋ^{5}	tɕɑŋ^{5}	tʂɔ^{5}	-	-	-	tɕõ^{5}
6. armpit *tsjo$^{C/D}$	ɕə^{5}	tɕo^{5}	tʂɔ^{7}	so^{7a}	tsu^{C}	-	tɕa^{5}
7. pheasant *tsjow^{D}	-	-	tʂaɯ^{7}	sə^{7a}	-	-	-
8. 祖 tiger *tsjo^{B}	ɕə^{3}	tɕo^{3}	tʂɔ^{3}	so^{3a}	tsu^{B}	tʃu^{3}	-

Notes

8. This is a borrowing from Chinese 祖 'ancestor' (MC tsuX > Man. *zǔ*). There is a custom in Southeast Asia of addressing the tiger as one's grandfather or ancestor (Wessing 1986).

*3.17 *tshj-*

PHM *tshj-	1	2	3	4	5	6	7	8	9	10	11
1. hungry *tshje	-	ɕi^{1}	tʂhai^{1}	se^{1b}	tshe^{A}	-	sa^{1}	ɕa^{1}	sa$^{1'}$	-	-
2. new *tshjɻəŋ	xhi^{1}	ɕɛ^{1}	tʂhia^{1}	sæin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	sĩ^{1}	ɕaŋ^{2}	saŋ^{2}	saŋ^{1}	sjaŋ^{1}
3. ashes *tshjɻəiX	ɕhu^{3}	ɕi^{3}	tʂhau^{3}	sɔ^{3b}	tshu^{B}	θe^{3}	ɕi^{3}	ɕwai^{3}	sa:i^{3}	swai^{3}	sɔi^{3}

PH *tshj-	1	2	3	4	5	6	7
4. spinning wheel *tshjɻa^{A}	-	-	tʂhua^{1}	-	tsha^{A}	-	-
5. to sieve *tshjɔ^{C}	-	ɕɔ^{5}	tʂhau^{5}	-	-	-	-

Notes

2. The velar initial in Jiongnai (6) is not figured into the reconstruction of this onset. It may reflect more than the absorption of a prefix, however; see initial 2.55 ff., where a prenasalized velar is the regular reflex of the *rj- series in Jiongnai. This may be from a variant of Chinese 清 'clear' (OC *N-s-r̥eŋ > MC tshjeng > Man. *qīng*), given its close resemblance to pre-nasalized *ntshjɻəŋ 'clear' (3.20/18); see chapter 4.
3. Chinese 灰 'ashes' (MC xwoj > Man. *huī*) has a very different onset and a different tone, but the rime corresponds.
4. The meaning of this word in White Hmong is 'machine'. It is probably from Chinese 車 'cart, chariot, thing with wheel' (MC tsyhæ > Man. *chē*).

*3.18 *dzj-*

PHM *dzj-	1	2	3	4	5	6	7	8	9	10	11
1. few/lack *dzjok	ɕu^{6}	-	tʂaɯ^{6}	-	zo^{C}	ʃau^{6}	tɕɤ^{6}	θo^{8}	tθɔ^{6}	tshɔ^{8}	hu^{8}
2. porcupine *N-dzjeiH	ɕen^{6}	tɕi^{6}	tʂau^{6}	so^{6}	zu^{C}	ʃa^{6}	tɕi^{6}	dei^{6}	dei^{6}	-	hɛi^{6}

PH *dzj-	1	2	3	4	5	6	7
3. bland/tasteless *dzjæ^{C}	ɕen^{6}	-	tʂua^{6}	sɔa^{6}	zi^{C}	ʃi^{6}	tɕi^{6}
4. chin/lower jaw *dzje^{D}	ɕi^{1}	tɕɑ^{8}	tʂai^{8}	se^{8}	ze^{D}	-	-
5. to wake *dzja^{D}	-	-	tʂi^{8}	si^{8}	za^{D}	-	tɕi^{8}

Notes

3. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).

*3.19 *ntsj-*

PHM *ntsj-	1	2	3	4	5	6	7	8	9	10	11
1. salt *ntsjəuX	ɕi^{3}	ɳ̊tɕɯ^{3}	ɳtʂe^{3}	ntsæ^{3a}	nʔtsi^{B}	-	ŋo^{3}	dau^{3}	dau^{3}	dza^{3}	-
2. to choke *ntsjeŋH	-	-	-	-	-	ɳtʃei^{5}	ni^{5}	dʑɛ:ŋ^{5}	-	dʑɛ^{5}	jaŋ^{5}
3. to stop up/plug *ntsjot	-	ntshu^{7}	ɳtʂauɯ^{7}	ntsɔu^{5a}	nʔtsu^{D}	ɳtʃau^{7}	sɔ^{7}	tsot^{7}	-	-	-
4. 眨 to wink *ntsjep	shei^{7}	-	ɳtʂai^{7}	ntse^{7}	nʔtse^{D}	-	ta^{7}	dzjop^{7}	-	hin^{7}	-

PH *ntsj-	1	2	3	4	5	6	7
5. to drive in (nail) *ntsjin^{C}	-	ɳ̊tɕɛ^{5}	ɳtʂia^{5}	-	nʔtsen^{C}	-	ni^{5}
6. to soak *ntsjæw^{C}	-	ɳ̊tɕɯ^{5}	ɳtʂe^{5}	ntsæ^{5a}	nʔtsi^{C}	ɳtʃa^{5}	ɳ̊tɕo^{5}
7. sorghum *ntsju^{C}	-	-	ɳtʂua^{7}	ntsa^{7a}	-	-	-
8. 叕 sharp *ntsjæw^{C}	-	-	ɳtʂe^{5}	ntsæ^{5a}	-	-	-

Notes

2. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
3. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Compare Cantonese /tsat/, Hainan Mun /tjat^{7}/ 'to plug (a hole)'.
4. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
6. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
7. Upon inspection of more cognates, it becomes clear that tone 7 in these two forms for 'sorghum' are tone sandhi forms derived from tone 5.
8. Probably from Chinese 叕 'sharp-cutting' (OC *[ts^{h}]rək > MC tsrhik > Man. *cè*), given the parallel correspondence between Hmongic *ndzjæwC 'vertical/upright' (3.21/3) and Chinese 直 'straight/vertical' (OC *N-t<r>ək > MC drik > Man. *zhí*).

*3.20 *ntshj-*

PHM *ntshj-	1	2	3	4	5	6	7	8	9	10	11
1. blood *ntshjamX	ɕhaŋ^{3}	ɳ̊tɕhi^{3}	ɳtʂha^{3}	ntsua^{3b}	nʔtshen^{B}	θi^{3}	ŋ̊e^{3}	ɕam^{3}	sa:m^{3}	san^{3}	dzjɛm^{3}
2. head louse *ntshjeiX	ɕhu^{3}	ɳ̊tɕhi^{3}	ɳtʂhau^{3}	ntsɔ^{3b}	nʔtshu^{B}	-	tɕ̊hi^{3}	ɕei^{3}	tθei^{3}	-	dzɛi^{3}
3. to fear/be afraid *ntshjeH	ɕhi^{1}	ɳ̊tɕha^{5}	ɳtʂhai^{5}	ntse^{5b}	nʔtshe^{C}	ɳtʃei^{1}	ŋ̊ɛ^{5}	dʑa^{5}	ɖ̊a$^{5'}$	ɖ̊a^{5}	dzjɛ^{5}
4. 清 clear *ntshjiəŋ	ɕhi^{1}	-	ɳtʂhia^{1}	ntsæin^{1b}	nʔtshe^{A}	-	nĩ^{1}	dzaŋ^{1}	-	-	-

PH *ntshj-	1	2	3	4	5	6	7
5. otter *ntshjɥa^{A}	ɕha^{1}	ɳ̊tɕhɑ^{1}	ɳtʂhua^{1}	ntsa^{1b}	nʔtsha^{A}	θja^{1}	-

Notes

1. Compare Mon-Khmer *jhaam ‘blood’ (Shorto #1430).
2. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
4. Xiangnan Mien (Wang and Mao 16) has been substituted for Luoxiang Mien (8). This may also have been borrowed as Hmong-Mien *tshjɻəŋ ‘new’ (3.17/18); see chapter 4.

*3.21 *ndzj-*

PH *ndzj-	1	2	3	4	5	6	7
1. to stumble *ndzjow^{D}	-	-	-	-	-	-	-
2. 直 vertical/upright *ndzjæw^{C}	-	-	ɳʈʂe^{6}	-	-	-	-

Notes

1. This word is only represented by two West Hmongic languages in Wang 1994: Xianjin /ɳʈʂeu^{8}/ and Shimen /ɳdzɦey^{8II}/.
2. This word is only represented by two other West Hmongic languages in Wang 1994: Xianjin /ɳʈʂe^{6}/ and Shimen /ɳdzɐ^{6II}/.

4. Palatals

*4.1 *c-*

PHM *c-	1	2	3	4	5	6	7	8	9	10	11
1. beeswax *N-cia̯ŋ	tɕaŋ^{1}	tɕi^{1}	cia^{1}	tɕua^{1a}	tɕen^{A}	-	-	-	-	ʤjɛ^{1}	-
2. earthworm *N-cuŋ	tɕoŋ^{1}	coŋ^{1}	ca^{1}	tɕaŋ^{1a}	tɕoŋ^{A}	jɐŋ^{1}	jõ^{1}	duŋ^{1}	-	hwjə^{1}	dziŋ^{1}
3. wind *N-cæwH	tɕen^{5}	ci^{5}	cua^{5}	-	tɕi^{C}	ʧĩ^{5}	tɕi^{5}	ʤau^{5}	ɖa̯:u^{5}	hja^{5}	dzau^{5}
4. 捷 quick *cu̯ɛp	-	-	-	-	-	-	tɕe^{7}	tɕep^{7}	-	-	-

PH *c-	1	2	3	4	5	6	7
5. to lead *coŋ^{A}	-	tɕoŋ^{1}	ca^{1}	tɕaŋ^{1a}	tɕoŋ^{A}	-	-
6. thrush (*huà méi niǎo*) *cɔŋ^{A}	tɕu^{1}	tɕu^{1}	cɔŋ^{1}	tɕaŋ^{1a}	tɕoŋ^{A}	ʧwaŋ^{1}	tɕɔ̃^{1}
7. to trap/ensnare *cu^{A}	-	-	cua^{1}	tɕæ^{1a}	tɕa^{A}	-	-
8. body/trunk *cæw^{B}	tɕi^{3}	tɕɯ^{3}	ce^{3}	tɕæ^{3a}	tɕi^{B}	-	-
9. to carry on shoulder *cæw^{C}	tɕi^{5}	-	-	tɕæ^{5a}	-	-	-
10. 酒 liquor *cow^{B}	tɕu^{3}	tɕɯ^{3}	caɯ^{3}	tɕə^{3a}	tɕo^{B}	ʧau^{3}	tɕɤ^{3}
11. 炙 to bake/toast *ci^{C}	tɕen^{5}	-	ci^{5}	tɕi^{5a}	tɕi^{C}	-	-
12. 嚼 to chew *cu̯a^{C}	tɕu^{5}	ca^{5}	cua^{5}	tɕa^{5a}	tɕa^{C}	ʧa^{5}	tɕa^{5}

PM *c-	8	9	10	11
13. crop (of bird) /gizzard *ciŋ^{B}	tɕiŋ^{3}	ɖi̯ŋ^{3}	-	-
14. to bark *cuŋ^{C}	tɕuŋ$^{5'}$	ʈuŋ^{5}	ɖ̯wə^{5}	-
15. 獐 deer *cuŋ^{A}	tɕuŋ^{1}	ʈu:ŋ^{1}	-	-

Discussion

In this series most of the Hmongic languages have palatal affricates and some Mienic languages have velar stops. Since palatal stops tend to be released with some degree of friction given the wide area of contact between the tongue and hard palate, the development from *c- to /tɕ-/ is quite natural (as is the development from *c- to /k-/, another way to resolve an unstable *c-). Developments of *tɕ- to either /c-/ or /k-/ would be more unusual.

Notes

3. Jiwei (2) is taken from Office of Miao-Yao Research Lexicon (1987).
8. This word appears to be morphologically related to Hmongic *ɲæw^{B} ‘leg/branch’ (4.3/3). The difference in initial voicing may have been due to a prefix; see chapter 4.
10. See Mienic *tiu^{B} (2.1/A), borrowed independently from the same word.
11. Morphologically related to Hmongic *ɲi^{C} ‘to burn/be alight’ (4.3/1); see chapter 4.
13. Downer (1973) gives Cantonese /khan/ ‘gizzard’ as the source of Mien /kien^{1}/, although this is not obviously the same word.

*4.2 *ch-*

PHM *ch-	1	2	3	4	5	6	7	8	9	10	11
1. 穿 to thread *chu̯en	tɕhaŋ^{1}	tɕhɑŋ^{1}	chɔ^{1}	tɕoŋ^{1b}	tɕhoŋ^{A}	tʃui^{1}	-	ɕwən^{1}	sen$^{1'}$	ʦhwən^{1}	tsui^{1}
2. 處 bed/place *chouH	tɕhu^{5}	-	chaɯ^{5}	-	tɕho^{C}	-	tɕhõ^{2}	ɕou^{5}	ʦɔu$^{5'}$	ʦhəu^{5}	fu^{5}

PH *ch-	1	2	3	4	5	6	7
3. to sweep *chæw^{A}	tɕhi^{1}	-	che^{1}	tɕæ^{1b}	tɕhi^{A}	-	-
4. belly *chu̯ei^{A}	tɕhu^{1}	tɕhi^{1}	chau^{1}	tɕɔ^{1b}	tɕhu^{A}	the^{1}	-
5. CLF-rooms *choŋ^{B}	tɕhoŋ^{3}	-	cha^{3}	tɕaŋ^{3b}	khoŋ^{B}	-	-
6. to peel/shave *che^{D}	-	-	chai^{7}	tɕe^{7b}	tɕhe^{D}	-	-

PM *ch-	8	9	10	11
7. 炒 to fry *chau^{B}	ɕa:u^{3}	ʦa:u^{3}	ʦha^{3}	hau^{3}

Notes

2. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
3. Mienic *ʔɻæu^{C} ‘to sweep’ (4.4/3) has the same place of articulation and rime, but differs in tone and aspiration.
4. In White Hmong, cognate /chau^{1}/ means ‘to crawl on one’s belly’ (compare the verbal use of ‘belly’ in English: ‘to belly up to the table’).
5. This bears a very slight similarity to Chinese 間 ‘room’ (MC kɛŋ > Man. *jiān*).

*4.3 *ɻ-*

PHM *ɻ-	1	2	3	4	5	6	7	8	9	10	11
1. male(human) *ɻi̯aŋH	tɕaŋ^{6}	-	-	tɕua^{6}	-	ɳʧʃi^{6}	-	tɕaŋ^{2}	-	-	kjaŋ^{2}
2. knee *ɻu̯əiH	tɕu^{6}	tɕɔ^{6}	cau^{6}	tɕo^{6}	ʑu^{C}	-	tɕi^{6}	tɕwai^{6}	-	ʦwai^{6}	-
3. nine *N-ɻuə	tɕə^{2}	tɕo^{2}	cua^{2}	tɕa^{2}	ʑa^{A}	ʧʃu^{2}	ko^{5}	du^{2}	du^{2}	ju^{2}	ku^{2}
4. 蕎 buckwheat *ɻæu	-	-	ce^{2}	tɕæ^{2}	ʑi^{A}	-	-	tɕou^{2}	-	ʦɔ^{4}	-
5. 茄 eggplant *ɻa	tɕa^{2}	-	-	tɕəa^{6}	-	-	-	tɕe^{2}	-	ʦa^{2}	kjɛ^{2}
6. 橋 bridge *ɻow	tɕu^{2}	-	chɔ^{2}	-	-	ʧʃi^{2}	tɕe^{6}	tɕou^{2}	ʦɔu^{2}	ʦəu^{2}	ku^{2}
7. 騎 to ride *ɻej	tɕi^{2}	-	cai^{2}	tɕe^{2}	ʑe^{A}	ʧʃei^{2}	tɕhi^{2}	tɕei^{2}	ʦei^{2}	ʦi^{2}	ki^{2}

PH *ɻ-	1	2	3	4	5	6	7
8. alive *ɻin^{A}	-	-	cia^{2}	tɕein^{2}	ʑi^{A}	-	-
9. root *ɻoŋ^{A}	tɕoŋ^{2}	tɕoŋ^{2}	ca^{6}	tɕaŋ^{6}	ʑoŋ^{A}	-	kõ^{2}
10. to finish *ɻɔŋ^{B}	tɕu^{4}	tɕu^{4}	-	tɕəŋ^{4}	-	-	-
11. to grow (TR) *ɻi^{B}	tɕen^{4}	-	-	-	ʑe^{B}	tei^{4}	-
12. leg/branch *ɻæw^{B}	tɕi^{4}	kɯ^{4}	ce^{6}	tɕe^{4}	ʑa^{B}	-	-
13. to meet *ɻu̯a^{C}	tɕa^{6}	-	cua^{6}	tɕəa^{6}	ʑa^{C}	-	-
14. to plant *ɻəŋ^{C}	-	tɕɑŋ^{6}	cɔ^{6}	tɕoŋ^{6}	-	-	-
15. 臼 mortar/treadmill *ɻo^{B}	tɕə^{4}	tɕo^{4}	cɔ^{4}	tɕu^{4}	ʑi^{B}	-	-
16. 炙 to burn/be alight *ɻi^{C}	tɕen^{6}	-	ci^{6}	tɕi^{6}	ʑe^{C}	-	-

PM *ɻ-	8	9	10	11
17. 茶 tea *ɻa^{A}	tɕa^{2}	ʦa^{2}	ʦa^{2}	ta^{2}
18. 韭 Allium *ɻiu^{B}	tɕiu^{4}	-	-	kiu^{4}

Notes

1. In White Hmong, the cognate may be /ca^{6}/ in the phrase *ob cag* /ʔɔ^{1} ca^{6}/ ‘others’.
3. Benedict (1987a:14) attributed the voiced initial in Hmong-Mien ‘nine’ to a Tibeto-Burman coronal prefix (*d-kəw). The use of a pre-element *N- here, as elsewhere in the reconstruction, does not account for the earliest voicing of the root initial; a voiced initial must be reconstructed for Proto Hmong-Mien to account for the lower-register tone. *N- merely indicates the loose adjunction of something that voiced the initials in Mienic at some later point, after the early voicing contrast had been lost. This pre-initial element may have been something other than a nasal consonant.
4. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
5. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
7. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
9. This may be related to Mienic *ndzuŋ^{A} ‘root’ (3.6/28), but if so, there must have been a pre-initial that caused voicing in Mienic (the Hmongic initial is not prenasalized).
12. This word appears to be morphologically related to ‘body/trunk’ above: *cæw^{B} (4.1/3). The difference in initial voicing alone may have been due to a prefix; see chapter 4.
16. Morphologically related to Hmongic *ci^{C} ‘to bake/toast’ above (4.1/1); see chapter 4.
18. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*4.4 *ɲc-*

PHM *ɲc-	1	2	3	4	5	6	7	8	9	10	11
1. pillow *ɲcu̯əmH	-	ɳ̊tɕɯ^{5}	ɲcɔŋ^{5}	ɳ̊teaŋ^{5a}	ŋ̊ʔtɕoŋ^{C}	ntjoŋ^{5}	ɳ̊ɔ^{5}	dʑum^{6}	ɖ̊am^{5}	-	-
2. 竹 bamboo strip *ɲcəuk	tɕen^{5}	ɳ̊tɕɔ^{5}	ɲcau^{5}	ɳ̊tɕɔ^{5a}	-	ntjeu^{5}	-	dʑu^{7}	ɖ̊u^{7}	ɖ̊u^{7}	dziu^{7}

PH *ɲc-	1	2	3	4	5	6	7
3. to climb *ɲcæw^{C}	tɕi^{5}	ɳ̊tɕɯ^{5}	ɲce^{5}	ɳ̊tɕæ^{5a}	ŋ̊ʔtɕi^{C}	ntja^{5}	-
4. to remember *ɲco^{C}	-	-	ɲcɔ^{5}	ɳ̊tɕo^{5a}	ŋ̊ʔtɕu^{C}	-	-
5. to peck/dig *ɲcow^{D}	tɕu^{7}	ɳ̊tɕu^{7}	ɲcaɯ^{7}	ɳ̊tɕə^{7a}	ŋ̊ʔtɕo^{D}	-	tɕɔ^{1}
6. 正 straight *ɲcɻ̊aŋ^{A}	-	-	ɲca^{1}	ɳ̊teaŋ^{1a}	ŋ̊ʔteaŋ^{A}	ntjeu^{1}	-

PM *ʔɻ- (<*ɲc-)	8	9	10	11
7. thorn *ʔɻim^{B}	jim^{3}	ɖ̊im^{3}	-	-
8. to sweep *ʔɻæu^{C}	-	ɖ̊ɔu^{5}	-	-
9. 夾 to pick up *ʔɻəp^{D}	dʑap^{7}	-	kan^{7}	-

Notes

1. Perhaps from a C-tone variant of Chinese 枕 ‘pillow’ (OC *[t.q][ə]mʔ > MC tsyimX > Man. *zhěn*).
5. There is a similar word meaning ‘to peck’ in Mienic: Jiangdi Mien /dzo^{7}/ (Wang and Mao 15) and Xiangnan Mien /dzəu^{7}/ (Wang and Mao 16). However, the rimes do not correspond. The word is listed twice in Wang and Mao, once as ‘to peck’ and once as ‘to dig’ because in Yanghao (1) ‘to peck’ has tone 5 and ‘to dig’ has tone 7. The forms in all other locations with these meanings are identical, which suggests the differentiation is limited to Yanghao. It is also used in White Hmong to mean ‘to hoe/clean the ground’. Compare Chinese 撅 ‘to dig’ (OC *[g]ot > MC gjwot > Man. *jué*).

6. In White Hmong (3),'to straighten'. 'To be straight' in both this language and in Xianjin Hmong (Wang and Mao 3) is the same word with tone 2, indicating either a morphological contrast in Chinese (and borrowing of both forms) or an innovated morphological contast within the parent of these two closely-related languages: it is impossible to tell which is more likely (see chapter 4).
8. Hmongic *chæw^{A} 'to sweep' (4.2/3) has the same place of articulation and rime, but differs in tone and aspiration.
9. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*4.5 *ɲch-*

PHM *ɲch-	1	2	3	4	5	6	7	8	9	10	11
1. cooking smoke *ɲchi̤ouH	-	ŋ̊tɕho^{5}	ɲchɔ^{5}	ŋ̊tɕo^{5b}	ŋ̊ʔtɕhu^{B}	-	-	ɕeu^{5}	sɔu$^{5'}$	-	-

PH *ɲch-	1	2	3	4	5	6	7
2. to sprinkle/spill *ɲchu^{B}	-	ŋ̊tɕho^{3}	ɲchua^{3}	ŋ̊tɕa^{3b}	ŋ̊ʔtɕha^{B}	-	-

PM *ɟh (< *ɲch-)	8	9	10	11
3. ant *ɟhi̤əu^{B}	ɕeu^{3}	sɔu^{3}	sau^{3}	dziu^{3}

Notes

1. Also 'to emit smoke' or 'steam'.
2. Also 'to pour out'.

*4.6 *ɲɟ-*

PHM *ɲɟ-	1	2	3	4	5	6	7	8	9	10	11
1. mouth/beak *ɲɟuj	ŋ̊u^{2}	ŋ̊ɔ^{2}	ɲcau^{2}	ŋ̊tɕu^{2}	ŋ̊tɕo^{A}	ntjɔ^{2}	ŋ̊ʑɯ^{2}	dzuːi^{2}	-	tɕi^{2}	dzi^{2}
2. pillar *ɲɟæu	ŋ̊i^{2}	ŋ̊ɯ^{2}	ɲce^{2}	ŋ̊tɕæ^{2}	ŋ̊tɕi^{A}	-	ŋo^{2}	-	-	tɕɔu^{2}	-

PM *ɲɟ-	8	9	10	11
3. to water *ɲɟun^{A}	dzun^{2}	-	-	-
4. sword *ɲɟəuk^{D}	dʑu^{8}	ɖu^{6}	ɖu^{8}	dziu^{8}

Notes

1. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8), and Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). Perhaps from Chinese **嘴** 'beak' (OC *[ts]ojʔ > MC tsjweX > Man. *zuǐ*).
2. Yanghao (1) is from Office of Miao-Yao Research Lexicon (1987). Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
3. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*4.7 *ʔɲ-*

PHM *ʔɲ-	1	2	3	4	5	6	7	8	9	10	11
1. sister-in-law *ʔɲam	ŋ̊aŋ^{1}	ŋ̊i^{1}	ŋ̊a^{1}	ŋ̊a^{1a}	ʔŋ̊en^{A}	ŋ̊i^{1}	-	-	ŋ̊aːm^{1}	ŋ̊an^{1}	ŋ̊ɛm^{1}
2. to weep *ʔɲæmX	ŋ̊aŋ^{1}	ŋ̊ɛ^{3}	ŋ̊ia^{3}	ŋ̊i^{3a}	ʔŋ̊en^{B}	ŋ̊iŋ^{1}	-	ŋ̊em^{3}	ŋ̊jim^{3}	ŋ̊an^{3}	ŋ̊ɛm^{3}

PH *ʔɲ-	1	2	3	4	5	6	7
3. to be at/live *ʔɲəŋ^{A}	ŋ̊aŋ^{1}	ŋ̊i^{1}	ŋ̊ɔ^{1}	ŋ̊ɔ^{1a}	ʔŋ̊oŋ^{A}	ŋ̊ɐŋ^{1}	ŋ̊õ^{1}

PM *ʔɲ-	8	9	10	11
4. POSSESSIVE *ʔɲiəŋ^{A}	ŋ̊aŋ^{1}	ŋ̊aŋ^{1}	nin^{2}	-
5. to crawl *ʔɲɛɔŋ^{A}	ŋ̊ɔŋ^{1}	ŋ̊ɔːŋ^{1}	-	-
6. shy *ʔɲæi$^{A/B}$	ŋ̊ai^{3}	ŋ̊ai^{1}	-	-
7. claw/talon *ʔɲau^{B}	ŋ̊au^{1}	ŋ̊aːu^{3}	-	-

Discussion

Although prepalatal nasals have been recorded for almost all locations for this series, simple palatal nasals have been reconstructed here, in keeping with the reconstructions for all initials in the palatal series. The goal of the reconstruction is not to establish precise phonetic characteristics of these nasals, or of any other segments in the protolanguage; it is rather to define contrastive places of articulation.

Notes

1. Also ‘daughter-in-law; bride’. Compare Tibeto-Burman *s-nam ‘daughter-in-law’ (Benedict 1987a:18).
3. Mienic *ʔjəm^{A} (4.10/21) ‘to be at/live’ is probably related to this word, but the absence of the nasal initial is hard to explain (Wang and Mao explain it as function word reduction); see chapter 4.
5. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
6. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
7. Downer (1973:30) relates this word to Amoy /jiaù/ ‘claw’.

*4.8 *hɲ-*

PHM *hɲ-	1	2	3	4	5	6	7	8	9	10	11
1. intestines *hɲeuŋX	-	ɕe^{3}	ŋ̊u^{3}	ŋ̊oŋ^{3b}	ŋ̊en^{B}	ŋ̊ɔ^{3}	ŋ̊ŋ^{3}	ŋ̊eu^{3}	ŋ̊ɔu^{3}	-	-
2. year *hɲu̯əŋH	ŋ̊hu^{5}	-	-	-	-	ŋ̊waŋ^{5}	-	ŋ̊aŋ^{5}	ŋ̊aŋ$^{5'}$	ŋ̊aŋ^{5}	ŋ̊aŋ^{5}

PH *hɲ-	1	2	3	4	5	6	7
3. forehead *hɲen^{A}	ŋ̊haŋ^{1}	ɕɛ^{1}	-	ŋ̊i^{1b}	-	-	nĩ^{1}

PM *hɲ-	8	9	10	11
4. to forget *hɲou^{B}	-	ŋ̊ɔu^{3}	ŋ̊au^{3}	nau^{3}
5. to carry on back *hɲa^{C}	ŋ̊a$^{5'}$	ŋ̊a^{5}	ŋ̊a^{3}	-
6. to squeeze *hɲai^{C}	ŋ̊ai$^{5'}$	ŋ̊ai^{5}	-	-
7. to winnow *hɲum^{C}	ŋ̊um^{5}	ŋ̊um$^{5'}$	ŋ̊ən^{5}	num^{5}

Notes

2. Since the tones and rimes correspond exactly, this is likely to be the same as Hmongic ‘year’ *ɕɔŋ^{C} (4.13/29), perhaps both from Tibeto-Burman *s-niŋ ‘year’, with prefix pre-emption in Hmongic (Mortensen 2002). Compare Chinese 年 ‘year’ (OC *[n]^{ʕ}i[n] > MC nen > Man. *nián*).
4. Compare Hmongic *hnuŋ^{B} ‘to forget’ (2.8/27).
5, 6, & 7. The tone subcategory indicated by an apostrophe suggests that these words should be reconstructed with *hɲ- rather than *ʔɲ-, as it appears in Wang and Mao 1995.

*4.9 *ɲ-*

PHM *ɲ-	1	2	3	4	5	6	7	8	9	10	11
1. raw/unripe *ɲu̯emX	ŋ̍u^{4}	ŋ̍u^{4}	ŋ̍ɔŋ^{4}	-	ŋ̍o^{B}	ŋ̍waŋ^{4}	ŋ̍õ^{4}	-	ŋ̍jim^{4}	-	-
2. to steal *ɲemH	ŋ̍aŋ^{6}	ŋ̍ɛ^{6}	ŋ̍ia^{6}	ŋ̍i^{6}	ŋ̍en^{C}	ŋ̍iŋ^{6}	ŋ̍ĩ^{6}	nim^{6}	ne:m^{6}	-	ŋ̍ɛm^{6}

PH *ɲ-	1	2	3	4	5	6	7
3. shallow *ɲen^{B}	ŋ̍i^{4}	-	-	ŋ̍i^{4}	-	-	ŋ̍ɦɪ^{4}
4. 姌 thin *ɲen^{B}	ŋ̍aŋ^{4}	ŋ̍ɛ^{4}	ŋ̍ia^{4}	ŋ̍i^{4}	ŋ̍en^{B}	ŋ̍iŋ^{4}	nĩ^{4}
5. 髯 beard *ɲaŋ^{C}	ŋ̍aŋ^{6}	ŋ̍i^{6}	-	ŋ̍a^{6}	ŋ̍en^{C}	ŋ̍i^{6}	nĩ^{6}

PM *ɲ-	8	9	10	11
6. to dye *ɲum^{C}	ŋ̍um^{6}	ŋ̍um^{6}	ŋ̍in^{6}	ŋ̍am^{6}
7. to eat *ɲən^{C}	ŋ̍en^{6}	ŋjin^{4}	ŋ̍in^{6}	ŋ̍an^{6}

Notes

3. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
6. This word for 'to dye' is attested in both the Tai (Lao /njɔm/) and Kam-Sui (Mak /njum/) branches of Tai-Kadai (Downer 1978). Also compare Vietnamese nhuộm. All are probably from Chinese 染 'to dye' (MC nyemX > Man. *rǎn*).
7. Hmongic *nuŋ^{A} 'to eat' (2.9/27) is probably related.

*4'.9 *ɲ^{w}-*

PHM *ɲ^{w}-	1	2	3	4	5	6	7	8	9	10	11
1. 銀 silver *ɲ^{w}i̯ən	ŋ̍i^{2}	ŋoŋ^{2}	ŋ̍ia^{2}	ŋ̍i^{2}	ʔŋ̍en^{A}	ŋ̍iŋ^{2}	ŋ̣^{2}	ŋ̍wan^{2}	ŋ̍a:n^{2}	ŋ̍an^{2}	ŋ̍an^{2}

*4.10 *ʔj-*

PH *ʔj-	1	2	3	4	5	6	7
1. mosquito *ʔjɔŋ^{B}	ʑu^{3}	-	jɔŋ^{3}	ʑaŋ^{3a}	ʔʑoŋ^{B}	-	jõ^{3}
2. to fly *ʔjaŋ^{C}	ʑaŋ^{5}	ʑi^{3}	ja^{5}	ʑua^{5a}	ʔʑen^{C}	i^{5}	je^{5}
3. 秧 seedling *ʔjɛŋ^{A}	ʑi^{1}	ʑɑŋ^{1}	ju^{1}	ʑoŋ^{1a}	ʔʑaŋ^{A}	jaŋ^{1}	jɔ̃^{1}
4. 要 to ask for/want *ʔju^{B}	ə^{3}	-	jua^{3}	ʑa^{3a}	-	wjaŋ^{3}	ja^{3}
5. 幼 small/young *ʔjuw^{C}	ʑu^{5}	ʑɔ^{5}	jau^{5}	ʑu^{5a}	ʔʑo^{C}	ju^{5}	jɯ^{5}

PM *ʔj-	8	9	10	11
6. to be at/live *ʔjəm^{A}	jem^{1}	jam^{1}	jan^{1}	-
7. 1SG (I/me) *ʔja^{A}	ja^{1}	ja^{1}	-	-
8. to spill *(ʔ)jam^{C}	ɕa:m^{5}	ja:m^{6}	ja^{6}	-
9. 秧 seedling *ʔjaŋ^{A}	jwaŋ^{1}	ja:ŋ^{1}	jɔ^{1}	-

Notes

2. Also 'to run' in Pa-Hng (Niederer 1997:120).
3 & 9. Since the rimes don't exactly correspond, these were probably separate borrowings from Chinese 秧 'seedling' (MC ʔjang > Man. *yāng*).
4. The Chinese and Hmongic tones do not correspond.
6. Hmongic *ʔɲəŋ^{A} 'to be at/live' (4.7/21) is probably related to this word; see chapter 4.

8. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This word has reflexes with both tone 5 and tone 6; it could equally well be reconstructed *jam^{C}.

*4.11 *hj-*

PHM *hj-	1	2	3	4	5	6	7	8	9	10	11
1. to shrink *hjuk	xhu^{7}	-	-	-	-	-	-	ɕo^{7}	-	-	-

Discussion

It is not clear whether *hj- should be listed as a voiceless palatal glide (as here), or as an h- onset with a -j- medial. Given the prominence of voiceless sonorant initials in Hmong-Mien it has been placed here, but the decision is fairly arbitrary.

Notes

1. See also Xianjin Miao /xau^{7}/, Jiangdi Mien /su^{7}/, and Changping Mien /ðut^{7}/. The final -t in Changping Mien and the Hmongic tones suggest that this word ended in -t, not -k. But the word is otherwise similar to Chinese 縮 'to shrink' (OC *[s]ruk > MC srjuwk > Man. *suō*), so a -k is tentatively reconstructed here.

*4.12 *j-*

PHM *j-	1	2	3	4	5	6	7	8	9	10	11
1. uncle *jæuX	ʑu^{5}	ʑo^{4}	-	-	-	ja^{2}	jo^{4}	jou^{4}	jɔu^{4}	-	-
2. to lick *-jep	ʑi^{8}	ʑɑ^{8}	jai^{8}	ʑe^{8}	-	ŋklai^{8}	jɛ^{8}	-	-	-	dzjɛp^{8}
3. eight *jat	ʑa^{8}	ʑi^{8}	ji^{8}	ʑi^{8}	ʑa^{D}	je^{8}	ji^{8}	jat^{8}	jet^{8}	hjɛn^{8}	dzjat^{8}
4. 羊 sheep/goat *juŋ	ʑoŋ^{2}	ʑoŋ^{2}	ja^{2}	ʑaŋ^{2}	ʑi^{A}	jɐŋ^{2}	-	juŋ^{2}	juːŋ^{2}	wjə^{2}	dziŋ^{2}

PH *j-	1	2	3	4	5	6	7
5. tree of heaven *jɛŋ^{A}	-	-	ju^{2}	ʑoŋ^{2}	ʑaŋ^{A}	-	-
6. cow/ox *jo^{B}	-	ʑu^{4}	-	-	ʑu^{B}	-	-
7. whorl at top of head *jɨ^{B}	ʑi^{6}	-	ji^{4}	ʑi^{4}	we^{B}	-	-
8. to be *jəŋ^{C}	-	-	jɔ^{6}	ʑoŋ^{6}	ʑoŋ^{C}	-	ɳɯ^{6}
9. 煬 to dissolve/melt *jaŋ^{A}	ʑaŋ^{2}	ʑi^{2}	ja^{2}	ʑua^{2}	-	ɳi^{2}	je^{2}
10. 楊 poplar tree *jɻaŋ^{A}	-	-	-	ʑaŋ^{2}	-	-	-
11. 養 to raise (chickens) *jɛŋ^{C}	ʑi^{6}	-	ju^{6}	ʑoŋ^{6}	ʑaŋ^{C}	jɐŋ^{6}	-

PM *j-	8	9	10	11
12. armspan *jɻam^{A}	jwam^{2}	jɔm^{2}	jaŋ^{2}	dzjam^{2}
13. to walk *jəŋ^{A}	jaŋ^{2}	jaŋ^{2}	ɳaŋ^{2}	dzaŋ^{2}
14. to dissolve *jəuk^{D}	ju^{8}	ju^{6}	-	-
15. 煬 to dissolve/melt *juŋ^{A}	-	-	wjə^{2}	dziŋ^{2}
16. 養 to raise (chickens) *juŋ^{B}	juŋ^{4}	juŋ^{4}	wjə^{4}	dziŋ^{4}

Notes

1. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
2. The complex onset in Jiongnai (6) resembles the Jiongnai onsets in sets 2.55, 2.56, 2.57 (*ʔr-, *hr-, *r-). As with certain words in those sets, the hyphen represents the presence of pre-initial matter.
3. From Tibeto-Burman *-rjat 'eight' (Matisoff 2003) See chapter 5.
5. *Ailanthus altissima.*
7. In White Hmong, 'cowlick' (an errant patch of hair growing anywhere).
9 & 15. The same word borrowed independently into Hmongic and Mienic. Compare #14 above, which is similar.
11 & 16. Hmongic from Chinese *yàng* 'to keep, support' and Mienic from Chinese *yǎng* 'to nourish, raise' (same character).
12. There is a word for 'span from thumb to index finger' with a palatal nasal that also seems to have been borrowed from this word.

*4.13 *ɕ-*

PHM *ɕ-	1	2	3	4	5	6	7	8	9	10	11
1. to stretch *ɕoŋ	ɕhoŋ^{1}	-	ɕa^{1}	-	-	-	ɕõ^{1}	ɕoŋ^{1}	-	-	-

PH *ɕ-	1	2	3	4	5	6	7
2. to breed/propagate *ɕaŋ^{C}	ɕhaŋ^{5}	-	ɕa^{5}	-	-	-	-
3. year *ɕɔŋ^{C}	-	tɕu^{5}	ɕɔŋ^{5}	tɕaŋ^{5a}	-	-	tɕõ^{5}

PM *ɕ-	8	9	10	11
4. winnowing fan *ɕi̱əŋ^{A}	ɕaŋ^{1}	saŋ$^{1'}$	ʂaŋ^{1}	-
5. to twist/rub *ɕæt^{D}	ɕat^{7}	sa:t$^{7'}$	sa:t$^{7'}$	sjɛt^{7}
6. 媳 daughter/girl *ɕi̱ɛk^{D}	ɕa^{7}	sa$^{7'}$	sa^{7}	sa^{7}

Discussion

The Mun (9) reflexes of voiceless fricatives fall into two large sets: those with tθ- and those with s-. The words with a Mun reflex of tθ- have been placed together and have been reconstructed at both the Proto Hmong-Mien and Proto Mienic level as *s- (2.13). The words with a Mun reflex of s- have been reconstructed at the Proto Hmong-Mien level as either *sj- (2.28) or *ɕ- (here), merging at the Proto Mienic level as *ɕ-. The distinction between Hmong-Mien *sj- and *ɕ- is based on developments in Western Hmongic: *sj- > ʂ- and *ɕ- > ɕ-.

The messiness of the fricative correspondences led Wang and Mao to reconstruct eleven voiceless fricatives for the protolanguage, but since the daughter languages are not characterized by large numbers of fricatives, it seems reasonable to assume that the protolanguage did not have many fricatives, either. There are many Chinese loanwords in these sets, some with unique patterns, that obscure the native correspondences.

Notes

3. The onset of this Hmongic word for 'year' is highly irregular: rather than showing either clear fricative reflexes of *ɕ- or stop/affricate reflexes of *c- , it shows a mixture of the two. It may be from the same source as the Hmong-Mien *hɲu̱əŋH (4.8/29) 'year', perhaps

both from Tibeto-Burman *s-niŋ ‘year’, with prefix pre-emption in this set of forms (Mortensen 2002). Compare Chinese 年 ‘year’ (OC *[n]ˁi[n] > MC nen > Man. *nián*).
4. Probably from Chinese 扇 ‘fan’ (MC syenH > Man. *shàn*).
5. Hainan Mun (Shintani and Yang 1990) has been substituted for Lanjin Mun (9). This word is probably the same as Hmongic *S-phu̯a^{A} ‘to twist/rub’ (1.2/15).

5. Velars

*5.1 *k-*

PHM *k-	1	2	3	4	5	6	7	8	9	10	11
1. younger brother *kṵeiX	-	kɯ^{3}	kɯ^{3}	kou^{3a}	ku^{B}	-	-	-	-	ki^{3}	kui^{3}

PH *k-	1	2	3	4	5	6	7
2. ditch *koŋ^{A}	koŋ^{1}	-	-	kaŋ^{1a}	koŋ^{A}	kjɐŋ^{1}	-
3. 1SG (I/me) *kɛŋ^{B}	-	-	ku^{3}	koŋ^{3a}	kaŋ^{B}	-	-
4. bamboo hat *kuw^{D}	-	ku^{7}	kau^{7}	ku^{7a}	ko^{D}	-	kɯ^{7}
5. to gnaw *kow^{D}	ki^{7}	ku^{7}	kaɯ^{7}	kə^{7a}	ko^{D}	-	-

PM *k-	8	9	10	11
6. to cover *kom^{B}	kom^{3}	kɔm^{3}	-	-

Discussion

Hmong-Mien *velars merged with uvulars in Hmongic unless followed by back rounded vowels, -l- , or -r-, and in Mienic, all Hmong-Mien *uvulars merged with velars (see this chapter, section 1.2).[25] Since words in the *k- and *q- series proper only contrast in these three restricted environments, a number of correspondence "sets" in series 5 and 6 will only contain one or two words. Words reconstructed with a dorsal consonant before any vowel other than a back rounded vowel are placed in the 5-6 series, which represents an undifferentiated dorsal (here written with a capital letter: *K- *KH-, *G-, etc.).

Notes

1. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Quanzhou Biao Min (10).
2. Compare Biao Min /khlɛ^{1}/ 'ditch, ravine, mountain stream' (Solnit 1982). Zao Min (11) /ku^{1}/ appears to have been borrowed from Chinese 溝 'ditch, irrigation canal' (MC kuw > Man. *gōu*).
3. This is the Hmong-Mien first person singular pronoun with the widest distribution; see chapter 3. Although it appears to be cognate to Dongshan Biao Min /kəu^{3}/ 'I/me' (Wang and Mao 21) and Sunjiang Biao Min /kɔ^{3}/ 'I/me' (Wang and Mao 22), it is not possible to place these forms into any existing Hmong-Mien rime set. The Proto Hmong-Mien form must have had an initial *k- and a back rounded vowel, however, since the *k- did not retract to q- in Hmongic; see chapter 2, section 1.2.
6. This word for 'to cover', as well as Mienic *hi̯əm$^{B/C}$ 'to cover (with tile)' (7.13/18), appear to be recent borrowings from Tai-Kadai. Li (1977) reconstructs a number of similar words with this general meaning: *xr[um]^{B1} 'to cover, veil; *ɣ[um]^{B2} 'to cover, protect'; *hom^{C1} 'to cover up'. See also the Mienic forms under 'to cover' with initial g- in L-Thongkum's reconstruction: Mien /gom^{3}/, Mun /gəm^{3}/, etc. (1993:204).

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[25] Medial -j- also prevented a *velar from retracting in Hmongic, but since there are no contrasting *kj- and *qj- correspondence sets, it is assumed that there was no *qj- series in Proto Hmong-Mien.

*5.2 *kh-*

PH *kh-	1	2	3	4	5	6	7
1. plum *khow^{A}	-	-	khaɯ^{1}	kə^{1b}	kho^{A}	-	-
2. to pick up *khow^{D}	tɕhə^{1}	-	khaɯ^{7}	kɯ^{7b}	kho^{D}	-	-

PM *kh-	8	9	10	11
3. good/tasty *khu^{B}	-	ku^{3}	-	kɔm^{3}
4. 開 to open *khu̯ɔi^{A}	khɔi^{1}	kɔːi$^{1'}$	khwai^{1}	-
5. 堀 hole *khot^{D}	khot^{7}	kɔt^{7}	khwan^{7}	-

*5.3 *g-*

PH *g-	1	2	3	4	5	6	7
1. 2SG (you) *gɯ^{A}	-	-	kɔ^{2}	-	-	-	-
2. 蝗 grasshopper *gɯŋ^{A}	ku	-	kɔŋ	kaŋ	ɣoŋ	-	-

Notes

1. Also attested in West Hmongic Xianjin /kau^{2}/, Shimen /tɕy^{6}/ and Bunu /kau^{2}/.
1 & 2. It is clear that central rounded /ɯ/ patterns as a back rounded vowel, since velars before vowels other than back rounded vowels retracted to uvulars in Hmongic.

*5.4 *ŋk-*

PH *ŋk-	1	2	3	4	5	6	7
1. muddy *ŋko^{D}	-	-	ŋkɔ^{7}	ŋko^{7a}	-	-	ŋa^{7}

Notes

1. Hainan Mun /glɔɔ^{6}/ ‘muddy’ looks similar (Shintani and Yang 1990), and also fits with the forms under Mienic *ŋglok^{D} ‘turbid’ (5.36/13). This word may involve expressive phonology.

*5.5 *ŋkh-*

PH *ŋkh-	1	2	3	4	5	6	7
1. soot *ŋkhow^{A}	tɕhu^{1}	-	ŋkhaɯ^{1}	ŋkə^{1b}	ŋʔkho^{A}	-	-
2. crooked *ŋkhuw^{D}	-	ŋkhu^{7}	ŋkhau^{7}	ŋko^{7b}	ŋʔkha^{D}	-	ŋɔ^{1}

Notes

2. Compare Chinese 曲 ‘bend, crooked’ (MC khjowk > Man. *qū*), Tibeto-Burman *kuk (Matisoff 2003), and Malayo-Polynesian *buŋkuk (ACD). Tone 7 in Hmongic points to a final *-p or *-t, rather than *-k, however.

*5.6 *ŋg-*

PH *ŋg-	1	2	3	4	5	6	7
1. river deer *ŋgu̯ei^{B}	-	-	-	ŋko^{4}	ŋku^{B}	-	-

*5.9 *ŋ-*

PHM *ŋ-	1	2	3	4	5	6	7	8	9	10	11
1. 牛 water buffalo/ cow *ŋiuŋ	ŋ̊en^{2}	ŋ̊e^{2}	ŋ̊u^{2}	ŋoŋ^{2}	ŋ̊en^{A}	ŋ̊ɔ^{2}	ŋ̍^{2}	ŋoŋ^{2}	ŋɔːŋ^{2}	ŋ̊uŋ^{2}	ŋ̍^{2}

Notes

1. Downer (1973:21) gives Chinese 牛 'ox/cow' (OC *[ŋ]^{w}ə > MC ngjuw > Man. *niú*) as the source, despite the fact that the word ends in a nasal consonant in Hmong-Mien.

*5'.9 *ŋ^{w}-*

PHM *ŋ^{w}-	1	2	3	4	5	6	7	8	9	10	11
1. 瓦 tile *ŋ^{w}æX	-	-	vua^{4}	waə^{4}	wa^{B}	-	wa^{4}	ŋwa^{4}	ŋwa^{4}	ŋɔ^{4}	ŋa^{4}

*5.13 *ɣ-*

PM *ɣ-	8	9	10	11
1. 嫌 to dislike *ɣi̯em^{A}	jem^{2}	ɖ̊iːm^{2}	gjɛn^{2}	-
2. 下 to descend *ɣa^{C}	ja^{8}	ɖ̊a^{6}	ɖ̊a^{6}	ga^{6}

*5.16 *kj-*

PHM *kj-	1	2	3	4	5	6	7	8	9	10	11
1. to lift *kjeŋ	-	-	-	-	-	-	tɕõ^{1}	tɕɛŋ^{1}	tɕːŋ^{5}	kjɛ^{1}	kaŋ^{1}
2. medicine *N-kjaj	tɕa^{1}	ŋ̊kɑ^{1}	-	ka^{1a}	ka^{A}	ðja^{1}	ŋ̊a^{1}	-	gja:i^{1}	hja^{1}	tsɛi^{1}
3. 金 gold *kjeəm	tɕen^{1}	ɲce^{1}	ku^{1}	koŋ^{1a}	tɕen^{A}	tʃeŋ^{1}	tɕĩ^{1}	tɕem^{1}	sam^{1}	tan^{1}	kɛm^{1}

PH *kj-	1	2	3	4	5	6	7
4. needle *kjɔŋ^{A}	tɕu^{1}	tɕu^{1}	kɔŋ^{1}	kaŋ^{1a}	koŋ^{A}	tʃwaŋ^{1}	kɔ̃^{1}

PM *kj-	8	9	10	11
5. cold (day) *kju̯ɛŋ^{B}	tɕwəŋ^{3}	sɔŋ^{3}	tɔŋ^{3}	kuŋ^{3}
6. to remember *kji̯əŋ^{C}	tɕjaŋ$^{5'}$	saŋ^{5}	taŋ^{5}	kɛŋ^{5}
7. 緊 tight *kjən^{B}	tɕen^{3}	sen^{3}	tɕin^{3}	-
8. 句 CLF-sentences *kjou^{C}	tɕou$^{5'}$	tɔu^{5}	təu^{5}	kui^{5}

Discussion

The palatal medial does not belong to the same phonological class as the other sounds which block retraction to uvular ("back" sounds: back rounded vowels, -l-, and -r-). Nonetheless, none of the correspondence sets suggests a contrast between a *kj- series and a *qj- series. Palatal onsets are disproportionately common in the Chinese element of Hmong-Mien: perhaps most (or all) of the words in this series were borrowed from Chinese words after the retraction process had applied, or perhaps retraction only applied to simple onsets for some reason.

Notes

4. Compare Chinese 箴 'needle' (OC *t.q[ə]m > MC tsyim > Man. *zhēn*).

*5'.16 *kʷj-*

PHM *kʷj-	1	2	3	4	5	6	7	8	9	10	11
1. 斤 catty *kʷjan	tɕaŋ^{1}	kɑŋ^{1}	-	tɕein^{1a}	tɕen^{A}	tʃoŋ^{1}	kõ^{1}	tɕwan^{1}	san^{1}	ʨwan^{1}	tsan^{1}

PM *kʷj-	8	9	10	11
2. sore/boil/blister *kʷjej^{A}	tɕwei^{2}	sei^{2}	-	-
3. child *kʷjei^{B}	tɕwei^{3}	sei^{3}	hwjəi^{7}	-
4. 筋 sinew *kʷjan^{A}	tɕwan^{1}	sa:n^{1}	ʨwan^{1}	tsan^{1}
5. 蕨 fern *kʷjət^{D}	tɕwət^{7}	set^{7}	ʨwan^{7}	kɔt^{7}

Discussion

The initial *kʷj- is most clearly reflected in a dialect of Mien not included above: Changping Mien (Wang and Mao 18): 'catty' /kwjan^{1}/, 'child' /kwjei^{3}/, 'fern' /kwət^{7}/.

Notes

3. Compare Pucheng (Min) /kiãi^{3}/ 'child' (Norman 1988:243). This word may also be reflected in the otherwise opaque second half of the White Hmong compound meaning 'children': *tub-ki* /tu^{1}-ki^{5}/ 'son-(child)'.

*5.17 *khj-*

PHM *khj-	1	2	3	4	5	6	7	8	9	10	11
1. itch(y)/scratch(y) *khjɥɛt	tɕhu^{5}	ɕi^{5}	khau^{7}	ko^{7b}	kho^{D}	ʃɔ^{7}	ŋɯ^{7}	ɕet^{7}	set$^{7'}$	hin^{7}	kɛt^{7}

PH *khj-	1	2	3	4	5	6	7
2. shoes *khjɔ^{C}	-	ɕɔ^{5}	khau^{5}	kɔ^{5b}	khu^{C}	ʃu^{5}	ŋkɯ^{5}

PM *khj-	8	9	10	11
3. 薑 ginger *khjuŋ^{A}	ɕuŋ^{1}	tθuŋ$^{1'}$	-	kɔŋ^{1}

Discussion

Pa-Hng (7) has a nasal initial for 'itch(y)/scratch(y)' and 'shoes'. It is not clear whether this is a retention or a secondary development.

Notes

2. In Jiongnai (6) and Pa-Hng (7), 'straw sandals'. Ho Ne (Wang and Mao 14) gives evidence of the medial -j- : /khju^{5}/. Perhaps from Chinese 屨 'sandals, straw shoes' (OC *kro-s > MC kjuH > Man. *jù*), although the Chinese word is not aspirated. Compare Mienic *səuk^{D} 'straw sandals' (2.13/6).

*5.18 *gj-*

PHM *gj-	1	2	3	4	5	6	7	8	9	10	11
1. ten *gjɻɛp	tɕu^{8}	ku^{8}	kau^{8}	ku^{8}	ɣo^{D}	tʃɔ^{8}	kɯ^{8}	ɕep^{8}	sap^{8}	ʇhan^{8}	sjɛp^{8}

PH *gj-	1	2	3	4	5	6	7
2. tea *gji^{B}	tɕen^{4}	ci^{4}	-	tɕi^{4}	ʑi^{B}	tʃi^{4}	tɕi^{4}

PM *gj-	8	9	10	11
3. bracelet *gjəm^{A}	tɕem^{2}	sam^{2}	-	-
4. steep *gjuj^{B}	tɕui^{4}	ʇui^{4}	-	ki^{4}
5. 裙 skirt *gjun^{A}	-	ʇun^{2}	ʇwən^{2}	kɔn^{2}

Notes

1. A borrowing from either Tibeto-Burman *g(j)ip 'ten' or Chinese 十 'ten' (OC *[g][i]p > MC dzyip > Man. *shí*); see chapter 5, section 2.
2. Also West Hmongic /ki^{4}/ (Qinyan, Gaopo, Fengxiang = Wang and Mao 5, 6, 9) and Ho Ne /khji^{4}/ (Wang and Mao 14).
3. Also Changping Mien /kjəm^{2}/ (Wang and Mao 18). Compare Lungchou (Tai-Kadai) /kiim^{2}/ (Li 1977).

*5'.18 *g^{w}j-*

PHM *g^{w}j-	1	2	3	4	5	6	7	8	9	10	11
1. to get up *g^{w}jaX	-	-	-	-	-	tʃe^{4}	-	kja^{4}	kwe^{4}	ʇɔ^{4}	kjɛ^{4}

*5.19 *ŋkj-*

PHM *ŋkj-	1	2	3	4	5	6	7	8	9	10	11
1. mushroom *ŋkjæu	tɕi^{1}	ŋkɯ^{1}	ɲce^{1}	ɳtɕæ^{1a}	ŋʔtɕi^{A}	ɳtʃa^{1}	ŋo^{1}	tɕeu^{1}	sɔu^{1}	ʇau^{1}	ku^{1}
2. 粑 rice cake *ŋkjuəX	tɕə^{3}	-	ɲcua^{3}	ɳtɕa^{3a}	ŋʔka^{B}	-	ŋo^{3}	ju^{3}	ɖu^{3}	ɖu^{3}	gu^{3}

PM *ʔgj- (< *ŋkj-)	8	9	10	11
3. 含 to hold in mouth *ʔgjɔm^{A}	gɔm^{1}	gjɔːm^{1}	gan^{1}	-

Notes

1. Onsets in the Mienic languages are irregular: they should be voiced, reflecting Hmongic prenasalization. Compare Chinese 菇 'mushroom' (OC *mə.kˤa > MC ku > Man. *gū*).

*5.21 *ŋgj-*

PH *ŋgj-	1	2	3	4	5	6	7
1. boat/ship *ŋgjəŋ^{A}	ŋ̊aŋ^{2}	ŋɑŋ^{2}	ŋkɔ^{2}	ŋkoŋ^{2}	ŋkoŋ^{A}	ŋ̊tʃoŋ^{2}	ŋɯ^{2}
2. to crawl *ŋgjoŋ^{C}	ŋ̊oŋ^{6}	-	ŋka^{6}	ŋ̊tɕaŋ^{6}	-	-	-
3. thick (liquid) *ŋgjɔŋ^{C}	ŋ̊u^{6}	-	ŋkɔŋ^{6}	ŋkəŋ^{6}	ŋkoŋ^{C}	-	ŋa^{8}
4. pair *ŋgjow^{D}	ŋ̊u^{8}	ŋoŋ^{8}	ŋkaɯ^{8}	ŋkə^{8}	ŋko^{D}	ŋ̊tʃau^{8}	ŋɤ^{8}

PM *ŋgj-	8	9	10	11
5. asleep *ŋgjɔm^{A}	gɔm^{2}	-	-	-
6. to snore *ŋgjan^{A}	gaŋ^{2}	da:n^{2}	-	-

Notes

1. Compare Central Malayo-Polynesian *waŋka[ŋ] ‘canoe’ (ACD).
5. Also Hainan Mun /gjo:m^{2}/.
6. Xiangnan Mien (Wang and Mao 16) has been substituted for Luoxiang Mien (8). Compare Chinese 鼾 ‘to snore’ (MC xan > Man. *hān*).

*5.24 *ŋj-*

PM *ŋj-	8	9	10	11
1. seven *ŋ̊jiC	ŋ̊i^{6}	ŋ̊ji^{6}	ni^{6}	ŋ̊i^{6}
2. 硬 hard/solid *ŋ̊jeŋ^{C}	ŋ̊ɛŋ^{6}	ŋ̊jeŋ^{6}	-	-

Notes

1. This is from Tibeto-Burman *s-nis (Benedict 1987a:13). Hmong-Mien *djuŋH (2.18/28) may be from the same source, but the correspondence is difficult. See chapter 5, section 5.2.

*5.28 *xj-*

PM *xj-	8	9	10	11
1. 寫 to write *xja^{B}	θja^{3}	kja^{3}	ɕa^{3}	sjɛ^{3}

*5.30 *ɣj-*

PM *ɣj-	8	9	10	11
1. 象 elephant *ɣj̊joŋ^{B}	θɛŋ^{4}	kja:ŋ^{4}	-	sjaŋ^{4}

*5.31 *kl-*

PHM *kl-	1	2	3	4	5	6	7	8	9	10	11
1. to fry *kleu	ka^{1}	ca^{1}	ki^{1}	tɕi^{1a}	tɕe^{A}	-	-	-	[tji:^{1}]	khla^{1}	-
2. horn *klɛoŋ	ki^{1}	ce^{1}	ku^{1}	koŋ^{1a}	kaŋ^{A}	kjaŋ^{1}	kɔ̃^{1}	kɔŋ^{1}	kjɔ:ŋ^{1}	klɔ^{1}	kɔu^{1}
3. insect/worm *klæŋ	kaŋ^{1}	ci^{1}	ka^{1}	kua^{1a}	tɕen^{A}	kjen^{1}	kɛ^{1}	kɛŋ^{1}	kje:ŋ^{1}	klɛ^{1}	tsaŋ^{1}
4. road/way *kləuX	ki^{3}	kɯ^{3}	ke^{3}	kæ^{3a}	tɕi^{B}	kja^{3}	ko^{3}	kjau^{3}	kjau^{3}	kla^{3}	tsu^{3}
5. liquid/soup *klæwX	-	ca^{3}	kua^{5}	ka^{3a}	tɕi^{B}	-	-	-	-	kla^{3}	-
6. to cut *klæp	ken^{7}	ɴqɑ^{7}	-	-	-	tʃei^{7}	-	kap^{7}	kjap^{7}	klan^{7}	kɛp^{7}
7. grasshopper *klup	-	-	-	-	-	-	ka-jɔ^{7}	tɕop^{7}	-	klin^{7}	-

PH *kl-	1	2	3	4	5	6	7
8. maggot *klaŋ^{C}	kaŋ^{5}	-	ka^{7}	kua^{7a}	tɕeen^{C}	-	kɛ^{1}-lõ^{7}

PM *kl-	8	9	10	11
9. pullet/hen *klan^{C}	ka:n^{5}	kja:n^{5}	-	-
10. egg *kləu^{C}	kjau$^{5'}$	kjau^{5}	klau^{5}	tsu^{5}
11. 蝸 snail *klu̯ei$^{A/B}$	kwei^{1}	kui^{3}	kjau^{3}	-

Discussion

The medial -l- from *kl- is preserved only in Biao Min. However, the disyllabic form of 'grasshopper' and 'maggot' in Pa-Hng (7) may also reflect the -l-, and is one more witness to the conservative nature of this language; see chapter 4.

Notes

1. Possibly from Chinese 攪 'to disturb, stir' (OC *kˁruʔ > MC kæwX > Man. *jiǎo*), but the tones do not correspond. Biao Min /khla^{1}/ (Solnit 1982) means 'to turn over, stir' (of drying grain, stir frying), hence this reconstruction with medial -l-, despite the problem with aspiration. In Hainan Mun 'to fry in oil or fat' is /tji:^{1}/. The rime does not correspond—it is probably a late borrowing from 煎 'to fry' (Man. *jiān*).
2. The forms for Zongdi (4) and Fuyuan (5) come from Wang 1994. These forms were entered inconsistently in Wang and Mao 1995. Although the tones do not correspond, this is probably the widespread word for 'horn', Chinese 角 (OC *k.rˁok > MC kæwk > Man. *jiǎo*).
3 & 8. Hmong-Mien 'insect' and Hmongic 'maggot' have the same root. The medial -l- may be present in the Pa-Hng (7) disyllabic form. 'Maggot' seems to have been derived from 'insect' by C-tone derivation; see chapter 4. Compare Austronesian */qulej/ 'maggot' and the following note by Blust: "Most problematic is the evidence from Puyuma, Western Bukidnon Manobo and Tagabili that PAN */qulej/ meant not only 'maggot', but also 'insect'" (ACD). Forms with tone 7 are secondary tones derived by tone sandhi.
5. Also Shimen /ka^{5}/ and Bunu /cai$^{3'}$/ (Office of Miao-Yao Research Lexicon 1987). In Biao Min (10), this means 'dew'.
6. Compare Cantonese /kip/. The Jiwei form /ɴqɑ^{7}/ and the Jiongnai form /tʃei^{7}/ are irregular.
7. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
10. This is no doubt the same as Hmongic 5-6.1/3 *qæw^{C}, since the tones and rimes correspond. The problem is that the medial -l- in Biao Min should correspond to velars rather than uvulars in Hmongic if from *kl- (see 5.31) or should correspond to uvulars with medial -l- in Hmongic if from *ql- (see 6.31). Although Hmong-Mien *qlj- is a possiblity, they are conservatively entered separately.
11. For medial -l-, see Sunjiang Biao Min /kle^{1}/ (Wang and Mao 22). Compare Hmongic *ɢɯ^{A} 'snail' (6.3/8) in the same rime category, and Mienic *k^{w}lej^{A} 'snail' (5-6'.31/10).

*5.31.1 *klj-*

PM *klj-	8	9	10	11
1. 龍 dragon *kljuŋ^{A}	kuŋ^{1}	ku:ŋ^{1}	kljɔŋ^{1}	-

Notes

1. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). This word represents a second borrowing from Chinese ‘dragon’: see also Hmong-Mien *-roŋ (2.57/28).

*5.32 *khl-*

PHM *khl-	1	2	3	4	5	6	7	8	9	10	11
1. hot (water) *k(h)lɛɔm	khi^{1}	ce^{1}	ku^{1}	koŋ^{1a}	kaŋ^{A}	khjaŋ^{1}	kɔ̃^{1}	kɔm^{1}	kjɔ:m^{1}	klœn^{1}	tsam^{1}

PH *khl-	1	2	3	4	5	6	7
2. centipede *khluw^{D}	khu^{7}	-	-	-	-	khjɔ^{5}	-

PM *khl-	8	9	10	11
3. 力 strength *khləkD	kha^{7}	-	khla^{7}	-

Notes

1. Jiwei (2) from Office of Miao-Yao Research Lexicon (1987). Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). Aspiration has been tentatively reconstructed for Hmong-Mien because of the aspirated initials in Hmongic.
2. Compare the Central Tai and Southwest Tai forms: Lao /(khii^{3}-)khep^{7}/, Thai /takhaap^{7}/ (Downer 1978). See also Proto Mon-Khmer *kʔaip > Khmer /kʔæp/ (Shorto #1226).
3. Xiangnan Mien (Wang and Mao 16) has been substituted for Luoxiang Mien (8). Hmong-Mien *-rək ‘strength’ (2.57/7) is from the same source.

*5.33 *gl-*

PM *gl-	8	9	10	11
1. mountain (range) *gl̥iem^{A}	kem^{2}	ki:m^{2}	kleŋ^{2}	-
2. thin *glæi^{C}	kje^{6}	kjai^{6}	klai^{6}	kɛi^{6}

Notes

1. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
2. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). A word meaning ‘thin (person)’ with matching rime and tone exists in Hmongic, but its initial is *ndz- (3.6).

*5.33.1 *glj-*

PHM *glj-	1	2	3	4	5	6	7	8	9	10	11
1. to fool/humor (children)*glje(X)	-	-	-	-	-	kle^{1}	-	-	kja^{4}	kljɔu^{4}	kɛi^{4}

Notes

1. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). The meaning of this word is given as *hǒng* as in *hǒng xiǎo há* ‘to handle children’ in Wang and Mao 1995.

*5.34 *ŋkl-*

PHM *ŋkl-	1	2	3	4	5	6	7	8	9	10	11
1. shallow *ŋkl̥əŋX	-	-	ŋkla^{3}	-	-	-	-	glaŋ^{3}	gjaŋ^{3}	-	lɛŋ^{3}

Notes

1. Green Mong has been substituted for White Hmong (3).

*5.34.1 *ŋklj-*

PM *ʔglj- (< *ŋklj-)	8	9	10	11
1. scissors *ʔgljɨeu^{B}	jeu^{3}	ɖ̥i:u^{3}	gjau^{3}	gɛu^{3}

Notes

1. Also Sunjiang Biao Min /kljɔu^{3}/ (Wang and Mao 22).

*5.36 *ŋgl-*

PHM *ŋgl-	1	2	3	4	5	6	7	8	9	10	11
1. cattle pen *ŋgluə	ŋə^{2}	-	ŋkua^{2}	ŋka^{2}	ŋka^{A}	-	tɕõ^{2}	-	gu^{2}	glu^{2}	dzu^{2}
2. 藍 indigo *ŋglam	ŋ̊i^{2}	ŋ̊i^{2}	ŋka^{2}	ŋkua^{2}	ŋ̊tɕen^{A}	ŋ̊tʃen^{2}	ŋɤ^{2}	ga:m^{2}	ga:m^{2}	klan^{2}	-

PH *ŋgl-	1	2	3	4	5	6	7
3. lazy *ŋglænB	ŋi^{4}	ɲe^{4}	ŋkɛŋ^{4}	ŋ̊tɕein^{4}	ŋkaŋ^{B}	-	ŋɛ^{4}

PM *ŋgl-	8	9	10	11
4. turbid *ŋglok^{D}	glo^{8}	glɔ^{6}	-	-

Notes

1. Biao Min (10) is from Solnit 1982. This may be the same as Chinese 囿 'prison, pen' (OC *m-q(ʰ)(r)aʔ > MC *ngjoX > Man. *yǔ*).
2. The palatal nasal in Yanghao (1) suggests that this might have had a medial -r- (*ŋgram) instead of a medial -l-. Since native words in *gr- pattern differently, however (see 5.48 below), the word has provisionally been placed here. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
3. Although a medial -l- is not attested, it is reconstructed for this word. Given the reconstructed front vowel, it would have become a uvular if not protected by a following liquid. Compare Chinese 懶 'lazy' (OC *[r]ˤanʔ > MC lanX > Man. *lǎn*).
4. Compare Hmongic *ŋkro^{B}/*ŋgro^{B} 'turbid'(5.49/7). This word may involve expressive phonology. Hainan Mun /glɔ:^{6}/ means 'muddy' (compare Hmongic *ŋko^{D} 'muddy', 5.4/7).

*5.36.1 *ŋglj-*

PM *ŋglj-	8	9	10	11
1. tiger *ŋgljænA	d̥zan^{2}	gja:n^{2}	jɛn^{2}	kjɛn^{2}

Notes

1. This is a difficult word to reconstruct; none other patterns like it. It is tentatively placed in this "free" slot with a medial -l- due to its resemblance to Mon-Khmer *klaʔ 'tiger' (Shorto #197).

*5.46 *kr-*

PHM *kr-	1	2	3	4	5	6	7	8	9	10	11
1. to laugh *krət	ʁə^{7}	ʈo^{7}	ʈɔ^{7}	ʂo^{7a}	tʂu^{D}	tsu^{7}	tɕa^{7}	kjat^{7}	kjet^{7}	klan^{7}	tut^{7}
2. six *kruk	ʁu^{5}	ʈɔ^{5}	ʈau^{5}	ʂu^{5a}	tʂo^{C}	tʃɔ^{5}	tɕɯ^{5}	kwo^{7}	kjɔ^{7}	klɔ^{7}	tɔu^{7}

PH *kr-	1	2	3	4	5	6	7
3. to burn (TR) *krɻei^{B}	ʁu^{3}	-	ʈau^{3}	ʂɔ^{3a}	tʂu^{B}	-	-

Notes

1. Also Shimen /tl̥o^{7}/ and Ho Ne /kɤ^{7}/.
2. A borrowing from Tibeto-Burman *k-ruk (Matisoff 2003); see chapter 5, section 5.2.

*5.48 *gr-*

PHM *gr-	1	2	3	4	5	6	7	8	9	10	11
1. door/gate *grɻeŋ	ʁu^{2}	ʈu^{2}	ʈɔŋ^{2}	ʂaŋ^{2}	ʐoŋ^{A}	ʃwaŋ^{2}	tɛ̃^{2}	kɛŋ^{2}	keːŋ^{2}	klɛ^{2}	-
2. to be fat *grəunH	ʁaŋ^{6}	ʈaŋ^{6}	ʈɔ^{6}	ʂoŋ^{6}	ʐoŋ^{C}	ʃoŋ^{6}	tɛõ^{6}	kun^{6}	kun^{6}	klin^{6}	tin^{6}

PH *gr-	1	2	3	4	5	6	7
3. animal fat/oil *grəŋ^{A}	ʁaŋ^{2}	-	ʈɔ^{2}	ʂoŋ^{2}	ʐoŋ^{A}	-	-

Notes

2 & 3. Although only attested in Hmongic, 'animal fat/oil' clearly involves the same root as 'to be fat'. It appears that the widespread 'to be fat' derived from the now more restricted 'animal fat/oil' via C-tone derivation; see chapter 4, section 4.4.2.

*5.49 *ŋkr-*

PH *ŋkr-	1	2	3	4	5	6	7
1. turbid *ŋkro^{B}/ŋgro^{B}	-	ɳʈo^{3}	ɳʈɔ^{5}	ɳʈo^{3a}	ɳʔtʂu^{B}	ɳʈʃu^{4}	ŋ̊õ^{3}

Notes

1. Also Ho Ne /kɤ^{4}/ (Wang and Mao 14). It is impossible to tell whether this word belongs to 5.49 or 5.51, since upper and lower register tones are represented equally. Compare Mienic *ŋglok^{D} 'turbid' (5.36/13), reflexes of which have tones 6 and 8, and a similar initial. Expressive phonology.

*5.51 *ŋgr-*

PH *ŋgr-	1	2	3	4	5	6	7
1. to lean (on stick) *ŋgra^{C}	ŋ̊a^{6}	ɳɑ^{6}	ɳʈi^{6}	ɳʈe^{4}	ɳtʂa^{C}	-	ŋ̊a^{2}
2. to seek shelter *ŋgre^{D}	-	-	ɳʈai^{8}	ɳʈe^{8}	ɳtʂe^{D}	-	-
3. 漏 to drip *ŋgro^{C}	ŋ̊ə^{6}	-	ɳʈɔ^{6}	ɳʈu^{6}	ɳtʂu^{C}	-	-

Notes

1. Also Ho Ne /ki^{4}/ (Wang and Mao 14). In White Hmong (3) also ‘a stick, cane’.
2. In White Hmong (3), ‘to hide’.

5-6. Dorsals (undifferentiated velar/uvular)

*5-6.1 *K-*

PHM *K-	1	2	3	4	5	6	7	8	9	10	11
1. frog *KæŋX	qaŋ^{3}	-	qa^{3}	hua^{3a}	qen^{B}	ken^{3}	kɤ^{7}	-	ʈeːŋ^{3}	kwa^{3}	-
2. to crow *KajH	qa^{5}	qɑ^{5}	qua^{5}	ha^{5a}	qa^{C}	ka^{5}	ŋa^{5}	kaːi$^{5'}$	kaːi^{5}	-	kɔi^{5}
3. back (vs. front) *N-Kaŋ	qaŋ^{1}	-	qa^{1}	hua^{1a}	-	-	-	daːŋ^{1}	daːŋ^{1}	-	kɔŋ^{1}
4. excrement*N-KəjX	qa^{3}	qɑ^{3}	qua^{3}	ha^{3a}	qa^{B}	ka^{3}	ka^{3}	dai^{3}	dai^{3}	kai^{3}	kai^{3}
5. 雞 chicken *Kəi	qei^{1}	qa^{1}	qai^{1}	he^{1a}	qe^{A}	kai^{1}	kɛ^{1}	tɕai^{1}	ʈai^{1}	kai^{1}	kui^{1}
6. 甘 sweet *Kam	qaŋ^{1}	-	qa^{1}	hua^{1a}	qen^{A}	ken^{1}	kɛ^{1}	kaːm^{1}	kaːm^{1}	kan^{1}	-
7. 假 to borrow *KaX	-	qɑ^{3}	qe^{3}	hɪ^{3a}	-	ku^{3}	ka^{3}	ka^{3}	ka^{3}	kɔ^{3}	kɔu^{3}

PH *q- (< *K-)	1	2	3	4	5	6	7
8. crops *qɔŋ^{A}	qə^{1}	-	qɔŋ^{1}	haŋ^{1a}	-	-	-
9. star *qɛŋ^{A}	qɛ^{1}	qe^{1}	qu^{1}	hoŋ^{1a}	qaŋ^{A}	ka^{1}	kɔ̃^{1}
10. grape *qin^{B}	qei^{3}	qɛ^{3}	-	hæin^{3a}	qen^{B}	-	ji^{3}
11. to scold/curse *qe^{C}	-	-	-	he^{5a}	qe^{C}	-	-
12. egg *qæw^{C}	ki^{5}	-	qe^{5}	hæ^{5a}	qwji^{C}	kja^{5}	ko^{5}

PM *k- (< *K-)	8	9	10	11
13. 鴿 pigeon *kɔp^{D}	kop^{7}	kɔp^{7}	-	ku^{7}
14. 割 to cut *kat^{D}	kaːt^{7}	kaːt$^{7'}$	kwan^{7}	kɔt^{7}

Notes

1. Compare Proto Austronesian *keŋkeŋ ‘frog; hollow sound’ (ACD).

2. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). Possibly from Chinese 歌 ‘to sing; a song’ (OC *[k]^{ɕ}aj > MC ka > Man. *gē*), although this word is not used for the song of animals, and the tones do not correspond.

3 & 4. For ‘back’, see also Mien (Wang and Mao 16) /gaŋ^{1}/. For both words, Mien (8) and Mun (9) show unusual initials in d- for which there is no satisfactory explanation; since the rimes and tones correspond, however, they probably belong here. The voiced initials in Mienic are accounted for by the reconstruction of an *N-, a nasal element which, unlike a prenasalized stop, left no trace in Hmongic.

5. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). This is an areal word: see also Proto Tai *kəi (Li 1977).

12. This is no doubt the same as Mienic *kləu^{C} ‘egg’ (5.31/3), since the tones and rimes correspond. The problem is that the medial -l- in Biao Min should correspond to velars rather than uvulars in Hmongic if from *kl- (see 5.31), or should correspond to uvulars with medial -l- in Hmongic if from *ql- (see 6.31). Although Hmong-Mien *qlj- is a possibility, they are conservatively entered separately.

*5-6'.1 *Kʷ-*

PHM *Kʷ-	1	2	3	4	5	6	7	8	9	10	11
1. 瓜 cucumber *Kʷa	fa^{1}	kwɑ^{1}	di^{1}	hwɪ^{1a}	qwa^{A}	kwe^{1}	qwa^{1}	kwa^{1}	kwa^{1}	kwa^{1}	ka^{1}
2. 廣 wide *Kʷi̯aŋX	faŋ^{3}	kwei^{3}	da^{3}	hwua^{3a}	-	kwan^{3}	kwɤ^{3}	kwaŋ^{3}	kwaŋ^{3}	kwaŋ^{3}	kjaŋ^{3}
3. 過 to cross (river) *KʷajH	fa^{5}	kwɑ^{5}	dhau^{5}	-	qwa^{C}	kwa^{5}	kwa^{5}	kwɔi$^{5'}$	kwa:i^{5}	kwa^{5}	kɛi^{5}

Discussion

As with the clearly velar and uvular labiovelars (5' and 6'), it is likely that all words in the *Kʷ series have been borrowed from Chinese. The rounding of the secondary articulation did not have the inhibitory effect of an initial rounded element in the rime: all of the dorsal initials in this series retracted to uvular in Hmongic (see discussion note under 5.1 above).

Notes

3. There is evidence of original aspiration both in White Hmong (3) and in the tone subcategory of Luoxiang Mien (8).

*5-6.2 *Kh-*

PHM *Kh-	1	2	3	4	5	6	7	8	9	10	11
1. 藁 dry/withered *KhæwX	-	qha^{3}	qhua^{3}	ha^{3b}	-	khei^{3}	khe^{3}	-	ka:u^{3}	khɔ^{3}	-
2. 客 guest *Khæk	qha^{5}	qha^{5}	qhua^{5}	ha^{5b}	qhei^{C}	-	-	khɛ^{7}	-	khiɛ^{7}	-

PH *qh- (< *Kh-)	1	2	3	4	5	6	7
3. to tie/cross (legs) *qheᴬ	qhei^{1}	-	qhai^{1}	he^{1b}	qhe^{A}	khai^{1}	-
4. to pack/wrap *qhɯᴮ	qhɛ^{3}	-	qhɯ^{3}	hou^{3b}	qhu^{B}	khau^{3}	-
5. ginger *qhinᴮ	khi^{3}	-	qhia^{3}	hæin^{3b}	qhwjen^{B}	khai^{3}	-
6. 孔 hole *qhəŋᴮ	qhaŋ^{3}	qhu^{3}	qhɔ^{3}	hoŋ^{3b}	qhoŋ^{B}	khoŋ^{3}	khõ^{3}

PM *kh- (< *Kh-)	8	9	10	11
7. bamboo bowl *khɔkᴰ	khɔ^{7}	-	-	-
8. 牽 to lead *khienᴬ	-	ki:n$^{1'}$	khən^{1}	-

Notes

2. The Mien (8) and Biao Min (10) forms are from Office of Miao-Yao Research Lexicon (1987).
4. Possibly from Chinese 裹 'to wrap' (OC *[k]ˤo[j]ʔ > MC kwaX > Man. *guǒ*).
7. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

*5-6.3 *G-*

PHM *G-	1	2	3	4	5	6	7	8	9	10	11
1. 號 sing/cry out *Gæw	ken^{2}	-	qua^{2}	ha^{2}	ʁi^{A}	-	-	ha:u^{2}	ha:u^{2}	hjau^{3}	-
2. 下 low/short *GaX	ka^{4}	-	qe^{4}	hɪ^{4}	ʁa^{B}	tʃe^{4}	ŋe^{4}	ha^{4}	ha^{4}	hɔ^{4}	-

PH *ɢ- (< *G-)	1	2	3	4	5	6	7
3. bamboo pipes *ɢænA	ki^{2}	-	qen^{2}	hæin^{2}	ʁwjaŋ^{A}	-	-
4. to slant/slanting *ɢeA	-	qa^{2}	qai^{2}	-	ʁe^{A}	-	-
5. 葫 garlic *ɢaA	qa^{2}	-	qe^{2}	hɪ^{2}	ʁa^{A}	-	-

PM *g- (< *G-)	8	9	10	11
6. oneself *gənA	kan^{2}	kan^{2}	kan^{4}	-
7. thick (porridge) *gətD	-	kat^{8}	-	-

Notes

2. A related word within Chinese was also borrowed by Hmong-Mien: Chinese 下 'to descend' appears as Hmongic *ɴɢaB (5-6.6/4) and, in a separate borrowing, as Mienic *ɣaC (5.13/4).
4. In White Hmong also 'to lean'.
6. 'Oneself' is technically Hmong-Mien, since this word also appears in Ho Ne (Hmongic): /kan^{4}/. The form is irregular, however, and looks like a loanword from some Mienic language.
7. Also Jiangdi Mien /ʤat^{8}/ and Xiangnan Mien /jə^{8}/. These forms suggest *gj-, but 'thick' does not pattern with the other words in 6.18. Compare Proto Malayo-Polynesian *buket 'thick, viscous' from a Proto Austronesian root */-keC/; Proto Malayo-Polynesian */-ket/ 'adhesive, sticky' (ACD).

*5-6'.3 *Gʷ-*

PH *Gʷ- (< *Gʷ-)	1	2	3	4	5	6	7
1. to escape *GʷaD	fa^{8}	qwei^{8}	di^{8}	hwɪ^{8}	ʁwa^{D}	-	-
2. 黃 yellow *GʷaŋA	faŋ^{2}	kwei^{2}	da^{2}	hwua^{2}	ʁwen^{A}	kwan^{2}	kwɛ^{2}
3. 黃 bright/light *GʷaŋA	faŋ^{2}	-	ka^{2}	hwua^{2}	ʁwen^{A}	kui^{2}	-

Notes

1. The labialized velar marks this as a loanword. According to Sagart (1999:123–124), it is a loanword from 脫 'to peel off, escape' (OC *l^{ʕ}ot > MC dwat > Man. *tuō*). Mortensen (2002) proposed Tibeto-Burman *g-lwat 'free, release' as the source, which works better since it has a dorsal consonant (for Sagart, the dorsal consonant is a secondary development of a hypothetical intermediate stage *dl- in Chinese). Note that this Chinese word with a voiceless initial is taken here as the source of Mienic *ʔdutD (< *N-t-) 'peel off/escape' (2.4/9).
2 & 3. It is of interest that 'yellow' and 'bright/light' are not identical in White Hmong (3) and Jiongnai (6), as one would expect. It may be that the word with the meaning 'bright/light' was a later borrowing in these dialects. In Mienic, 'yellow' was probably borrowed from Chinese 皇 'yellow and white spotted' (OC *[ɢ]^{wʕ}aŋ > MC hwang > Man. *huáng*) as *wi̯əŋA (1.12/24).

*5-6.4 *NK-*

PHM *NK-	1	2	3	4	5	6	7	8	9	10	11
1. cogongrass *NKan	qɛ^{1}	-	ɴqɛŋ^{1}	ŋkæin^{1a}	-	ŋkan^{1}	ŋɛ^{1}	ga:n^{1}	ga:n^{1}	gwan^{1}	gɔn^{1}

PH *ɴq- (< *NK-)	1	2	3	4	5	6	7
2. to low/bellow *ɴqəŋ^{B}	-	-	ɴqɔ^{3}	ŋkoŋ^{3a}	ɴʔqoŋ^{B}	-	-
3. 價 price *ɴqa^{C}	qa^{5}	ɴqɑ^{5}	ɴqi^{5}	ŋkɪ^{5a}	ɴʔqa^{C}	ŋʈʃe^{5}	ŋa^{5}
4. 鉤 hook *ɴqæw^{C}	qa^{5}	-	ɴqe^{5}	ŋkæ^{5a}	-	-	-

Notes

3. In White Hmong (3) also pronounced /ɴqe^{5}/.

*5-6'.4 *NK^{w}-*

PHM *NK^{w}-	1	2	3	4	5	6	7	8	9	10	11
1. 缺 to have a gap *NK^{w}et	qei^{5}	ɴqwɑ^{3}	ntai^{3}	-	-	-	-	gwa^{7}	gu^{7}	-	-

PM *ʔg^{w}- (< *NK^{w}-)	8	9	10	11
2. 黃 bright *ʔg^{w}i̯əŋ^{A}	gwaŋ^{1}	gwaŋ^{1}	gwaŋ^{1}	vjaŋ^{1}

Notes

1. The Chinese source has an aspirated initial (MC khwɛt > Man. *quē*). In Chinese the word means 'to be short of, to lack, defective, incomplete' which is better reflected in the White Hmong (3) meaning 'broken off'. The development of apparently irregular White Hmong (3) nt- must have been from *NK^{w}et - > ɴq^{w}- > ɴql- > nd- > nt- (d- is a regular development from kl- or ql- in White Hmong, but the onset nd- does not occur; nt- is the closest equivalent). Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
2. See discussion of Chinese 'yellow' as the source of both 'yellow' and 'bright/light' under 5-6'.3 above.

*5-6.5 *NKh-*

PHM *NKh-	1	2	3	4	5	6	7	8	9	10	11
1. dry/thirsty *NKhæj	qha^{1}	-	ɴqhua^{1}	ŋka^{1b}	ɴʔqhei^{A}	ŋkhei^{1}	-	ga:i^{1}	ga:i$^{1'}$	-	gɔi^{1}
2. 渴 thirsty *NKhat	-	ɴqhe^{7}	ɴqhi^{7}	-	-	-	-	ga:t^{7}	ga:t$^{7'}$	-	gɔt^{7}

Notes

1. Expressive phonology.
2. In White Hmong (3) also pronounced /ɴqhe^{7}/.

*5-6.6 *NG-*

PHM *NG-	1	2	3	4	5	6	7	8	9	10	11
1. meat *NGej	ŋi^{2}	ɲa^{2}	ɴqai^{2}	ŋke^{2}	ɴqe^{A}	ŋkai^{2}	ŋɛ^{2}	-	-	dʑi^{2}	hɔi^{2}
2. diligent *NGəjH	ŋa^{6}	ŋɑ^{6}	ɴqua^{6}	ŋkəa^{6}	ɴqa^{C}	ŋka^{6}	ŋe^{6}	-	-	gwai^{6}	-

PH *ɴG- (< *NG-)	1	2	3	4	5	6	7
3. shuttle *ɴGəŋ^{B}	ŋaŋ^{4}	nɑŋ^{4}	ɴqɔ^{4}	ŋkoŋ^{4}	ɴqoŋ^{B}	ŋwaŋ^{4}	-
4. to swallow *ɴGəŋ^{B}	ŋaŋ^{4}	ŋu^{4}	-	-	ɴqoŋ^{B}	-	-
5. 下 to descend *ɴGa^{B}	ŋa^{4}	-	ɴqe^{4}	ŋkɪ^{4}	ɴqa^{B}	-	ŋe^{4}
6. 狹 narrow *ɴGe^{D}	ŋi^{8}	ŋɑ^{8}	ɴqai^{8}	ŋke^{8}	ɴqe^{D}	ŋkai^{8}	ŋɛ^{8}

Notes

3. Mienic *ɴGlow^{B} ‘shuttle’ (6.36/16) suggests a rounded vowel, which might make this initial uvular with a medial /-l-/. It is not clear that they reflect the same word, however, since there is no final nasal consonant in Mienic and the rime correspondence is not attested elsewhere.

4. Expressive phonology.

6. Hmongic and Mienic both borrowed this word from Chinese 狹 ‘narrow’ (OC *N-kˁ<r>ep > MC hɛp > Man. *xiá*), but Hmongic *ɴGe^{D} was an earlier borrowing from OC, and Mienic *hep^{D} (7.13/10) was a later borrowing from MC.

*5-6’.31 *Kʷl-*

PM *kʷl- (< *Kʷl-)	8	9	10	11
1. 蝸 snail *kʷlej^{A}	kwei^{1}	gwei^{1}	kli^{3}	ki^{1}

Notes

1. Compare Hmongic *ɢɯ^{A} ‘snail’ (6.3/8) in the same rime category, and Mienic *klu̱ei$^{A/B}$ ‘snail’ (5.31/8).

6. Uvulars

*6.1 *q-*

PHM *q-	1	2	3	4	5	6	7	8	9	10	11
1. old *qu̯oH	qo^{5}	qɔ^{5}	qu^{1}	-	-	ku^{5}	ko^{5}	ko$^{5'}$	ku^{5}	ku^{5}	ku^{5}

PH *q-	1	2	3	4	5	6	7
2. neck *qoŋ^{B}	qoŋ^{3}	qoŋ^{3}	-	haŋ^{3}	-	kɐŋ^{3}	-
3. marry (a woman) *qu̯a^{C}	qha^{5}	-	-	ha^{5a}	ka^{C}	-	-

Discussion

Hmong-Mien *velars merged with uvulars in Hmongic unless followed by back rounded vowels, -l- , or -r- — and in Mienic, all Hmong-Mien *uvulars merged with velars (see this chapter. section 1.2).[26] Since words in the *k- and *q- series proper only contrast in these three restricted environments, a number of correspondence "sets" in series 5 and 6 will only contain one or two words. Words reconstructed with a dorsal consonant before any vowel other than a back rounded vowel are placed in the 5-6 series, which simply represents an undifferentiated dorsal (here written with a capital letter: *K- *KH-, *G-, etc.).

Notes

1. Wang and Mao (1995:327–328) list 'old' in the sense of 'aged', and 'old' as the opposite of 'new' separately because of the presence of two forms in Ho Ne (She) that differentiate these senses of 'old' (kɤ^{5} and kɔ^{5}, respectively). Since the forms are otherwise identical, they are presented together here. This is probably from Chinese 故 'old (not new)' (OC *k^{s}a(ʔ)-s > MC kuH > Man. *gù*), especially since in White Hmong it appears before the noun it modifies, as in Chinese, rather than in the customary position for adjectives, after the noun.
2. Compare Chinese 頸 'neck' (OC *keŋʔ > MC kjiengX > Man. *jǐng*).

*6'.1 *q^{w}-*

PHM *q^{w}-	1	2	3	4	5	6	7	8	9	10	11
1. far *q^{w}uw	-	qɯ^{1}	de^{1}	hwæ^{1a}	qwei^{A}	kwa^{1}	ko^{1}	ko^{1}	ku^{1}	ku^{1}	kɔu^{1}

Notes

1. Compare Chinese 迂 'bend, deflect; astray, far from' (OC *qw(r)a > MC ʔju > Man. *yū*).

[26] Medial -j- also prevented a *velar from retracting in Hmongic, but since there are no contrasting *kj- and *qj- correspondence sets, it is assumed that there was no *qj- series in Proto Hmong-Mien.

*6.3 *ɢ-*

PH *ɢ-	1	2	3	4	5	6	7
1. cuckoo *ɢʉ^{B}	-	qu^{4}	-	hu^{4}	-	-	-
2. duck *ɢu̯a^{C}	ka^{6}	-	-	-	ʁwa^{C}	-	-
3. to fall (over) *ɢu̯ei^{C}	ku^{6}	qɔ^{6}	qau^{6}	ho^{6}	ʁu^{C}	-	-
4. back (of body) *ɢuw^{D}	kə^{8}	-	qau^{8}	hu^{8}	ʁo^{D}	kɔ^{8}	kɯ^{8}
5. 蝸 snail *ɢʉ^{A}	ki^{1}	qə^{1}	qɯ^{2}	hu^{2}	ʁwju^{A}	-	-

Notes

2. Also Fengxiang (West Hmongic) /qa^{6}/ (Wang and Mao 9). Expressive phonology.
4. In White Hmong, this refers to the upper back. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
5. Compare Mienic *kʷlej^{A} ‘snail’ (5-6’.31/10) and *klu̯ei$^{A/B}$ ‘snail’ (5.31/8).

*6.4 *ɴq-*

PH *ɴq-	1	2	3	4	5	6	7
1. to swallow *ɴqow^{C}	-	-	-	ŋkə^{5a}	-	ŋkau^{5}	ŋɛ^{5}
2. 鳩 pigeon *ɴqu^{A}	qo^{1}	ɴqo^{1}	ɴqua^{1}	ŋka^{1a}	ɴʔqa^{A}	ŋku^{1}	ŋo^{1}

Notes

1. Expressive phonology.

*6.6 *ɴɢ-*

PHM *ɴɢ-	1	2	3	4	5	6	7	8	9	10	11
1. sky/heaven *ɴɢɛuŋ	-	-	-	-	ɴqwaŋ^{A}	ŋkuŋ^{2}	ŋwɔ^{2}	guŋ^{2}	guːŋ^{2}	-	-
2. 滑 smooth/slippery *ɴɢu̯at	-	-	-	-	-	ŋkɔ^{8}	ŋgɯ^{8}	gut^{8}	gɔt^{8}	gwan^{8}	gut^{8}

Notes

1. Part of a very irregular set with Hmong-Mien *wɛŋ ‘sky/heaven’ (1.12/22) and Hmong-Mien *ndɛuŋ ‘sky/heaven’ (2.6/22).
1 & 2. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).

*6.31 *ql-*

PHM *ql-	1	2	3	4	5	6	7	8	9	10	11
1. neck *qlaŋ	-	-	da^{1}	-	-	-	-	kla:ŋ^{1}	kla:ŋ^{1}	klaŋ^{1}	kan^{1}
2. dog *qluwX	l̥a^{3}	qwɯ^{3}	de^{3}	l̥æ^{3a}	qlei^{B}	kla^{3}	ka-ljð^{7}	klo^{3}	klu^{3}	klu^{3}	ku^{3}
3. waist *qlajX	l̥a^{3}	qwɑ^{3}	dua^{3}	l̥a^{3a}	qla^{B}	kla^{3}	la^{3}	kla:i^{3}	kla:i^{3}	kla^{3}	lai^{3}
4. eagle/hawk *qlaŋX	l̥aŋ^{3}	qwei^{3}	da^{3}	l̥ua^{3a}	-	klen^{3}	kwɤ^{3}	kla:ŋ^{3}	kla:ŋ^{3}	klaŋ^{3}	kjan^{3}

PH *ql-	1	2	3	4	5	6	7
5. white *qlow^{A}	l̥u^{1}	qwə^{1}	daɯ^{1}	l̥ə^{1a}	qlo^{A}	klau^{1}	kwɔ^{1}
6. to roll down *qləŋ^{B}	l̥aŋ^{3}	cɑŋ^{3}	dɔ^{3}	-	qloŋ^{B}	-	-
7. walnut *qlow^{C}	-	-	-	l̥ə^{5a}	qlo^{C}	-	-

PM *ql-	8	9	10	11
8. to repay *qlau^{B}	-	kla:u3	klau3	kau3

Discussion

The *ql- series is differentiated from the *kl- series by the relative persistence of -l- in languages across the family, and the occasional retention of a uvular stop.

Notes

1. Compare Chinese 頸 ‘neck’ (OC *keŋʔ > MC kjiengX > Man. *jǐng*). Wang and Mao (1995) give two different forms for Zao Min ‘neck’, and note that both are irregular in rime: /kan^{1}/ (p. 341) and /kuŋ^{1}/ (p. 500). It is not clear whether these are variants, or one form was entered in error. /kuŋ^{1}/ is arbitrarily entered here.
2. This word for ‘dog’ appears in languages across the area: compare Chinese 狗 ‘dog’ (OC *-[k]^{ʂ}(r)oʔ > MC kuwX > Man. *gǒu*) and see Benedict 1996. The disyllabic Pa-Hng (7) form /ka-ljð^{7}/ is especially interesting for what it may suggest about the origin of some Hmong-Mien consonant clusters (see chapter 4, section 4.2.4 and Niederer 2004, Ratliff 2006).
4. Compare Mon-Khmer *klaŋ ‘hawk, large raptor’ (Shorto #714) and Tibeto-Burman *(g)laŋ ‘eagle’ (Matisoff 2003).

*6.33 *ɢl-*

PHM *ɢl-	1	2	3	4	5	6	7	8	9	10	11
1. round *ɢlun	-	-	-	-	-	-	ka^{1}-lɔ^{4}	klun^{2}	klun^{2}	klin^{2}	-
2. 桃 peach *ɢlæw	l̥en^{2}	qwa^{2}	dua^{2}	l̥a^{2}	ʁlei^{A}	-	kwi^{2}	kla:u^{2}	klau^{2}	kla^{2}	kɔu^{2}

PH *ɢl-	1	2	3	4	5	6	7
3. river *ɢlæw^{A}	-	-	de^{2}	-	ʁlei^{A}	-	-
4. Allium *ɢləŋ^{B}	-	-	dɔ^{4}	l̥oŋ^{4}	ʁloŋ^{B}	-	-
5. mountain pass *ɢlow^{D}	-	-	daɯ^{4}	l̥ə^{4}	-	-	-

Notes

1. Compare Chinese 輪 ‘wheel; round’ (MC lwin > Man. *lún*); see chapter 4 on the significance of Pa-Hng disyllabic form for interpreting Hmong-Mien clusters.

5. This may be the same as Chinese 峽 ‘gorge between two mountains’ (OC *N-kˁ<r>ep > MC hɛp > Man. *xiá*; the same word as 狹 ‘narrow’), but the Chinese word does not have a rounded vowel.

*6.33.1 *ɢlj-*

PM *ɢlj-	8	9	10	11
1. 腸 intestines *ɢljaŋ^{A}	kla:ŋ^{2}	kla:ŋ^{2}	klaŋ^{2}	kjaŋ^{2}

*6.36 *ᴎɢl-*

PH *ᴎɢl-	1	2	3	4	5	6	7
1. front surface *ᴎɢlin^{A}	-	-	ntia^{2}	-	ᴎqlen^{A}	-	-
2. to flow *ᴎɢlɯ^{B}	-	-	ntɯ^{4}	-	qlu^{B}	ljɔu^{4}	-
3. ragged/shabby *ᴎɢlu^{C}	nei^{6}	-	ntua^{6}	-	qla^{C}	-	-

PM *ᴎɢl-	8	9	10	11
4. shuttle *ᴎɢlow^{B}	gou^{4}	glɔu^{4}	-	-

Notes

1. There are also Hmongic forms that match this word in meaning, rime, and tone but have an *mbl- initial: Gaopo /mplɛ^{2}/, Zongdi /mplæin^{2}/, and Fengxiang /mplen^{2}/ (Wang 1994).
3. Reflexes in Xianjin (/ŋʈua^{6}/) and Qingyan (/ŋʈo^{6}/) have retroflex initials, so this word might better be reconstructed as *ᴎɢru^{C}. It is possibly from a prefixed form of Chinese 陋 ‘humble, mean’ (OC *[r]ˁo-s > MC luwH > Man. *lòu*).
4. These forms and Hmongic *ᴎɢəŋ^{B} ‘shuttle’ (5-6.6/21), may be related, although there is no trace of -l- in Hmongic, and no final nasal in Mienic.

*6.46 *qr-*

PHM *qr-	1	2	3	4	5	6	7	8	9	10	11
1. bear *qrep	ɭi^{7}	-	dai^{7}	ɭe^{7a}	-	-	-	kjep^{7}	kja:p^{7}	kljɛ^{7}	-

PH *qr-	1	2	3	4	5	6	7
2. black *qrɛŋ^{A}	ɭɛ^{1}	qwe^{1}	du^{1}	ɭoŋ^{1a}	qlaŋ^{A}	klaŋ^{1}	-
3. spirit/ghost *qraŋ^{A}	ɭaŋ^{1}	qwei^{1}	da^{1}	ɭua^{1a}	qlen^{A}	kli^{1}	kwɛ^{1}
4. trough *qroŋ^{A}	ɭoŋ^{1}	coŋ^{1}	da^{1}	ɭaŋ^{1a}	qloŋ^{A}	kjɐŋ^{1}	ljõ^{1}
5. to tear *qrɻa^{C}	ɭi^{5}	-	dua^{5}	ɭa^{5a}	qla^{C}	-	kwɛ^{3}
6. span, finger *qro^{C}	ɭo^{5}	-	dɔ^{7}	ɭo^{5a}	qlou^{C}	-	-
7. salty *qrow^{C}	ɭu^{5}	-	daɯ^{5}	ɭə^{5a}	-	-	-
8. ice *qrɻei^{D}	ɭu^{7}	-	dau^{7}	-	-	-	-

PM *kr- (< *qr-)	8	9	10	11
9. black *qriɛk^{D}	kje^{7}	kja^{7}	kja^{7}	kjɛ^{7}

Notes

1. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).

2 & 9. These two words for 'black' are undoubtedly related, but the rime and tone correspondences are irregular. In Mienic, the medial liquid is reflected in Sunjiang Biao Min /klja^{7}/.
4. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
5. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
6. In White Hmong (3), this is the span of thumb to middle finger.

*6.48 *ɢr-*

PH *ɢr-	1	2	3	4	5	6	7
1. armspan *ɢraŋ^{A}	l̥aŋ^{2}	ci^{2}	da^{2}	l̥ua^{2}	ʁlei^{A}	-	-

Notes

1. In White Hmong (3), this measure is for a double arms' length (fingertip to fingertip).

7. Laryngeals

*7.1 *ʔ-*

PHM *ʔ-	1	2	3	4	5	6	7	8	9	10	11
1. one *ʔɨ	i^{1}	ɑ^{3}	i^{1}	ei^{1a}	-	i^{3}	-	-	-	i^{1}	a^{1}
2. two *ʔu̯i	o^{1}	ɯ^{1}	ɔ^{1}	ɔ^{1a}	u^{A}	u^{1}	va^{1}	vi^{1}	i^{1}	wəi^{1}	vi^{5}
3. bitter *ʔim	i^{1}	ɛ^{1}	ia^{1}	æin^{1a}	-	an^{1}	jĩ^{1}	im^{1}	im^{1}	in^{1}	jɛm^{1}
4. mountain pass *ʔæ(C)	-	-	-	-	-	e^{7}	-	ɛ^{7}	e^{1}	ɛ^{7}	a^{1}
5. water *ʔu̯əm	ə^{1}	u^{1}	-	aŋ^{1a}	oŋ^{A}	waŋ^{1}	ʔɔ̃^{1}	wəm^{1}	wɔm^{1}	ən^{1}	m̩^{3}
6. to do/work *ʔəjH	ɛ^{5}	-	ua^{5}	aŋ^{5a}	a^{C}	-	ʔĩ^{5}	-	ai^{5}	wəi^{5}	ai^{5}
7. to swell *ʔəumH	aŋ^{5}	ɑŋ^{5}	ɔ^{5}	oŋ^{5a}	oŋ^{C}	oŋ^{5}	ʔõ^{5}	om$^{5'}$	ɔm^{5}	ən^{5}	-
8. 媼 wife *ʔəuX	a^{3}	-	-	-	-	-	-	au^{3}	au^{3}	kau^{3}	-
9. 鴨 duck *ʔap	-	-	ɔ^{7}	o^{7a}	-	ai^{7}	a^{7}	a:p^{7}	a:p$^{7'}$	an^{7}	ap^{7}

PH *ʔ-	1	2	3	4	5	6	7
10. that/the former *ʔɨ^{B}	i^{3}	a^{3}	i^{5}	i^{3a}	e^{B}	-	-
11. cloud/haze *ʔɔŋ^{C}	en^{5}	-	ɔŋ^{5}	aŋ^{5a}	-	-	-
12. 烏 crow (bird) *ʔu^{A}	-	-	ua^{1}	a^{7a}	-	-	-

PM *ʔ-	8	9	10	11
13. meat *ʔa^{B}	a^{3}	a^{3}	-	-
14. 愛 to love *ʔu̯ɔi^{C}	-	ɔ:i^{5}	-	i^{5}

Notes

1. 'One' is highly irregular, which is to be expected since it is both short and frequently used. The onset is not in question, however. It is the same as Chinese 一 'one' (OC *ʔi[t] > MC ʔjit > Man. *yī*); see chapter 5. The Jiongnai (6) form is from Mao and Li 2001.
8. In Yanghao (1), 'elder sister'. In Dongshan Biao Min (10), /u^{3}/ means 'elder sister' and /au^{3}/ means 'wife'; they are presumably both taken from this source.

*7.13 *h-*

PHM *h-	1	2	3	4	5	6	7	8	9	10	11
1. 欲 to drink/smoke *hup	hə^{7}	hu^{7}	hau^{7}	ɦo^{7b}	ho^{D}	xɔ^{7}	hɔ^{7}	hop^{7}	hɔp$^{7'}$	hən^{7}	hup^{7}

PH *h-	1	2	3	4	5	6	7
2. fog/cloud *hu^{A}	ho^{1}	ho^{1}	hua^{1}	ɦa^{1b}	ha^{A}	-	ho^{1}
3. to weave/plait *hin^{A}	hei^{1}	hɛ^{1}	hia^{1}	ɦæin^{1b}	hen^{A}	xan^{1}	-
4. clay pot/earthen jar *hɛŋ^{A}	-	-	hu^{1}	ɦoŋ^{1b}	haŋ^{A}	-	-
5. to sharpen/grind *ho^{B}	xhə^{3}	ho^{3}	hɔ^{3}	ho^{3b}	hu^{B}	xu^{3}	ho^{3}
6. to boil (TR) *hu̯ei^{C}	hu^{5}	hɔ^{3}	hau^{5}	-	-	-	-
7. to ladle out *he^{D}	hei^{7}	-	hai^{7}	ɦe^{7b}	he^{D}	-	fɛ^{7}
8. to rob *hæ^{D}	-	-	-	ɦa^{7b}	hi^{D}	-	-
9. 腐 bean curd *hɯ^{B}	-	-	-	ɦou^{3b}	hu^{B}	-	-

PM *h-	8	9	10	11
10. to cover (with tile) *hi̯əm$^{B/C}$	hom^{6}	hɔ:m^{3}	-	hum^{3}
11. to scold/curse *hi̯em^{C}	he:m^{5}	-	-	-
12. 狭 narrow *hep^{D}	hep^{8}	he:p^{8}	hjɛn^{8}	hɛp^{8}

Notes

9. This must be from Chinese 腐 ‘rotten’ (MC bjuX > Man. *fǔ* ‘curd’); a late borrowing into West Hmongic. See also Hmongic *bu̯a^{B} 'bad/spoiled' (1.3/15), an earlier borrowing from the same word.

10. These forms for ‘to cover’, as well as Mienic *kom^{B} (5.1/21), appear to be borrowings from Tai-Kadai. Li (1977) reconstructs a number of similar words with this general meaning: *xr[um]^{B1} ‘to cover, veil; *ɣ[um]^{B2} ‘to cover, protect’; *hom^{C1} ‘to cover up’. See also the Mienic forms under ‘to cover’ with initial g- in L-Thongkum’s reconstruction: Mien /gom^{3}/, Mun /gəm^{3}/, etc. (1993:204). The Mienic reflexes in both tone 3 and tone 6 suggest an initial voicing alternation as well as a tone alternation, but the tones may simply be “loan-tones” (see chapter 3), chosen to reflect the tone of the donor language(s) as closely as possible.

11. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This may belong with Hmongic *qe^{C} (5-6.1/10) ‘to scold/curse’, as represented in Wang and Mao 1995 (p. 327).

12. Hmongic and Mienic both borrowed this word from Chinese 狭 ‘narrow’ (OC *N-kˁ<r>ep > MC hɛp > Man. *xiá*), but Hmongic *ɴɢe^{D} was an earlier borrowing from OC, and Mienic *hep^{D} (7.13/10) was a later borrowing from MC.

*7.15 *ɦ-*

PM *ɦ-	8	9	10	11
1. 厚 thick *ɦɔu^{B}	ho^{4}	hu^{4}	hau^{4}	hu^{4}

2.3 Proto Hmong-Mien rimes

V		u̯-			i̯-	u̯-		i̯-	u̯-		i̯-
-ø	i (1)	u̯i (14)	ɨ (2)	e (10)			ɛ			æ (5)	
-j				ej (10)			ɛj (11)		u̯ɛj (11)	æj (5)	
-w										æw (5)	
-p				ep (10)				*i̯ɛp (1)*	u̯ɛp (9)	æp (5)	
-t				et (10)					u̯ɛt (9)		
-k	ik (2)			ek (2)				i̯ɛk (1)	u̯ɛk (9)	*æk (5)*	
-m	im (18)			em (20)		u̯em (29)	ɛm (22)			æm (20)	
-n	in (18)				*i̯en (20)*	*u̯en (21)*			u̯ɛn (22)	æn (19)	i̯æn (1)
-ŋ	iŋ (18)			eŋ (20)		u̯eŋ (29)	ɛŋ (22)		u̯ɛŋ (22)	æŋ (24)	i̯æŋ (24)

V		i̯-	u̯-		i̯-	u̯-		i̯-	u̯-		u̯-		
-ø	ə			a (4)			ɔ			o (7)	u̯o (7)	ʉ	u (16)
-j	əj (15)		u̯əj (15)	aj (15)									uj (9)
-w	əw (7)									ow (16)			uw (3)
-p	əp (7)						ɔp (29)			op (13)			up (9)
-t	ət (7)		u̯ət (7)	at (4)		*u̯at (9)*				ot (13)			ut (9)
-k	ək (7)						ɔk (29)			ok (13)			uk (9)
-m		i̯əm (18)	u̯əm (29)	am (24)					u̯ɔm (27)				
-n	ən (21)	i̯ən (18)	*u̯ən (29)*	an (19)			ɔn (24)						un (27)
-ŋ	əŋ (21)	i̯əŋ (18)	u̯əŋ (29)	aŋ (24)	i̯aŋ (24)		ɔŋ (29)	*i̯ɔŋ (26)*	u̯ɔŋ (29)	oŋ (28)		ʉŋ (30)	uŋ (28)

VV				u̯-			i̯-				u̯-	
-ø			ei (12)	u̯ei (8)		eu (2)	i̯eu (2)			æi (12)	*u̯æi (12)*	æu (3)
-k												
-t												
-m					*eəm (23)*			ɛɔm (22)				
-n			ein (25)									
-ŋ	iəŋ (23)	*iuŋ (23)*				euŋ (23)		ɛɔŋ (22)	ɛuŋ (22)			

VV		u̯-			i̯-					i̯-		
-ø	*əi (10)*	u̯əi (12)		əu (3)	i̯əu (1)	au (3)	ɔi (6)	ɔu (3)	ou (13)	i̯ou (7)	ui (8)	uə (16)
-k				əuk (6)								
-t				əut (13)								
-m				əum (21)								
-n			*əan (21)*	əun (21)								
-ŋ			əaŋ (21)	əuŋ (21)								

Proto Hmongic rimes

Oral

i (1)	ɨ (2) ʉ (8)	u (16)
e (10)		o (7)
		ɔ (6)
æ (5)		a (4)

Nasal

in (18)		iŋ (23) ʉŋ (30)		uŋ (27)
en (20)/ein (25)				oŋ (28)
	ɛŋ (22)	əŋ (21)	ɔŋ (29)	
æn (19)				aŋ (24)/*i̯aŋ (26)*

uw (9)	u̯u (14)
ow (13)	u̯ei (12/17)
æw (3)	u̯ɛ (11)
	u̯a (15)

Rime tables

The rimes of Mienic languages are much more complex than the rimes of Hmongic languages: not only do Mienic languages have final stop consonants and final -m (Hmongic languages only have -n and -ŋ at most), they also show more diphthongs and on-glides.[27] The protolanguage is assumed to have looked more like Mienic in its rime inventory, and this assumption is reflected in the tables above. Chinese loanwords have introduced even more rimes: these rimes appear in the tables in italics. Further research may reveal that other rimes should be also be attributed to the influence of Chinese, which would simplify the picture above.

Correspondence sets

The correspondence sets below follow the numbering of the original 30 Proto Hmongic rime correspondence sets in Wang 1994. In total, however, there are only 28 sets: set 17 has been combined with 12, and set 26 contains only Chinese loanwords.[28] The reason for using the simpler Hmongic rime correspondences to organize the more complex Hmong-Mien rime correspondences is given fully in the introduction to the reconstruction above (section 2.1.3.1). Briefly, this organization of the data makes it possible to see at a glance that in the development of Hmongic, each Hmong-Mien rime merged into one of only a small number of rimes. Thus, each of the super-sets is divided into sub-sets according to differences in the Mienic correspondences which more directly represent the Proto Hmong-Mien rime values. Given such a transparent presentation of the data, the reader will be able to evaluate the reconstruction of each set of Proto Hmong-Mien rimes by two primary measures:

(1) The reconstruction of each Hmong-Mien sub-set must reflect its more conservative Mienic reflexes in a direct and natural way[29]

(2) Hmong-Mien sub-set reconstructions must share certain phonological features which would have made their merger into a single Hmongic rime natural.

Information on the Chinese loanwords that belong to each sub-set have also been included. Middle Chinese forms are the transcriptions of Baxter (2000), and Old Chinese reconstructions represent work in progress by Baxter and Sagart (2009). These provide yet a third measure for evaluating the reconstruction:

(3) Loanwords must have fallen into sets of native words that were phonologically similar.

The first ("a") sub-set within each super-set will contain words attested in Hmongic alone, and will illustrate the merger target pattern. The next sub-sets will contain words attested in both Hmongic and Mienic, each with a different array of reflexes in Mienic, requiring a different Hmong-Mien reconstruction. Words attested in Mienic alone will be included if they correspond to Mienic words that have cognates in Hmongic and thus clearly belong in

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[27] Vowel-length contrasts in Mun and Mien increase the complexity of these rime inventories. Vowel length has not been reconstructed for Hmong-Mien, however: see section 2.1.3.2 for discussion.

[28] And set 14 consists of only one word, 'two'.

[29] Although Mienic rimes are in general closer to those of Proto Hmong-Mien, there have been a number of mergers into Mienic as well, as described in the introduction to the reconstruction, section 2.1.3.1.

a particular sub-set, or, in some instances, if the reconstructed Mienic rime is closely related to the other rimes in a particular super-set. At the end of this section, three small Mienic sets are presented that display correspondences not clearly represented in any of the super-sets that bridge the Hmong-Mien divide.

The words illustrating the rime correspondences are from Wang and Mao 1995 and Wang 1994, with the addition of a few others. The main objective in this work is not to present more data, but to organize it in such a way that the rime correspondence patterns and the justification for the reconstructions can be clearly understood, evaluated, and improved by others.

Languages

For reasons of space and ease of use, the same eleven maximally distinct languages (seven Hmongic, four Mienic) used in section 2.2 on Hmong-Mien onsets were chosen to represent all the languages of the Hmong-Mien family. However, given the greater variation in vowel reflexes, using such a small sample makes it difficult to see the rationale behind some of the rime reconstructions; the reader may wish to consult Wang and Mao 1995, which includes forms from 23 sampling locations. If a form was taken from Wang and Mao 1995, Wang 1994,[30] or one of the primary sources listed, no mention is made of the source of the form. If a form was taken from another source, or if another closely related dialect was substituted for the one listed here, the source and dialect will be given in the notes. The eleven criterial languages will be referred to in discussion by the underlined names.

1. East Hmongic (Qiandong): Northern vernacular: Guizhou, Kaili County, Yanghao Township, Yanghao

   Sources: Wang and Mao 1995, language 1 = Wang 1994, language 1

2. North Hmongic (Xiangxi): Western vernacular: Hunan, Huayuan County, Jiwei Township, Jiwei

   Sources: Wang and Mao 1995, language 2 = Wang 1994, language 2

3. West Hmongic (Chuanqiandian): CQD subdialect, #1 vernacular: Laos/Thailand, White Hmong

   Sources: Heimbach 1979, Bertrais 1979 [1964]

4. West Hmongic (Chuanqiandian): Mashan subdialect, Central vernacular: Guizhou Province, Ziyun Miao/Buyi A.C., Zongdi Township, Zongdi

   Sources: Wang and Mao 1995, language 7 = Wang 1994, language 7 (tones 1a, 3a, 5a, 7a < voiceless stop, preglottalized stop, and preglottalized sonorant onsets; tones 1b, 3b, 5b, 7b < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)

5. West Hmongic (Chuanqiandian): Luopohe subdialect, #2 vernacular: Guizhou Province, Fuyuan County, Fuyuan

   Sources: Wang and Mao 1995 language 8 = Wang 1994, language 8 (no tone split)

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[30] For some reason, not all forms from Wang 1994 were included in Wang and Mao 1995. Unless obvious Chinese loans, they have all been incorporated here.

6. Hmongic: Guangxi/Zhuang A. R., Jinxiu Yao A. C., Changdong Township, Jiongnai
   Sources: Wang and Mao 1995, language 13; Mao and Li 2001
7. Hmongic: Guangxi/Zhuang A. R., Miao A.C., Rongshui District, Baiyun Pa-Hng
   Source: Niederer 1997
8. Mienic: Mien, Luoxiang vernacular: Guangxi/Zhuang A. R., Jinxiu Yao A.C., Luoxiang Township, Mien
   Sources: Wang and Mao 1995, language 17; L-Thongkum 1993 "JX" (tone 5 < voiceless stop, preglottalized stop, and preglottalized sonorant onsets; tone 5' < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)
9. Mienic: Jinmen: Guangxi/Zhuang A. R., Lingyun County, Lanjin Township, Mun
   Source: Wang and Mao 1995, language 20 (tones 1, 3, 5, 7 < voiceless stop, preglottalized stop, and preglottalized sonorant onsets; tones 1', 3', 5', 7' < voiceless aspirated stop, voiceless fricative, and voiceless sonorant onsets)
10. Mienic: Biaomin: Guangxi/Zhuang A. R., Quanzhou county, Dongshan Yao Township, Biao Min
    Sources: Wang and Mao 1995, language 21; Solnit 1982
11. Mienic: Zaomin: Guangdong Province, Liannan Yao A. C., Daping Township, Zao Min
    Source: Wang and Mao 1995, language 23

1

*1a. H *i*

	1	2	3	4	5	6	7	H
1. to grow (TR)	tɕeen^{4}	–	–	–	ʑe^{B}	tei^{4}	–	*ɟi^{B}
2. noose/trap	–	–	tʂi^{4}	–	–	–	–	*bri^{B}
3. tea	tɕeen^{4}	ci^{4}	–	tɕi^{4}	ʑi^{B}	tʃi^{4}	tɕi^{4}	*gji^{B}
4. to bear fruit	tsen^{5}	–	tsi^{5}	pei^{5a}	pze^{C}	–	–	*pji^{C}
5. late	–	–	li^{6}	li^{6}	–	–	lɦe^{6}	*li^{C}

Loan in set 1a:
tsyek (MC) 炙 *zhì 'to roast/broil'* > *H *ci^{C} 'to bake/toast'*
> *H *ɟi^{C} 'to burn/be alight'*

*1b. HM *i (1, 18)*[31]

H *i : HM *i : M *i

	1	2	3	4	5	6	7	8	9	10	11	HM/M
6. bedbug	–	–	–	–	–	pi^{1}	pɪ^{5}	pi^{1}	pi^{1}	pi^{1}	bɛi^{1}	*pji
7. stomach								ɕi^{1}	tθi$^{1'}$	–	sɛi^{1}	*si^{A}
8. seven								ŋi^{6}	ŋji^{6}	ni^{6}	ŋi^{6}	*ŋji^{C}

Loans in set 1b:
nej (MC) 泥 *ní 'mud'* > *M *hnɨ^{A}*
tejX (MC) 底 *dǐ 'bottom/base'* > *M *ʔdi^{B} 'lower level'*
dzi (MC) 慈 *cí 'love/mother'* > *M *ndji^{B} 'mother/aunt'*
dojH (MC) 袋 *dài 'bag'* > *M *di^{C}*

*1c. HM *i̯æn (81)*

H *i : HM *i̯æn : M *æn

	1	2	3	4	5	6	7	8	9	10	11	HM
9. 3SG (he/she/it)	nen^{2}	–	nɯ^{4}	ŋi^{4}	nen^{B}	nɐŋ^{4}	nɯ^{4}	nan^{2}	nen^{2}	nin^{2}	–	*ni̯æn(X)

Loan in set 1c:
**[k]ˤon (OC)* > *kwan (MC)* 冠 *guān 'crest/comb'* > *HM *ʔwi̯æn*

*1d. HM *i̯əu (210)*

H *i : HM *i̯əu : M *i̯əu

	1	2	3	4	5	6	7	8	9	10	11	HM/M
10. gall bladder	ɕen^{1}	tɕi^{1}	tʂi^{1}	sei^{1a}	tse^{A}	–	tɕe^{1}	–	–	–	tɛu^{1}	*tsji̯əu
11. 2PL (you)	maŋ^{2}	me^{2}	ne^{2}	mein^{2}	men^{A}	–	–	–	njou^{2}	–	–	*mi̯əu
12. fruit	tsen^{3}	pi^{3}	tsi^{3}	pei^{3a}	pze^{B}	pi^{3}	pje^{3}	pjeu^{3}	pjɔu^{3}	pjau^{3}	bɛu^{3}	*pji̯əuX
13. ant								ɕeu^{3}	sɔu^{3}	sau^{3}	dziu^{3}	*ɻhi̯əu^{B}
14. CLF-fields								lau$^{5'}$	–	–	–	*ʔli̯əu^{C}

[31] The numbers following each rime reconstruction represent the rime sets in Wang and Mao 1995 to which these words are assigned.

Loans in set 1d:

**m.b(r)u (OC)*	>	*bjuw (MC)*	浮	*fú 'to float'*	>	*M *mbi̯əu^{A}*
**[r]u (OC)*	>	*ljuw (MC)*	流	*liú 'to flow'*	>	*M *ri̯əu^{C}*

*1e. HM *i̯ɛk (148, 110)*

H *i : HM *i̯ɛk : M *i̯ɛk

	1	2	3	4	5	6	7	8	9	10	11	HM/M
15. chaff/husk	–	–	–	–	–	–	m̥e^{5}	bwa^{7}	va$^{7'}$	bja^{7}	bjɛ^{7}	*mphi̯ɛk
16. black								kje^{7}	kja^{7}	kja^{7}	kjɛ^{7}	*qri̯ɛk^{D}

Loans in set 1e:

tsyak (MC)	灼	*zhuó 'to burn'*	>	*M *dji̯ɛk^{D}*
tsyek (MC)	隻	*zhī 'CLF-birds'*	>	*M *tsi̯ɛk^{D}*
syik (MC)	識	*shí 'to know/recognize'*	>	*M *tsi̯ɛk^{D}*
tsyik (MC)	織	*zhī 'to weave'*	>	*M *tsi̯ɛk^{D}*
sik (MC)	媳	*sī 'daughter/girl'*	>	*M *ɕi̯ɛk^{D}*
bak (MC)	薄	*bó 'thin'*	>	*M *bi̯ɛk^{D}*

Discussion

In this and in subsequent correspondences, the initial element of the Hmong-Mien rime is continued into Hmongic. This is in keeping with the general tendency for Hmongic to retain the beginning of the Hmong-Mien syllable and Mienic to retain the end of the Hmong-Mien syllable. For many of the words in rime 1, one could have chosen to reconstruct the medial high front element as -j- , part of the onset, instead of an on-glide to the vowel, part of the rime. Given the fact that words in this set merged to Hmongic *-i whereas other words with medial -j- did not, these words are reconstructed with the high front element already associated more closely with the vowel.

Another rime which fits the pattern above is Hmong-Mien *-i̯ɛp, represented only by Mienic *ri̯ɛp^{D} (2.57/1) 'to erect' from Chinese 立 'to stand' (OC *(kə.)rəp > MC lip > Man. *li*).

Notes

2. Xianjin Hmong (Wang and Mao 3) has been substituted for White Hmong (3). Other forms appear in Wang 1994.
4. 'To bear fruit' is a C-tone derivative of 'fruit' (rime 1d); see chapter 4.
5. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
8. This is from Tibeto-Burman *s-nis (Benedict 1987a:13). HM *djuŋH (2.18/28) may be from the same source, but the correspondence is difficult. See chapter 5, section 2.
9. The 3SG pronoun is irregular in rime and in tone (tone 4 in Hmongic, tone 2 in Mienic). The placement of this word in rime 1 is based on the Hmongic reflexes; given this analysis, the nasal codas that appear in Hmongic must be taken as secondary.
11. The Hmongic forms are from Wang 1994 and the Mun form (9) is from Shintani and Yang 1990.
12. Compare derivative 'to bear fruit' in set 1a above.
14. Also Jiangdi Mien /ljou^{5}/ and Xiangnan Mien /ljəu^{5}/. Compare Gaopo (Hmongic) /loŋ^{5}/ 'field' and Tibeto-Burman *low 'field' (Matisoff 2003).

15. This word is probably related to Hmongic *S-phjæ^{C} ‘chaff/husk’ (1.17/5). The -w- in Luoxiang Mien (8) is secondary: -j- dropped, then -w- developed between a labial and /a/.
16. This is no doubt the same as Hmongic *qrɛŋ^{A} ‘black’ (6.46/22).

2

*2a. H *i̱*

	1	2	3	4	5	6	7	H
1. clean	sha^{1}	ntsha^{1}	–	ntsei^{1b}	nʔtshe^{A}	θei^{1}	–	*ntshi̱^{A}
2. that/the former	i^{3}	a^{3}	i^{5}	i^{3a}	e^{B}	–	–	*ʔi̱^{B}
3. what	ɕi^{3}	–	tʂi^{5}	si^{7b}	tsi^{B}	–	–	*tsji̱^{B}
4. whorl at top of head	ʑi^{6}	–	ji^{4}	ʑi^{4}	we^{B}	–	–	*ji̱^{B}
5. hoop	tha^{5}	–	thi^{5}	tei^{5b}	the^{C}	–	–	*thi̱^{C}
6. to squeeze/pinch	la^{5}	lɑ^{5}	li^{5}	lei^{5a}	–	l̥i^{5}	la^{5}	*ʔli̱^{C}
7. wildcat	l̥aŋ^{7}	–	pli^{7}	pl̥ei^{5a}	ple^{C}	–	–	*plji̱^{D}

Loan in set 2a:
sje (MC) 'mutually' 廝 *sī 'with each other' > HM *sji̱$^{A\text{-}D}$ RECIPROCAL*

*2b. HM *i̱ (35)*

H *i̱ : HM *i̱ : M *i̱

	1	2	3	4	5	6	7	8	9	10	11	Initial	HM
8. one	i^{1}	ɑ^{3}	i^{1}	ei^{1a}	–	i^{3}	–	–	–	i^{1}	a^{1}	7.1	*ʔi̱

Loan in set 2b:
liX (MC) 里 *lǐ 'half kilometer' > HM *lji̱X*

*2c. HM *eu (35)*

H *i̱ : HM *eu : M *eu

	1	2	3	4	5	6	7	8	9	10	11	HM
9. to fry	ka^{1}	ca^{1}	ki^{1}	tɕi^{1a}	tɕe^{A}	–	–	–	[tji:^{1}]	khla^{1}	–	*kleu
10. butterfly	–	–	–	mpei^{5a}	mʔple^{C}	–	–	bjeu$^{5'}$	blɔu$^{5'}$	bja^{4}	–	*mpleuH

*2d. HM *i̱eu (2, 35)*

H *i̱ : HM *i̱eu : M *i̱eu

	1	2	3	4	5	6	7	8	9	10	11	HM/M
11. lightweight	fha^{1}	ɕa^{1}	ʂi^{1}	sei^{1b}	se^{A}	ɣ̥uai$^{1'}$	fɤ^{1}	ɕeu^{1}	sɔu$^{1'}$	hjau^{1}	–	*-sji̱eu
12. scissors								jeu^{3}	d̥i:u^{3}	gjau^{3}	gɛu^{3}	*ʔglji̱eu^{B}

*2e. HM *ik (15)*

H *i̱ : HM *ik : M *it

	1	2	3	4	5	6	7	8	9	10	11	HM
13. flip with finger	–	–	nti^{3}	ntei^{5a}	–	ntai^{5}	na^{5}	dit^{7}	–	–	–	*ntik

*2f. HM *ek (17, 34)*

H *i̱ : HM *ek : M *ek

	1	2	3	4	5	6	7	8	9	10	11	M
14. to dry (clothes)								–	si^{7}	tɕi^{7}	tsaŋ^{1}	*tsek^{D}

Loans in set 2f:
phek (MC) 劈 *pī 'to split/chop'* > *HM *phek*
tsyhek (MC) 赤 *chì 'red'* > *M *sek^{D}*

Discussion

In set 2c above, *ik is reconstructed for Hmong-Mien, despite the reflexes in -it in Mienic, because the Hmongic reflexes have tone 5: Hmong-Mien D-tone syllables ending in -k regularly go to the corresponding register of the C-tone in Hmongic.

Notes

3. The variability of tone may be due to this word rarely being used in isolation. For example, in White Hmong (3) it is part of the unanalyzable word *dabtsi* 'what', and tone sandhi rules would explain a change from tone 3 to tone 5.
4. In White Hmong, this means 'cowlick' (an errant patch of hair growing anywhere).
5. Possibly from Chinese 帶 'belt, girdle' (MC tajH > Man. *dài*), although the Chinese initial is not aspirated.
7. Perhaps the same as Chinese 狸 'wildcat' (OC *[m]ə.rə > MC li > Man. *lí*) from a variant *bù lái* indicating an initial *pə- (Sagart 1999:88). In Hmong-Mien the word would have had a final -p or -t, so this may be a loan from Hmong-Mien to Chinese.
8. 'One' is highly irregular, which is to be expected since it is both short and frequently used. It is the same as Chinese 一 'one' (OC *ʔi[t] > MC ʔjit > Man. *yī*); see chapter 5. The Jiongnai (6) form is from Mao and Li 2001.
9. Possibly from Chinese 攪 'disturb, stir' (OC *kˁruʔ > MC kæwX > Man. *jiǎo*), but the tones do not correspond. Biao Min /khla^{1}/ (Solnit 1982) means 'turn over, stir' (of drying grain, stir frying), hence this reconstruction with medial -l-, despite the problem with aspiration. In Hainan Mun 'to fry in oil or fat' is /tji:^{1}/. The rime does not correspond—it is probably a late borrowing from 煎 'to fry' (Man. *jiān*).
13. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Although some Mienic forms end in -t, the tone correspondence 7 Mienic to 5 Hmongic is usually indicative of final -k.

3

*3a. H *æw*

	1	2	3	4	5	6	7	H
1. to sow	–	pʐo^{1}	tʂe^{1}	pʐæ^{1a}	pji^{A}	–	–	*præw^{A}
2. steel	sha^{1}	sɯ^{1}	–	sæ^{1b}	–	–	tɕo^{1}	*tshæw^{A}
3. to sweep	tɕhi^{1}	–	che^{1}	tɕæ^{1b}	tɕhi^{A}	–	–	*chæw^{A}
4. river	–	–	de^{2}	–	ʁlei^{A}	–	–	*ɢlæw^{A}
5. body/trunk	tɕi^{3}	tɕɯ^{3}	ce^{3}	tɕæ^{3a}	tɕi^{B}	–	–	*cæw^{B}
6. to burn (TR)	phi^{3}	–	–	–	–	ɣa^{3}	pho^{3}	*phjæw^{B}
7. wife/elder sister	vi^{3}	–	vi^{3}	–	–	va^{3}	vo^{3}	*ʔwæw^{B}
8. leg/branch	tɕi^{4}	kɯ^{4}	ce^{6}	tɕe^{4}	ʑa^{B}	–	–	*ɟæw^{B}
9. mountain	pi^{4}	–	pe^{8}	pe^{4}	vei^{B}	–	–	*bæw^{B}
10. to carry on shoulder	tɕi^{5}	–	–	tɕæ^{5a}	–	–	–	*cæw^{C}
11. to climb	tɕi^{5}	ɳtɕɯ^{5}	ɲce^{5}	ɳtɕæ^{5a}	ɳʔtɕi^{C}	ntja^{5}	–	*ɲcæw^{C}
12. egg	ki^{5}	–	qe^{5}	hæ^{5a}	qwji^{C}	kja^{5}	ko^{5}	*qæw^{C}
13. frost	ta^{5}	tɯ^{5}	te^{5}	tæ^{5a}	ti^{C}	ða^{5}	no^{5}	*tæw^{C}
14. near	ɣi^{5}	ʐɯ^{5}	ʐe^{5}	ʐæ^{5a}	ʔwji^{C}	ŋkja^{5}	jo^{5}	*-ʔræw^{C}
15. to soak	–	ɳtɕɯ^{5}	ɳtʂe^{5}	ntsæ^{5a}	nʔtsi^{C}	ɳʧa^{5}	ɳtɕo^{5}	*ntsjæw^{C}

Loans in set 3a:

**mə-qˤ(r)o (OC)* > *kuw (MC)* 鉤 *gōu 'hook'* > *H *ɴqæw^{C}*
**[tsʰ]rək (OC)* > *tsrhik (MC)* 叕 *cè 'sharp-cutting'* > *H *ntsjæw^{C} 'sharp'*
**N-t<r>ək (OC)* > *drik (MC)* 直 *zhí 'straight/vertical'* > *H *ndzjæw^{C} 'vertical/upright'*[32]

*3b. HM *æu (113, 259)*

H *æw : HM *æu : M *æu

	1	2	3	4	5	6	7	8	9	10	11	HM/M
16. ear	zɛ^{2}	mʐɯ^{2}	ɳtʂe^{2}	mpʐæ^{2}	mpji^{A}	mpja^{2}	mjo^{2}	–	–	blau^{2}	bju^{2}	*mbræu
17. mushroom	tɕi^{1}	ŋkɯ^{1}	ɲce^{1}	ɳtɕæ^{1a}	ɳʔtɕi^{A}	ɳʧa^{1}	ŋo^{1}	tɕeu^{1}	sɔu^{1}	ʈau^{1}	ku^{1}	*ŋkjæu
18. pillar	ɳi^{2}	ɳɯ^{2}	ɲce^{2}	ɳtɕæ^{2}	ɳtɕi^{A}	–	ŋo^{2}	–	–	tɕɔu^{2}	–	*ɲɟæu
19. uncle	ʐu^{5}	ʑo^{4}	–	–	–	ja^{2}	jo^{4}	–	jɔu^{4}	–	–	*jæuX
20. to sharpen /grind								ʤeu^{5}	gjɔu$^{5'}$	ɖau^{5}	dziu^{5}	*dhjæu^{C}
21. to sweep								–	ɖɔu^{5}	–	–	*ʔɟæu^{C}

Loan in set 3b:

gjew (MC) 蕎 *qiáo 'buckwheat'* > *HM *ɟæu*

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[32] 'Upright/erect' is attested only in Xianjin and Shimen (Wang 1994) and in White Hmong (*ntseg* 'erect/vertical/steep'), closely related West Hmongic dialects.

*3c. HM *əu (96)*

H *æw : HM *əu : M *əu

	1	2	3	4	5	6	7	8	9	10	11	HM/M
22. earth	ta^{1}	tɯ^{1}	te^{1}	tæ^{1a}	ti^{A}	ta^{1}	to^{1}	dau^{1}	–	–	–	*N-təu
23. stone	ɣi^{1}	ʐɯ^{1}	ʐe^{1}	ʐæ^{1a}	ʔwji^{A}	ŋkja^{1}	jo^{1}	gau^{1}	gjau^{1}	lau^{1}	ɖzu^{1}	*-ʔrəu
24. long (time)	la^{2}	lɯ^{2}	le^{2}	læ^{2}	li^{A}	la^{2}	lo^{2}	lau^{2}	lau^{2}	–	lu^{2}	*ləu
25. riceplant /paddy	na^{2}	nɯ^{2}	mple^{2}	mplæ^{2}	–	mpla^{2}	mjo^{2}	blau^{2}	blau^{2}	blau^{2}	bjau^{2}	*mbləu
26. house	tsɛ^{3}	pʐɯ^{3}	tʂe^{3}	pʐæ^{3a}	pei^{B}	pja^{3}	pjo^{3}	pjau^{3}	pjau^{3}	pla^{3}	pju^{3}	*prəuX
27. road/way	ki^{3}	kɯ^{3}	ke^{3}	kæ^{3a}	tɕi^{B}	kja^{3}	ko^{3}	kjau^{3}	kjau^{3}	kla^{3}	tsu^{3}	*kləuX
28. salt	ɕi^{3}	ɳtɕɯ^{3}	ɳtʂe^{3}	ntsæ^{3a}	nʔtsi^{B}	–	ŋo^{3}	dau^{3}	dau^{3}	dza^{3}	–	*ntsjəuX
29. fish	zɛ^{4}	mzʐɯ^{4}	ɳtʂe^{4}	mpʐe^{4}	mpji^{B}	mpja^{4}	mjo^{4}	bjau^{4}	bjau^{4}	bla^{4}	bju^{4}	*mbrəuX
30. nest	ɣi^{4}	ʐɯ^{4}	ʐe^{4}	ʐe^{4}	wji^{B}	ŋkja^{4}	–	gau^{4}	gjau^{4}	la^{4}	–	*-rəuX
31. to lay eggs	na^{6}	–	nte^{6}	nte^{6}	nti^{C}	tei^{5}	no^{6}	–	–	dau^{6}	du^{6}	*ndəuH
32. egg								kjau$^{5'}$	kjau^{5}	klau^{5}	tsu^{5}	*kləu^{C}

Loan in set 3c:
**ʔˤuʔ (OC) > ʔawX (MC)* 媪 *ǎo 'old woman' > HM *ʔəuX 'elder sister/wife'*

*3d. HM *au (76, 95, 177)*

H *æw : HM *au : M *au

	1	2	3	4	5	6	7	8	9	10	11	HM/M
33. to answer	ta^{1}	tɯ^{1}	te^{1}	tæ^{1a}	ti^{A}	ta^{1}	no^{1}	–	tau^{1}	–	du^{1}	*tau
34. long	ta^{3}	ntɯ^{3}	nte^{3}	ntæ^{3a}	nʔti^{B}	ða^{3}	to^{3}	da:u^{3}	da:u^{3}	da^{3}	du^{3}	*ntauX
35. to warm self by fire	ta^{5}	ntɯ^{5}	nte^{5}	ntæ^{5a}	nʔti^{C}	nta^{5}	no^{5}	–	da:u^{5}	dau^{5}	du^{5}	*ntauH
36. mouse/rat								na:u^{4}	–	–	–	*nau^{B}

*3e. HM *ɔu (77, 244)*

H *æw : HM *ɔu : M *ɔu

	1	2	3	4	5	6	7	8	9	10	11	HM/M
37. three	pi^{1}	pu^{1}	pe^{1}	pæ^{1a}	pzi^{A}	pa^{1}	po^{1}	pu^{1}	pu^{1}	pau^{1}	bu^{5}	*pjɔu
38. 1PL (we/us)	pi^{1}	pɯ^{1}	pe^{1}	pæ^{1a}	pei^{A}	pa^{1}	pɯ^{5}	–	pu^{1}	–	bu^{1}	*N-pɔu
39. hand/arm	pi^{4}	tɯ^{4}	te^{4}	ʂe^{4}	wei^{B}	tʃa^{4}	tɛ-pɯ^{4}	pu^{4}	pu^{4}	pau^{4}	pu^{4}	*-bɔuX
40. name	pi^{5}	mpu^{5}	mpe^{5}	mpæ^{5a}	mʔpei^{C}	mpa^{5}	mo^{5}	bu$^{5'}$	bu^{5}	bau^{5}	bu^{5}	*mpɔuH
41. table								du^{2}	nu^{2}	–	–	*ndɔu^{A}
42. blind								bu^{3}	bu^{4}	–	–	*ʔblɔu^{B}
43. to burn								pu^{3}	pu^{3}	pau^{3}	bu^{3}	*pɔu^{B}
44. grey								bu^{2}	bu^{3}	bau^{3}	–	*ʔbɔu^{B}
45. to wait								tɕu^{3}	ʈu^{3}	ʈu^{3}	–	*tjɔu^{B}
46. brother								mai^{4}	–	mau^{4}	mu^{4}	*mɔu^{B}

Loan in set 3e:
huwX (MC) 厚 *hòu 'thick' > M *ɦɔu^{B}*

*3f. HM *uw (115)*

H *æw : HM *uw : M *u

	1	2	3	4	5	6	7	8	9	10	11	HM/M
47. far	–	quɯ^{1}	de^{1}	hwæ^{1a}	qwei^{A}	kwa^{1}	ko^{1}	ko^{1}	ku^{1}	ku^{1}	kɔu^{1}	*q^{w}uw
48. dog	l̥a^{3}	qwɯ^{3}	de^{3}	l̥æ^{3a}	qlei^{B}	kla^{3}	ka-ljɔ̃^{7}	klo^{3}	klu^{3}	klu^{3}	ku^{3}	*qluwX
49. good/tasty								–	ku^{3}	–	kɔm^{3}	*khu^{B}

Discussion

The details of the phonetic values assigned to the subsets of set 3 are approximate: the general pattern of a back vowel followed by a back rounded vowel is what they all share, however, and what allowed them to merge into Hmongic *-æw.

Notes

3 & 21. These two sets of forms meaning ‘to sweep’ have the same rime and place of articulation, but differ in tone and aspiration.
5 & 8. These two words appear to be morphologically related. The difference in initial voicing may have been due to a prefix; see chapter 4.
7. ‘Elder sister’ in White Hmong (3).
9. White Hmong ‘up there on the slope’. The tone in White Hmong is the result of a recent morphological class formation by tone-shift (geographical feature > locative) (Ratliff 1992a:104-112).
12 & 32. These two words for ‘egg’ are no doubt the same; although there are difficulties with the onsets, their rimes and tones correspond.
15. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
17. Compare Chinese 菇 ‘mushroom’ (OC *mə.kˤa > MC ku > Man. *gū*).
18. The Yanghao form (1) is from Office of Miao-Yao Research Lexicon 1987. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
20. Perhaps from Chinese 剉 ‘to file’ (MC tshwaH > Man. *cuò*).
21. This may be from Chinese 帚 ‘broom’ (MC tsyuwX > Man. *zhǒu*), although the initial voicing suggests *ɲc-, and the tones are different.
22. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
23. Also ‘grindstone’ in White Hmong.
24. The Green Mong form meaning ‘a long time ago’ has been substituted for White Hmong (3).
29. Compare Proto Tai *pla A1 (Li 1977), Proto Kam-Sui *mprai 3 (Thurgood 1988).
36. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Hmongic *naŋ^{B} ‘mouse/rat’ (2.9/24) is probably the same.
37 & 38. See discussion of the similarity between‘three’ and ‘we/us’ in chapter 5. ‘We/us’ is used as a plural suffix in Mien, suggesting an original meaning of ‘group’. In Hainan Mun, it is a 1PL exclusive pronoun.
44. In Hainan Mun, the cognate means ‘blue’ and the word for ‘grey’ is the compound ‘white-blue’; in Biao Min, it also means ‘mildew, mold’ (Solnit 1982).
47. Compare Chinese 迂 ‘bend, deflect; astray, far from’ (OC *q^{w}(r)a > MC ʔju > Man. *yū*).
48. This word for ‘dog’ appears in languages across the area: compare Chinese 狗 ‘dog’ (OC *-[k]^{ʕ}(r)oʔ > MC kuwX > Man. *gǒu*) and see Benedict 1996.

4

*4a. H *a*

	1	2	3	4	5	6	7	H
1. cherry	va^{1}	wɑ^{1}	–	ʑi^{1a}	–	–	–	*ʔwa^{A}
2. honey	va^{1}	–	zɻ^{1}	zɻ^{1a}	ʔwja^{A}	–	–	*ʔra^{A}
3. rough/coarse	sha^{1}	ntshɑ^{1}	ntshi^{1}	ntsi^{1b}	nʔtsha^{A}	–	–	*ntsha^{A}
4. soul/spirit	l̥u^{2}	pjə^{2}	pli^{6}	plɪ^{6}	vlo^{A}	–	pjɔ^{2}	*blja^{A}
5. finger	t̥a^{3}	ntɑ^{3}	nti^{3}	nti^{3a}	nʔta^{B}	–	–	*nta^{B}
6. to pour	tsɑ^{5}	pzɻa^{5}	tʂi^{5}	–	–	–	–	*pra^{C}
7. to lean (on stick)	ŋa^{6}	ŋɑ^{6}	ŋʈi^{6}	ŋʈe^{4}	ŋʈʂa^{C}	–	ŋa^{2}	*ŋgra^{C}
8. to escape	fa^{8}	qwei^{8}	di^{8}	hwɪ^{8}	ʁwa^{D}	–	–	*ɢ^{w}a^{D}
9. to wake	–	–	tʂi^{8}	si^{8}	za^{D}	–	tɕi^{8}	*dzja^{D}

Loans in set 4a:

**[g]^{ʕ}a 'gourd' (OC)*	>	*hu (MC)*	葫	*hú*	*'garlic'*	>	*H *ɢa^{A} 'garlic'*
**mə.q^{ʕ}<r>aʔ-s (OC)*	>	*kœH (MC)*	價	*jià*	*'price'*	>	*H *ɴqa^{C}*

*4b. HM *a (92, 130, 149, 187)*

H *a : HM *a : M *a

	1	2	3	4	5	6	7	8	9	10	11	HM/M
10. five	tsa^{1}	pzɻɑ^{1}	tʂi^{1}	pzɻ^{1a}	pja^{A}	pui^{1}	pja^{1}	pla^{1}	pja^{1}	pla^{1}	pjɛ^{5}	*pra
11. father/male	pa^{3}	pɑ^{3}	tsi^{3}	pi^{3a}	pa^{B}	pe^{3}	pa^{7}	pwa^{3}	fa^{3}	–	–	*pjaX
12. stick	–	pzɻɑ^{3}	–	–	–	–	pja^{3}	pla^{3}	pja^{3}	–	–	*praX
13. to get up	–	–	–	–	–	tʃe^{4}	–	kja^{4}	kwe^{4}	ʈɔ^{4}	kjɛ^{4}	*g^{w}jaX
14. moon/month	l̥ha^{5}	l̥hɑ^{5}	hl̥i^{5}	li^{5b}	l̥a^{C}	l̥e^{5}	l̥a^{5}	la^{5}	la^{5}	ɬa^{5}	lɔu^{5}	*hlaH
15. elder brother	ta^{2}	–	ti^{2}	ti^{2}	ða^{A}	–	–	–	ta^{2}	–	–	*da
16. urine	va^{4}	zɻɑ^{4}	zɻi^{4}	zɻ^{4}	wja^{B}	ŋkwe^{4}	ve^{4}	wa^{4}	va^{4}	lɔ^{4}	vjɛ^{4}	*-raX
17. 1SG (I/me)								ja^{1}	ja^{1}	–	–	*ʔja^{A}
18. grass								m̥wa^{3}	wa^{3}	m̥ja^{3}	mjɛ^{3}	*hmja^{B}
19. meat								a^{3}	a^{3}	–	–	*ʔa^{B}
20. to carry on back								ŋa$^{5'}$	ŋa^{5}	ŋa^{3}	–	*hŋa^{C}

Loans in set 4b:

**k^{w}ʕra (OC)*	>	*kwæ (MC)*	瓜	*guā*	*'melon/gourd'*	>	*HM *K^{w}a 'cucumber'*
		gja (MC)	茄	*qié*	*'eggplant'*	>	*HM *ɟa*
**Cə.kʕraʔ (OC)*	>	*kæX (MC)*	假	*jiǎ*	*'to borrow'*	>	*HM *KaX*
**(mə)-pʕaʔ (OC)*	>	*puX (MC)*	補	*bǔ*	*'repair/mend'*	>	*HM *mpjaX*
**[g]^{ʕ}raʔ 'down' (OC)*	>	*hæX (MC)*	下	*xià*	*'low/short'*	>	*HM *GaX*
**[g]^{ʕ}raʔ 'down' (OC)*	>	*hæX (MC)*	下	*xià*	*'to descend'*	>	*H *ʁɢa^{B}*
**mə-[g]^{ʕ}raʔ-s 'to descend' (OC)*	>	*hæH (MC)*	下	*xià*	*'to descend'*	>	*M *ɣa^{C}*
		bæ (MC)	耙	*pá*	*'to rake'*	>	*M *ba^{A}*
		dræ (MC)	茶	*chá*	*'tea'*	>	*M *ɟa^{A}*
		sjæX (MC)	寫	*xiě*	*'to write'*	>	*M *xja^{B}*

*4c. HM *at (88, 107, 127 and 221)*

H *a : HM *at : M *at

	1	2	3	4	5	6	7	8	9	10	11	HM/M
21. wing	ta^{7}	tei^{7}	ti^{7}	ti^{7a}	ta^{D}	ðe^{7}	te^{7}	da:t^{7}	da:t^{7}	–	dɔt^{7}	*N-tat
22. spicy	za^{8}	mzɐ̯i^{8}	ɳʈʂi^{8}	mpzɻ^{8}	mpja^{D}	mpwai^{8}	mje^{8}	bla:t^{8}	bjat^{8}	blan^{8}	bjɛt^{8}	*mbrat
23. eight	ʑa^{8}	ʑi^{8}	ji^{8}	ʑi^{8}	ʑa^{D}	je^{8}	ji^{8}	jat^{8}	jet^{8}	hjɛn^{8}	dzjat^{8}	*jat
24. wooden basin								pwat^{7}	–	–	–	*pjat^{D}

Loans in set 4c:

**Nə-q^{hc}at (OC)* > *khat (MC)* 渴 *kě 'thirsty'* > *HM *NKhat*
**mə-k^{c}at (OC)* > *kat (MC)* 割 *gē 'to cut'* > *M *kat^{D}*

*4d. M *ak (184)*

	1	2	3	4	5	6	7	H	HM	M	8	9	10	11	Initial	M
25. thick/dense										*ak	ma^{8}	ma^{6}	–	mɔu^{8}	1.9	*mak^{D}

Discussion

The most interesting feature of this rime set is the way that Jiwei (Qo Xiong) (2) and Pa-Hng (12) pattern. They show a rime difference that reflects whether or not the Hmong-Mien rimes of this set (as reflected in the Mienic forms) were open or closed. Open Hmong-Mien rime 4b yields Jiwei /ɑ/ and Pa-Hng /a/, whereas the closed Hmong-Mien rime 4c yields Jiwei /ei, i/ and Pa-Hng /e, i/. The reflection of the open/closed Hmong-Mien contrast as a vowel quality difference can also be seen in Jiwei in rimes 12/17 and 13, and in Pa Hng in rime 7. This suggests that Jiwei and Pa-Hng may have split off the main Hmongic branch at an early stage (see Strecker 1987a,b on the conservatism of "Na-e", or Pa-Hng).

The effect of the medial *-r- in 'spicy' and initial *j- in 'eight' on the rime *-at account for the irregularities in set 4c.

Notes

3. Compare Chinese 粗 'coarse' (OC *s.[r̥]^{c}a > MC tshu > Man. *cū*).
4. Compare Tibeto-Burman *b-la 'demon, soul' > Nung /phəla/ (Benedict 1972). Tone 6 forms can be explained as sandhi form promotions, but the rime is highly irregular.
5. Mienic *ʔdok^{D} 'finger' (2.4/13) may be related.
6. Forms taken from Office of Miao-Yao Research Lexicon (1987). The details of the low vowels in languages 1 and 2 do not correspond, but the word seems to fit in this set given the White Hmong cognate /tʂi^{5}/ 'to pour'.
7. Also Ho Ne /ki^{4}/. White Hmong (3) also 'a stick, cane'.
8. The labialized velar marks this as a loanword. According to Sagart (1999:123–124), it is a loanword from 脫 'to peel off, escape' (OC *l^{c}ot > MC dwat > Man. *tuō*). Mortensen (2002) proposed Tibeto-Burman *g-lwat 'free, release' as the source, which works better since it has a dorsal consonant (for Sagart, the dorsal consonant is a secondary development of a hypothetical intermediate stage *dl- in Chinese). Note that this Chinese word with a voiceless initial is taken here as the source of Mienic *ʔdut^{D} (< *N-t-) 'peel off/escape' (2.4/9).

10. From Tibeto-Burman *b-r-ŋa ‘five’ (Benedict 1987a). See chapter 5.
11. Compare Chinese 父 ‘father’ (OC *[b](r)aʔ > MC bjuX > Man. *fù*). See also Hmong-Mien ‘husband’ *N-poX (1.1/7).
15. Compare Chinese 弟 *dì* ‘younger brother’, used in the compound 弟兄 *dìxiong* to mean ‘brothers’.
18. The -w- in Luoxiang Mien (8) and Lanjin Mun (9) is secondary: -j- dropped, then -w- developed between a labial and /a/.
23. From Tibeto-Burman *-rjat ‘eight’ (Matisoff 2003). See chapter 5.
24. *pj- is reconstructed on the basis of Mien forms /pjet^{7}/ and /pje^{7}/ (Wang and Mao 15 & 16). The -w- in Luoxiang Mien (8) is secondary: -j- dropped, then -w- developed between a labial and /a/.

5

*5a. H *æ*

	1	2	3	4	5	6	7	H
1. bridge	–	–	–	la^{1b}	–	–	–	*hlæ^{A}
2. thick	ta^{1}	ta^{1}	tua^{1}	ta^{1a}	ti^{A}	tei^{1}	te^{1}	*tæ^{A}
3. thigh	pa^{1}	pa^{1}	pua^{1}	pa^{1a}	–	–	pe^{1}	*pæ^{A}
4. ant	phen^{3}	mpha^{3}	–	–	–	mphai^{3}	m̥je^{3}	*mphæ^{B}
5. to hold/grasp hand	–	–	tua^{3}	ta^{3a}	ti^{B}	–	–	*tæ^{B}
6. to hold in mouth	–	–	mpua^{3}	mpa^{3a}	mʔpzi^{B}	–	–	*mpæ^{B}
7. billhook	sa^{5}	–	tsua^{7}	sa^{7a}	tsi^{C}	–	–	*tsæ^{C}
8. chaff/husk	fha^{5}	sa^{5}	sua^{5}	sa^{5b}	si^{B}	y̥ei^{5}	m̥e^{5}	*S-phjæ^{C}
9. pig	pa^{5}	mpa^{5}	mpua^{5}	mpa^{5a}	mʔpei^{C}	mpei^{5}	me^{5}	*mpæ^{C}
10. rope	l̥ha^{5}	l̥ha^{5}	hl̥ua^{5}	la^{5b}	l̥i^{C}	l̥ei^{5}	l̥e^{5}	*hlæ^{C}
11. bland/tasteless	ɕen^{6}	–	tʂua^{6}	səa^{6}	zi^{C}	ʃi^{6}	tɕi^{6}	*dzjæ^{C}
12. comb	ɣa^{6}	zą^{6}	zu̯a^{6}	zù̯a^{6}	wji^{C}	vi^{6}	ɦji^{6}	*ræ^{C}
13. to have food w/rice	–	–	ntsua^{6}	mpje^{6}	mpji^{C}	–	–	*mbljæ^{C}
14. to join	sen^{7}	tshɑ^{7}	tsua^{7}	sa^{7a}	–	–	–	*tsæ^{D}
15. to rob	–	–	–	ɦa^{7b}	hi^{D}	–	–	*hæ^{D}
16. tin	–	–	tshua^{7}	sa^{7b}	–	–	–	*tshæ^{D}
17. young	–	–	hl̥ua^{7}	l̥a^{7b}	–	–	–	*hljæ^{D}

Loans in set 5a:

**mə-p^{hs}rak (OC)* > *phæk (MC)* 拍 *pāi 'to strike'* > *H *mbæ^{A} 'to clap'*
dap (MC) 蹋 *tà 'to trample/tread'* > *H *dæ^{D} 'to step on/tread'*

*5b. HM *æ (54, 149)*

H *æ : HM *æ : M *æ

	1	2	3	4	5	6	7	8	9	10	11	HM
18. molar tooth	–	pa^{2}	pua^{1}	–	–	–	–	–	–	–	ba^{1}	*pæ
19. mountain pass	–	–	–	–	–	e^{7}	–	ɛ^{7}	e^{1}	ɛ^{7}	a^{1}	*ʔæ(C)

Loan in set 5b:

ngwæX (MC) 瓦 *wǎ 'tile'* > *HM *ŋ^{w}æX*

*5c. HM *æj (169)*

H *æ : HM *æj : M *aj

	1	2	3	4	5	6	7	8	9	10	11	HM
20. dry/thirsty	qha^{1}	–	ɴqhua^{1}	ŋka^{1b}	ɴʔqhei^{A}	ŋkhei^{1}	–	ga꞉i^{1}	ga꞉i$^{1'}$	–	gɔi^{1}	*NKhæj

*5d. HM *æw (114, 152, 171)*

H *æ : HM *æw : M *au

	1	2	3	4	5	6	7	8	9	10	11	HM/M
21. liquid/soup	–	ca^{3}	kua^{5}	ka^{3a}	tɕi^{B}	–	–	–	–	kla^{3}	–	*klæwX
22. to play	–	tsa^{4}	–	–	–	–	–	dzja:u^{6}	dza:u^{6}	dza^{6}	–	*N-dzæwH
23. wind	tɕen^{5}	ci^{5}	cua^{5}	–	tɕi^{C}	tʃi^{5}	tɕi^{5}	ʣau^{5}	ɖa:u^{5}	hja^{5}	dzau^{5}	*N-cæwH
24. to measure (rice)								ga:u^{1}	ga:u$^{1'}$	ɬa^{1}	dzau^{1}	*hrau^{A}
25. young man								bja:u^{2}	ba:u^{2}	–	–	*mbjau^{A}
26. to repay								–	kla:u^{3}	klau^{3}	kau^{3}	*qlau^{B}

Loans in set 5d:[33]

*$l^{ʕ}$aw (OC)	>	*daw (MC)*	桃	*táo 'peach'*	>	*HM *ɢlæw*
*[g]aw (OC)	>	*haw (MC)*	號	*háo 'to shout/cry out'*	>	*HM *Gæw 'to sing/cry out'*
*[k^{h}]^{ʕ}awʔ (OC)	>	*khawX (MC)*	藁	*gǎo 'dry/withered'*	>	*HM *KhæwX*
*mə.[ts]^{ʕ}awʔ (OC)	>	*tsawX (MC)*	澡	*zǎo 'to wash (hands)'*	>	*HM *ntsæwX*
		tsrhæwX (MC)	炒	*chǎo 'to fry'*	>	*M *chau^{B}*

*5e. HM *æp (86, 144)*

H *æ : HM *æp : M *æp

	1	2	3	4	5	6	7	8	9	10	11	HM
27. to cut	ken^{7}	ɴqɑ^{7}	–	–	–	tʃei^{7}	–	kap^{7}	kjap^{7}	klan^{7}	kɛp^{7}	*klæp
28. fan	zen^{8}	mjɑ^{7}	ntsua^{8}	mpja^{8}	mpzi^{D}	mpli^{8}	mi^{8}	bjap^{8}	bja:p^{8}	bjɛn^{8}	dzjɛp^{8}	*mbljæp

*5f. M *æt (164)*

	1	2	3	4	5	6	7	8	9	10	11	M
29. to twist/rub								ɕat^{7}	sa:t$^{7'}$	sa:t$^{7'}$	sjɛt^{7}	*ɕæt^{D}

Discussion

There was a merger of Hmong-Mien *au (3d) and *æw (5c) into Mienic *au. 'To measure rice', 'young man', 'to repay', and 'to stir fry' have been placed here, in rime 5c, given a slightly better fit with the reflexes of Hmong-Mien 'wind'. But it should be remembered that these words could be taken back to either *au or *æw in Proto Hmong-Mien.

5g. Hmong-Mien *-æk (72) contains only Chinese loans:

百 *bǎi* 'hundred':	OC *$p^{ʕ}$rak	>	MC pæk	>	HM *pæk
拍 *pāi* 'to strike':	OC *mə-$p^{hʕ}$rak	>	MC phæk	>	(HM *mphæk >) M *bhæk^{D} 'to clap'
白 *bái* 'white':	OC *b^{ʕ}rak	>	MC bæk	>	M *bæk^{D}

Another Chinese loanword falls into this set:

客 *kè* 'guest':	OC *$k^{hʕ}$rak	>	MC khæk	>	HM *Khæk

[33] Another Chinese loan which might fit here would be the irregular Mienic word for 'claw/talon' (M *ʔɲau^{B}); Downer (1973) noted the resemblance to Amoy /jiaù/.

Notes

1. See also Shimen /l̥a[1]/, Qingyan /l̥o[1]/, and Gaopo /l̥hɑ[1]/ ‘bridge’ (all West Hmongic). Compare Tibeto-Burman *(s-)ley ‘bridge, ladder’ (Matisoff 2003), which is a closer semantic match than Chinese 梯 ‘wooden steps, stairs’ (OC *l̥[ə]j > MC thej > Man. *tī*).
8. This word is probably the same as Hmong-Mien *mphi̱ɛk ‘chaff/husk’ (1.5/1); note the Pa-Hng (7) form /m̥e[5]/ which provides a link.
9. Compare Tibeto-Burman *pʷak ‘pig’ (Matisoff 2003).
11. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
16. In White Hmong, ‘lead metal’.
17. This word would have ended in either -p or -t (Hmong-Mien tone 7 words ending in -k merged with tone 5 in Hmongic).
18. In White Hmong, ‘jaw, chin’.
19. A final stop consonant is tentatively reconstructed on the basis of three reflexes with tone 7.
21. In Biao Min (10), this means ‘dew’.
22. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
23. Jiwei (2) form taken from Office of Miao-Yao Research Lexicon (1987).
25. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
20 & 28. These words may involve expressive phonology.
29. Hainan Mun (Shintani and Yang 1990) has been substituted for Lanjin Mun (9). This word is probably the same as Hmongic *S-phu̱a^{A} ‘twist/rub’ (1.2/15).

6

*6a. H *ɔ*

	1	2	3	4	5	6	7	H
1. many/much	nɛ^{5}	–	ntau^{5}	ntɔ^{5a}	nʔtu^{C}	ntei^{5}	–	*ntɔ^{C}
2. shoes	–	ɕɔ^{5}	khau^{5}	kɔ^{5b}	khu^{C}	ʃu^{5}	ŋkɯ^{5}	*khjɔ^{C}
3. to sieve	–	ɕɔ^{5}	tʂhau^{5}	–	–	–	–	*tshjɔ^{C}
4. bracelet	–	pɔ^{6}	pau^{6}	po^{6}	vu^{C}	–	po^{6}	*bɔ^{C}
5. ant	–	–	ɳtʂau^{8}	mpzɻɔ^{8}	mpju^{D}	–	–	*mbrɔ^{D}

Loans in set 6a:

**[d]rak 'to put on clothes; be attached' (OC)*	>	*drjak (MC)*	著	*zhuó 'to wear, touch, etc.'*	>	*H *drɔ^{C} 'to hit target'*
**trak 'to place' (OC)*	>	*trjak (MC)*	著	*zhuó 'to wear, touch, etc.'*	>	*H *trɔ^{C} 'to put on/wear (shoes)'*

*6b. HM *ɔi (131)*

H *ɔ : HM *ɔi : M *əi

	1	2	3	4	5	6	7	8	9	10	11	HM
6. pangolin	ɣo^{6}	zɻɔ^{6}	zɻau^{6}	zɻo^{6}	wjoŋ^{A}	–	ɦje^{6}	gai^{6}	gjai^{6}	–	–	*rɔiH

*6c. HM *əuk (241)*

H *ɔ : HM *əuk : M *əuk

	1	2	3	4	5	6	7	8	9	10	11	M
7. straw sandals								ɕu^{7}	tθu$^{7'}$	ʇu^{7}	–	*səuk^{D}
8. to dissolve								ju^{8}	ju^{6}	–	–	*jəuk^{D}
9. sword								ʤu^{8}	ɖu^{6}	ɖu^{8}	dziu^{8}	*ɲɟəuk^{D}

Loans in set 6c:

**t^{ʕ}ək (OC)*	>	*tok (MC)*	得	*dé 'to get/gain'*	>	*HM *təuk*
**truk (OC)*	>	*trjuwk (MC)*	竹	*zhú 'bamboo'*	>	*HM *ɲcəuk 'bamboo strip'*
**[dz]^{ʕ}awk (OC)*	>	*dzak (MC)*	鑿	*záo 'chisel'*	>	*HM *dzəuk*

Discussion

This may have been a diphthong in Proto Hmongic: *ɔw.

Notes

1. There are Mun forms for 'many/much' with a final velar nasal (/duŋ^{5}/ or /duːŋ^{5}/) which correspond in all but the coda. It is not clear how this word should be reconstructed, so provisionally only the Hmongic forms are given above.
2. In Jiongnai (6) and Pa-Hng (7), 'straw sandals'. Perhaps from Chinese 屨 'sandals, straw shoes' (OC *kro-s > MC kjuH > Man. *jù*), although the Chinese word is not aspirated. Compare Mienic *sjəuk^{D} 'straw sandals', #7 this set.
4. Green Mong has been substituted for White Hmong (3).
5. Compare Mon-Khmer *srmuuc (Shorto #873), Proto Tai *mu̯it D2S, Malay /semut/.

7

*7a. H *o*

	1	2	3	4	5	6	7	H
1. to boil (TR)	tho^{1}	–	–	to^{1b}	thu^{A}	–	–	*tho^{A}
2. thunder	ho^{1}	so^{1}	sɔ^{1}	so^{1b}	su^{A}	xu^{1}	–	*S-pho^{A}
3. female/woman	–	–	pɔ^{2}	–	vu^{A}	–	–	*bo^{A}
4. step	ʇə^{2}	ʈo^{2}	ʈɔ^{2}	ʈo^{2}	ʐu^{A}	tʃa^{2}	tɕa^{6}	*dro^{A}
5. to cover self	–	–	vɔ^{3}	wo^{3a}	ʔwu^{B}	–	va^{3}	*ʔwo^{B}
6. to look after	ɣə^{3}	–	ʐɔ^{3}	ʐo^{3a}	ʔwju^{B}	–	–	*ʔro^{B}
7. to play (flute)	–	–	tʂhɔ^{3}	pʐo^{3b}	–	–	–	*phro^{B}
8. to sharpen/grind	xhə^{3}	ho^{3}	hɔ^{3}	ho^{3b}	hu^{B}	xu^{3}	ho^{3}	*ho^{B}
9. thread	fhə^{3}	so^{3}	sɔ^{3}	so^{3b}	su^{B}	–	–	*S-pho^{B}
10. turbid	–	ɳʇo^{3}	ɳʇɔ^{5}	ɳʇo^{3a}	ɳʔtʂu^{B}	ɳʇʃu^{4}	ŋ̃^{3}	*ŋkro^{B}/*ŋgro^{B}
11. cow/ox	–	ʑu^{4}	–	–	ʑu^{B}	–	–	*jo^{B}
12. thorn	pə^{4}	to^{4}	pɔ^{4}	puɯ^{4}	vu^{B}	–	–	*-bo^{B}
13. CLF-mouthfuls	lo^{5}	–	lɔ^{5}	lo^{5a}	–	lu^{5}	–	*ʔlo^{C}
14. to remember	–	–	ɲcɔ^{5}	ɳʇɕo^{5a}	ɳʔtɕu^{C}	–	–	*ɲco^{C}
15. to rest	tɕhə^{5}	ɕo^{5}	ʂɔ^{5}	so^{5b}	su^{C}	θjeu^{5}	–	*sjo^{C}
16. span, finger	l̥o^{5}	–	dɔ^{7}	l̥o^{5a}	qlou^{C}	–	–	*qro^{C}
17. to wring	–	pʐo^{5}	–	pʐo^{5a}	pju^{C}	–	pja^{5}	*pro^{C}
18. to cover	mə^{6}	–	mpɔ^{6}	mpu^{6}	mpu^{C}	–	pho^{5}	*mbo^{C}
19. to track	–	ɳɑŋ^{6}	ɳʇɔ^{6}	–	–	–	–	*ndro^{C}
20. armpit	ɕə^{5}	tɕo^{5}	tʂɔ^{7}	so^{7a}	tsu^{C}	–	tɕa^{5}	*tsjo$^{C/D}$
21. muddy	–	–	ŋkɔ^{7}	ŋko^{7a}	–	–	ŋa^{7}	*ŋko^{D}
22. to grind (grain)	–	ʐo^{8}	ʐɔ^{8}	ʐo^{8}	wju^{D}	–	–	*ro^{D}

Loans in set 7a:

		gjuwX (MC)	臼	*jiù 'mortar/treadmill'*	>	*H *jo^{B}*
		tsuX (MC)	祖	*zǔ 'ancestor'*	>	*H *tsjo^{B} 'tiger'*
**l̥ru (OC)*	>	*trhjuw (MC)*	抽	*chōu 'to pull out'*	>	*H *thro^{C}*
**[r]^{ʕ}o-s 'to leak'(OC)*	>	*luwH (MC)*	漏	*lòu 'to drip'*	>	*H *ŋgro^{C}*
**(mə-)ts^{hʕ}uʔ-s (OC)*	>	*tshawH (MC)*	造	*zào 'to arrive at'*	>	*H *dzo^{C} 'to reach/arrive at'*

*7b. HM *o (225)*

H *o : HM *o : M *o

	1	2	3	4	5	6	7	8	9	10	11	HM/M
23. big	l̥hə^{1}	–	hl̥ɔ^{1}	l̥o^{1b}	l̥u^{A}	l̥jeu$^{1'}$	l̥o^{1}	lo^{1}	lu$^{1'}$	łu^{1}	lɔu^{1}	*hljo
24. husband	–	po^{3}	–	–	–	–	–	–	–	bu^{3}	–	*N-poX
25. to soak								–	–	ta^{2}	tɔu^{2}	*do^{A}

Loans in set 7b:

**[ts]^{ʕ}uk-s (OC)*	>	*tsawH (MC)*	竈	*zào 'stove'*	>	*HM *N-tsoH*
**(mə-)p^{ʕ}uk-s (OC)*	>	*pawH (MC)*	報	*bào 'to announce/report'*	>	*M *ʔbo^{C} (< *mpoH) 'to tell'*

*7c. HM *u̯o (206, 225)*

H *o : HM *u̯o : M *u

	1	2	3	4	5	6	7	8	9	10	11	HM
26. deep	to^{1}	to^{1}	tɔ^{1}	to^{1a}	tu^{A}	ðu^{1}	to^{1}	do^{1}	du^{1}	du^{1}	–	*N-tu̯o
27. old	qo^{5}	qɔ^{5}	qu^{1}	–	–	ku^{5}	ko^{5}	ko$^{5'}$	ku^{5}	ku^{5}	ku^{5}	*qu̯oH

*7d. HM *əw (206)*

H *o : HM *əw : M *əu

	1	2	3	4	5	6	7	8	9	10	11	HM
28. bamboo	l̥ho^{3}	l̥ho^{3}	hl̥ɔ^{3}	–	–	–	–	l̥au^{3}	lɔu^{3}	ɬau^{3}	lau^{3}	*hləwX
29. to chop	to^{3}	–	ntɔ^{3}	nto^{3a}	nʔtu^{B}	ntu^{3}	no^{3}	–	–	dau^{3}	dau^{3}	*ntəwX
30. to come back	lo^{4}	lo^{4}	lɔ^{4}	lu^{4}	lu^{B}	lɔu^{4}	lo^{4}	lau^{4}	lau^{4}	lau^{4}	lau^{4}	*ləwX

Loan in set 7d: *ʔæwX (MC)* 拗 *ǎo 'to break'* > *H *ʔlo^{B}, M *ʔnəu^{B} (< *ʔəwX)*[34]

*7e. HM *i̯ou (134)*

H *o : HM *i̯ou : M *i̯ou

	1	2	3	4	5	6	7	8	9	10	11	HM
31. cooking smoke	–	ŋ̊tɕho^{5}	ɲchɔ^{5}	ŋ̊tɕo^{5b}	ŋ̊ʔtɕhu^{B}	–	–	ɕeu^{5}	sɔu$^{5'}$	–	–	*ɲchi̯ouH

Loans in set 7e:
**Nə.[ts]ˤuʔ (OC)* > *tsawX (MC)* 早 *zǎo 'early'* > *HM *ntsi̯ouX*
syoX (MC) 暑 *shǔ 'warm'* > *HM *sji̯ouX*

*7f. HM *əp (106)*

H *o : HM *əp : M *əp

	1	2	3	4	5	6	7	8	9	10	11	HM/M
32. to bite	tə^{8}	to^{8}	tɔ^{8}	to^{8}	ðu^{D}	–	ta^{8}	tap^{8}	tap^{8}	than^{8}	–	*dəp
33. centipede								ɕap^{7}	tθap$^{7'}$	sən^{7}	tsap^{7}	*səp^{D}
34. lightning flash								gap^{7}	–	–	dzjɛp^{8}	*ljəp^{D}

Loans in set 7f:
**kˤ<r>ep (OC)* > *kɛp (MC)* 夾 *jiā 'to pinch'* > *M *ʔɟəp^{D} 'to pick up'*
**(kə.)rəp (OC)* > *lip (MC)* 笠 *lì 'bamboo hat'* > *M *rəp^{D}*

[34] This word appears with different "cover" consonants in Hmongic (ʔl-) and Mienic (ʔn-). It is not clear if this was borrowed once as *ʔəwX, or separately into the two branches, from Chinese sources that had already added a cover consonant, as H *ʔlo^{B} and M *ʔnəu^{B}; they have been entered separately in the onsets section and in the index.

*7g. HM *ət (222, 108)*

H *o : HM *ət : M *ət

	1	2	3	4	5	6	7	8	9	10	11	HM/M
35. to weave	to^{7}	nto^{7}	ntɔ^{7}	–	–	ntu^{7}	na^{7}	dat^{7}	dat^{7}	dan^{7}	dat^{7}	*ntət
36. to laugh	ʇə^{7}	ʈo^{7}	ʈɔ^{7}	ʂo^{7a}	tʂu^{D}	tsu^{7}	tɕa^{7}	kjat^{7}	kjet^{7}	klan^{7}	tut^{7}	*krət
37. near								θat^{7}	tθat^{7}	–	–	*sət^{D}
38. thick								–	kat^{8}	–	–	*gət^{D}

Loan in set 7g:
kjwot (MC) 蕨 *jué 'fern'* > *M *k^{w}jət^{D}*

*7h. HM *u̯ət (108)*

H *o : HM *u̯ət : M *u̯ət

	1	2	3	4	5	6	7	8	9	10	11	HM
39. to see	poŋ^{8}	–	pɔ^{8}	po^{8}	mpu^{D}	pu^{8}	pa^{8}	pwat^{8}	fat^{8}	phi^{8}	–	*bu̯ət

Loan in set 7h:
phjut (MC) 拂 *fú 'to brush'* > *M *phu̯ət^{D} 'to sweep'*

*7i. HM *ək (167)*

H *o : HM *ək : M *ək

	1	2	3	4	5	6	7	8	9	10	11	M
40. crossbow								n̥ak^{5}	na$^{7'}$	–	–	*hnək^{D}
41. to swallow								na^{7}	na^{7}	na^{7}	–	*ʔnək^{D}

Loan in set 7i:
**kə.rək (OC)* > *lik (MC)* 力 *lì 'strength'* > *HM *-rək, M *khlək^{D}*

Discussion

Pa-Hng (12) shows a rime difference that reflects whether or not the Hmong-Mien rimes of this set (as reflected in the Mienic forms) were open or closed. Open Hmong-Mien rimes yield Pa-Hng /o/ (see rimes 7b-d above), whereas closed Hmong-Mien rimes yield Pa-Hng /a/ (see rimes 7f-h above). The reflection of the open/closed Hmong-Mien contrast as a vowel quality difference in Pa Hng can also be seen in rime 4. Similarly, Jiwei (Qo Xiong) (2) shows vowel quality differences reflecting elements of the rime not preserved elsewhere in Hmongic in rimes 4, 12/17, and 13. This suggests that Pa-Hng and Jiwei may have split off the main Hmongic branch at an early stage (see Strecker 1987a,b on the conservatism of "Na-e", or Pa-Hng).

The Mienic reflexes of rimes 7b and 7c are almost identical, and those of 7c are clearly to be reconstructed as Mienic *u, since they merge with 3f and 16c (including the common development of Mienic *u to Liangzi Mun /-o/). The key difference between the two sets is in Zao Min (23):

7b	HM *o	>	M *o	>	Zao Min /-ɔu/
7c	HM *u̯o	>	M *u	>	Zao Min /-u/

There is no evidence from the Hmongic side to place the words in rime 7g (*-ək) here. However, the fact that *-əp and *-ət belong to this rime allow us to provisionally include them here as well.

The two words in Wang and Mao rime set 105 belong here as well, but they are not listed above, since they are both Chinese loanwords. They have another rime—*ap—that merged with the others above into Hmongic *o (rather than into Hmongic *a, as we might expect). They are Hmong-Mien *ʔap 'duck' from Chinese 鴨 (MC ʔæp > Man. *yā*), and Hmong-Mien *dap 'to put on/wear shoes', possibly from Chinese 踏 'step on' (MC thop > Man *tà*).

Notes

2. Perhaps the same as Hmong-Mien *mpuə 'thunder' (1.4/16); see discussion under onset 1.2.

3. Perhaps borrowed from Chinese 婦 'wife, married woman' (MC bjuwX > Man. *fù*), although the tones do not correspond.

4. The Jiwei (2) form is from Office of Miao-Yao Research Lexicon 1987.

7. Compare the similar Mienic *phlu̯əm^{B} 'to play (flute)' (1.32/29).

16. This is the span of thumb to middle finger in White Hmong.

19. White Hmong *nrog* /ŋʈɔ^{6}/ means 'to accompany; with' ('to track' > 'to follow' > 'to accompany' > 'with').

21. Hainan Mun /glɔɔ^{6}/ 'muddy' looks similar (Shintani and Yang 1990), and also fits with the forms under Mienic *ŋglok^{D} 'turbid' (5.36/13).

23. In White Hmong, *hlob* /hl̥ɔ^{1}/ is 'to grow; elder; great in volume, proud'. The simple word for 'big' is *loj* /lɔ^{2}/, which appears to have the same root. The tonal and onset difference may be attributed to a prefix that devoiced the initial of 'to grow': *hlj- yielded upper-register tone 1, while *lj- yielded lower-register tone 2 (see chapter 4).

24. Compare Chinese 父 'father' (OC *[b](r)aʔ > MC bjuX > Man. *fù*). See also Hmong-Mien 'father/male' *pjaX (1.16/4).

27. Wang and Mao (1995:327–328) list 'old' in the sense of 'aged', and 'old' as the opposite of 'new' separately because of the presence of two forms in Ho Ne (She), with those meanings (kɤ^{5} and kɔ^{5}, respectively). Since the forms are otherwise identical, they are presented together here. This is probably from Chinese 故 'old (not new)' (OC *kˤa(ʔ)-s > MC kuH > Man. *gù*), especially since in White Hmong it appears before the noun it modifies, as in Chinese, rather than in the native position after the noun.

30. In White Hmong, 'to come back to one's home'; compare HM *dɑj (2.3/15) 'to come (back to a place other than one's home)'.

32. Compare Malayo-Polynesian *ketep 'to bite'.

33. There are similar forms in both Tai-Kadai (Lao /khep^{7}/) and Mon-Khmer (Khmer /kʔæp/).

34. Hmongic *lje^{D} 'lightning flash' (2.42.1/10) would have ended in either -p or -t (Hmong-Mien tone 8 words ending in -k merged with tone 6 in Hmongic), so these two words are clearly related. Compare to Tibeto-Burman *(s-)lyap 'flash; lightning' (Matisoff 2003).

38. Also Jiangdi Mien /ʤat^{8}/ and Xiangnan Mien /jə^{8}/. Compare Proto Malayo-Polynesian *buket 'thick, viscous' from Proto Austronesian root */-keC/; Proto Malayo-Polynesian */-ket/ 'adhesive, sticky' (ACD).

40. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This is undoubtedly the same word as Hmongic *hnæn^{B} 'crossbow' (2.8/19). Compare Mon-Khmer *snaʔ (Shorto #97), Chinese 弩 (OC *[n]^{ʕ}aʔ > MC nuX > Man. *nǔ*), and Proto Tai *hnaa B1.

8

*8a. H *ʉ*

	1	2	3	4	5	6	7	H
1. to push earth aside	phɛ^{1}	–	phua^{1}	pou^{1b}	–	phau^{1}	phɪ^{1}	*phʉ^{A}
2. marrow/brains	l̥hɛ^{1}	l̥hə^{1}	hl̥ɯ^{1}	lou^{1b}	l̥u^{A}	–	–	*hlʉ^{A}
3. to rot	la^{2}	–	lɯ^{2}	lou^{2}	len^{A}	–	–	*lʉ^{A}
4. 2SG (you)	–	–	kɔ^{2}	–	–	–	–	*gʉ^{A}
5. to pack/wrap	qhɛ^{3}	–	qhɯ^{3}	hou^{3b}	qhu^{B}	khau^{3}	–	*qhʉ^{B}
6. to flow	–	–	ntɯ^{4}	–	qlu^{B}	ljɔu^{4}	–	*ɴGlʉ^{B}
7. cuckoo	–	qu^{4}	–	hu^{4}	–	–	–	*ɢʉ^{B}
8. elephant	shɛ^{5}	–	ntshɯ^{5}	–	nʔtshu^{C}	–	–	*ntshʉ^{C}
9. lung	zɛ^{6}	mzo̱^{5}	ɳʈʂɯ^{7}	mpzo̱u^{5a}	mʔpju^{C}	–	mɔ^{5}	*mprʉ^{C}
10. to stroke	l̥hɛ^{5}	phzo̱^{5}	phlɯ^{7}	plou^{5b}	phlu^{C}	–	–	*phlʉ^{C}
11. which	tei^{6}	–	tɯ^{6}	tu^{6}	ðu^{B}	–	ti^{1}	*dʉ^{C}
12. shoulder	–	pə^{6}	pɯ^{6}	–	vu^{C}	–	–	*bʉ^{C}

Loans in set 8a:
luH (MC) 露 *lù 'dew'* > *H *lʉ^{C}*
bjuX (MC) 腐 *fǔ 'curd'* > *H *hʉ^{B} 'bean curd'*

*8b. HM *u̱ei (39, 170, 242)*

H *ʉ : HM *u̱ei : M *u̱ei

	1	2	3	4	5	6	7	8	9	10	11	HM/M
13. 2SG (you)	moŋ^{2}	mɯ^{2}	–	–	–	mɐŋ^{2}	mɯ^{6}	mwei^{2}	mei^{2}	məi^{2}	mui^{2}	*mu̱ei
14. tail	tɛ^{3}	tə^{3}	tɯ^{5}	tou^{3a}	tu^{B}	ðau^{3}	tɛ^{3}	twei^{3}	tei^{3}	dwai^{3}	dui^{3}	*tu̱eiX
15. younger brother	–	kɯ^{3}	kɯ^{3}	kou^{3a}	ku^{B}	–	–	–	–	ki^{3}	kui^{3}	*ku̱eiX
16. malodorous	–	tɐə^{5}	tʂɯ^{5}	sou^{5a}	tsu^{C}	tʃau^{5}	tɐɔ^{5}	θwei$^{5'}$	tθei^{5}	tswəi^{5}	ti^{5}	*tsju̱eiH
17. to sleep/ lie down	pi^{5}	pə^{5}	pɯ^{5}	pu^{5a}	pu^{C}	pau^{5}	pɛ^{5}	pwei$^{5'}$	fei^{5}	–	bui^{5}	*pu̱eiH
18. bee								mwei^{4}	ŋwei^{4}	mi^{4}	mui^{4}	*mu̱ei^{B}
19. to shed leaves/drop								blwei^{6}	blei^{6}	–	–	*mblu̱ei^{C}

Loans in set 8b:
**[k]^{wʕ}raj (OC)* > *kwæ (MC)* 蝸 *wō 'snail'* > *H *gʉ^{A}*
**[k]^{wʕ}raj (OC)* > *kwæ (MC)* 蝸 *wō 'snail'* > *M *klu̱ei$^{A/B}$*
**[dz]^{ʕ}o[j]ʔ (OC)* > *dzwaX (MC)* 坐 *zuò 'to sit'* > *M *dzu̱ei^{B}*
lwojH (MC) 累 *lèi 'tired'* > *M *lu̱ei^{C} 'lazy'*

*8c. HM *ui (226)*

H *ʉ : HM *ui : M *ui

	1	2	3	4	5	6	7	8	9	10	11	HM
20. nose	zɛ^{6}	mzo̱^{6}	ɳʈʂɯ^{6}	mpzu̱^{6}	mpju^{C}	mpjau^{6}	mjɔ^{6}	pa^{6}	–	bli^{6}	–	*mbruiH

Discussion

It is clear that the medial -w- in the Mienic forms of rime 8b point to a rounded element in the rime, not secondary rounding of the initial consonant, since it occurs consistently in this rime.

Notes

2. According to Sagart (1999:67), this is the same as Chinese 髓 'marrow' (OC *s-lojʔ > MC sjweX > Man. *suǐ*).
4. Also attested in Western Hmongic Xianjin /kau^{2}/, Shimen /tɕy^{6}/ and Bunu /kau^{2}/.
5. Possibly from Chinese 裹 'to wrap' (OC *[k]^{ʕ}o[j]ʔ > MC kwaX > Man. *guǒ*).
8. Compare Lolo-Burmese *ts(h)aŋ 'elephant' > Written Burmese chaŋ.
10. Compare Mienic *phlun^{A} (1.32/27) and Chinese 撫 'to caress' (OC *[p^{h}](r)aʔ > MC phjuX > Man. *fǔ*).
13. Similar to the Austronesian 2PL root *-mu (ACD); the 2PL root was extended to the 2SG in Austronesian. Western Hmongic has a different root in set 8a above: *g~~u~~^{A} 'you' (5.3/8).
15. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Quanzhou Biao Min (10).
20. Compare Chinese 鼻 'nose' (OC *m-[b]i[t]-s > MC bjijH > Man. *bí*). For the reconstruction of this rime, see Jiangdi Mien /bjuːi^{6}/, Xiangnan Mien /bu^{8}/, and Changping Mien /blui^{6}/ (Wang and Mao 1995).

9

*9a. H *uw*

	1	2	3	4	5	6	7	H
1. gourd	–	tɔ^{1}	tau^{1}	tu^{1a}	to^{A}	–	–	*tuw^{A}
2. to butt (of bulls)	ʇu^{5}	–	ɳʇau^{5}	ɳʇu^{5a}	ŋʔtʂo^{C}	–	–	*ntruw^{C}
3. husked rice	–	ntsɔ^{5}	–	–	–	ɳʇʃei^{5}	ɳɯ^{5}	*ntsuw^{C}
4. male	–	–	lau^{5}	ɭu^{3a}	ʔlo^{B}	–	–	*ʔljuw^{B}
5. centipede	khu^{7}	–	–	–	–	khjɔ^{5}	–	*khluw^{D}
6. bamboo hat	–	ku^{7}	kau^{7}	ku^{7a}	ko^{D}	–	kɯ^{7}	*kuw^{D}
7. to beat (someone)	–	–	ntau^{7}	ntu^{7a}	–	–	ta^{7}	*ntuw^{D}
8. crooked	–	ŋkhu^{7}	ŋkhau^{7}	ŋko^{7b}	ŋʔkha^{D}	–	ŋɔ^{1}	*ŋkhuw^{D}
9. dark	tsə^{7}	pzu^{7}	tʂau^{7}	pzu^{7a}	pjo^{D}	pjɔu^{7}	–	*pruw^{D}
10. *houttuynia cordata*	ʇu^{7}	ʈu^{7}	ʈau^{7}	ʈu^{7a}	tʂo^{D}	–	–	*truw^{D}
11. back (of body)	kə^{8}	–	qau^{8}	hu^{8}	ʁo^{D}	kɔ^{8}	kɯ^{8}	*ɢuw^{D}

Loans in set 9a:

	syuw (MC)	收	*shōu 'to receive/gather in'*	>	*H *sjuw^{A}*	
	ʔjiwH (MC)	幼	*yòu 'young'*	>	*H *ʔjuw^{C}*	*'small/young'*
**l̥ˤik (OC)* >	*thet (MC)*	鐵	*tiě 'iron'*	>	*H *hluw^{C}*	

*9b. HM *uj (243, 260)*

H *uw : HM *uj : M *uj

	1	2	3	4	5	6	7	8	9	10	11	HM/M
12. sour	ɕhu^{1}	ɕɔ^{1}	–	su^{1b}	so^{A}	θjɔ^{1}	sɯ^{1}	ɕui^{1}	tθui$^{1'}$	swəi^{1}	si^{1}	*suj
13. mouth/beak	ɳu^{2}	ɳɔ^{2}	ɲcau^{2}	ɳʈeu^{2}	ɳʈeo^{A}	ntjɔ^{2}	ɳʐɯ^{2}	dzu:i^{2}	–	ʈei^{2}	dzi^{2}	*ɲɻuj
14. loud/sound								bui^{1}	bu:i$^{1'}$	bəi^{1}	bai^{1}	*ʔbuj^{A}
15. bat (animal)								bui^{1}	bu:i$^{1'}$	bəi^{1}	bai^{1}	*ʔbuj^{A}
16. clothes								gui^{1}	gui^{1}	lwəi^{1}	–	*ʔruj^{A}
17. thigh								ʈɕui^{2}	ʈu:i^{2}	–	si^{2}	*ɖjuj^{A}
18. steep								ʈɕui^{4}	ʈui^{4}	–	ki^{4}	*ɡjuj^{B}
19. thread								ɕui^{5}	tθu:i$^{5'}$	sui^{5}	si^{5}	*suj^{C}

Loan in set 9b:
dwoj (MC) 'violent wind; collapse' 頹 *tuí* > *M *duj^{A} 'to fall (of rain)'*

*9c. HM *up (271)*

H *uw : HM *up : M *op

	1	2	3	4	5	6	7	8	9	10	11	HM/M
20. grasshopper	–	–	–	–	–	–	ka-jɔ^{7}	ʈɕop^{7}	–	klin^{7}	–	*klup
21. to bury								plop^{7}	plɔp^{7}	–	–	*plop^{D}

Loans in set 9c:
**q^{hs}[ə]p (OC) > xop (MC)* 欱 *hē 'drink/smoke' > HM *hup*
**[t]^{s}[ə]p (OC) > top (MC)* 荅 *dá 'small bean' > HM *dup 'bean'*[35]

*9d. HM *ut (239)*

H *uw : HM *ut : M *ut

	1	2	3	4	5	6	7	8	9	10	11	HM
22. glutinous /sticky	nə^{8}	nu^{8}	mplau^{8}	mplu^{8}	mplo^{D}	–	–	but^{8}	blut^{8}	blun^{8}	bit^{8}	*mblut

Loan in set 9d:
**l̥^{s}ot (OC) > thwat (MC)* 脫 *tuō 'to peel off/escape' > M *ʔdut^{D}*

*9e. HM *uk (204, 203)*

H *uw : HM *uk : M *ok

	1	2	3	4	5	6	7	8	9	10	11	HM
23. six	ʈu^{5}	ʈɔ^{5}	ʈau^{5}	ʂu^{5a}	tʂo^{C}	tʃɔ^{5}	tɕɯ^{5}	kwo^{7}	kjɔ^{7}	klɔ^{7}	tɔu^{7}	*kruk
24. to shrink	xhu^{7}	–	–	–	–	–	–	ɕo^{7}	–	–	–	*hjuk

*9f. HM *u̯ɛp (163)*

H *uw : HM *u̯ɛp : M *ɛp

	1	2	3	4	5	6	7	8	9	10	11	M
25. to drip								djep^{7}	–	djan^{7}	dɛp^{7}	*ʔdjɛp^{D}

Loans in set 9f:
**[g][i]p (OC) > dzyip (MC)* 十 *shí 'ten' > HM *gju̯ɛp*[36]
dzjep (MC) 捷 *jié 'quick' > HM *cu̯ɛp*

*9g. HM *u̯ɛt (70)*

H *uw : HM *u̯ɛt : M *ɛt

	1	2	3	4	5	6	7	8	9	10	11	HM
26. itch(y) /scratch(y)	tɕhu^{5}	ɕi^{5}	khau^{7}	ko^{7b}	kho^{D}	ʃɔ^{7}	ŋɯ^{7}	ɕet^{7}	set$^{7'}$	hin^{7}	kɛt^{7}	*khju̯ɛt

*9h. HM *u̯ɛk (224)*

H *uw : HM *u̯ɛk : M *ɛk

	1	2	3	4	5	6	7	8	9	10	11	HM
27. to enter	pə^{6}	pɔ^{5}	–	–	–	pɔ^{6}	pɯ^{6}	pja^{8}	–	phja^{8}	pjɛ^{8}	*bju̯ɛk

*Loan in set 9h: *l̥^{s}ik (OC) > thet (MC)* 鐵 *tiě 'iron' > M *hrɛk^{D}*

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[35] See Sagart 1999:187.

[36] This could also have been borrowed from Tibeto-Burman, as were the numerals from 'four' through 'nine' (see chapter 5, section 2). Benedict (1987a:14) reconstructs *g(j)iap for Hmong-Mien.

Discussion

Hmong-Mien *ɴgu̯at 'smooth/slippery' from Chinese 滑 'slippery' (OC *Nə-gˤrut > MC hwɛt > Man. *huá*) also belongs to this group.

Notes

2. This is probably from Chinese 鬥 'fight, wrangle' (MC tuwH > Man. *dòu*).
3. 'Husked rice' corresponds in only two of its four forms (Jiongnai (6) and Ho Ne /tsi^{5}/ do not correspond), and may thus prove not to belong in this set.
4. In White Hmong, *lau* /lau^{5}/ is male of birds, while *laug* /lau^{6}/is male of sheep, goat, cow.
5. Compare the Central Tai and Southwest Tai forms (Downer 1978): Lao /(khii^{3}-) khep^{7}/, Thai /takhaap^{7}/, which also appears in Kam as /khep^{7}/. See also Proto Mon-Khmer *kʔaip > Khmer /kʔæp/ (Shorto #1226).
6–11. These words must have ended in either *-p or *-t, since Hmong-Mien *-k would have yielded Hmongic forms with tone 5.
8. Compare Chinese 曲 'bend, crooked' (MC khjowk > Man. *qū*), Tibeto-Burman *kuk (Matisoff 2003), and Malayo-Polynesian *buŋkuk (ACD).
10. Also known as 魚腥草 (Man. *yú xīng cǎo*), this is a plant used primarily for medicinal purposes (see chapter 7).
11. In White Hmong, this refers to the upper back. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
12. This may come from Chinese 酸 'sour' (OC *[s]ˤo[r] > MC swan > Man. *suān*).
13. Perhaps from Chinese 嘴 'beak' (OC *[ts]ojʔ > MC tsjweX > Man. *zuǐ*).
20. Jiangdi Mien (Wang and Mao 15) has been substitued for Luoxiang Mien (8).
21. Hainan Mun (Shintani and Yang 1990) has been substituted for Lanjin Mun (9).
22. In Hmongic, this is used for 'sticky' rice, in Mienic it means both 'glutinous' and 'snot'. Compare Proto Malayo-Polynesian *belit/*bulit 'viscous, sticky' (ACD) and Chinese 秫 'glutinous millet' (OC *m.lut > MC zywit > Man. *shú*) (Sagart 1999:79).
23. A borrowing from Tibeto-Burman *k-ruk (see chapter 5 and Benedict 1987a). The Hmong-Mien reconstruction must differ from the Mienic reconstruction, since the Mienic reflexes exactly match those of 'few, lack' (rime 13), indicating a merger of two rimes in Mienic.
24. See also Xianjin Miao /xau^{7}/, Jiangdi Mien /su^{7}/, and Changping Mien /ðut^{7}/. The final -t in Changping Mien and the Hmongic tones suggest that this word ended in -t, not -k. But the word is otherwise similar to Chinese 縮 'to shrink' (OC *[s]ruk > MC srjuwk > Man. *suō*), so a -k is tentatively reconstructed here.
25. The correspondence of Mienic tone 8 to Hmongic tone 6 is regular when the Hmong-Mien word ended in -k.

10
*10a. H *e*

	1	2	3	4	5	6	7	H
1. finger ring	–	–	mphlai^{1}	–	mʔphle^{A}	–	–	*mphle^{A}
2. to tie/cross	qhei^{1}	–	qhai^{1}	he^{1b}	qhe^{A}	khai^{1}	–	*qhe^{A}
3. twin	pi^{1}	–	ntsai^{1}	mpje^{1a}	mʔple^{A}	–	–	*mplje^{A}
4. to slant/slanting	–	qa^{2}	qai^{2}	–	ʁe^{A}	–	–	*ɢe^{A}
5. bowl	–	–	tai^{4}	te^{4}	–	–	ta^{4}	*de^{B}
6. half	–	–	–	pje^{7b}	phje^{C}	–	–	*phje^{C}
7. quick	xhi^{5}	ʂɑŋ^{5}	ʂai^{5}	–	se^{C}	ɣwei^{5}	–	*hre^{C}
8. to scold/curse	–	–	–	he^{5a}	qe^{C}	–	–	*qe^{C}
9. to conceal	ɣi^{7}	ʐɑ^{7}	ʐai^{7}	ʐe^{7a}	ʔwje^{D}	vwei^{7}	ɛ^{7}	*ʔre^{D}
10. daughter/girl	phi^{7}	mphɑ^{7}	ntshai^{7}	mpje^{7b}	mʔphje^{D}	phai^{7}	phe^{7}	*mphje^{D}
11. to ladle out	hei^{7}	–	hai^{7}	ɦe^{7b}	he^{D}	–	fɛ^{7}	*he^{D}
12. to peel/shave	–	–	chai^{7}	tɕe^{7b}	tɕhe^{D}	–	–	*che^{D}
13. to pick up/clamp	–	tɑ^{7}	tai^{7}	te^{7a}	te^{D}	–	næ̃^{6}	*te^{D}
14. to suck	–	–	ntsai^{7}	–	–	–	–	*ntse^{D}
15. chin/lower jaw	ɕi^{1}	tɕɑ^{8}	tʂai^{8}	se^{8}	ze^{D}	–	–	*dzje^{D}
16. lightning flash	l̥i^{8}	l̥ɑ^{8}	lai^{8}	l̥e^{8}	le^{D}	–	–	*lje^{D}
17. to seek shelter	–	–	ŋʈai^{8}	ŋʈe^{8}	ŋʈʂe^{D}	–	–	*ŋgre^{D}

Loan in set 10a:
**N-k^{ʕ}<r>ep (OC) > hɛp (MC)* 狹 *xiá 'narrow' > H *ɴɢe^{D}*

*10b. HM *e (73)*

H *e : HM *e : M *e

	1	2	3	4	5	6	7	8	9	10	11	HM/M
18. hungry	–	ɕi^{1}	tʂhai^{1}	se^{1b}	tshe^{A}	–	sa^{1}	ɕa^{1}	sa$^{1'}$	–	–	*tshje
19. fear/be afraid	ɕhi^{1}	ŋʈɕha^{5}	ŋʈʂhai^{5}	ntse^{5b}	nʔtshe^{C}	ŋʈʃei^{1}	ŋɛ̰^{5}	ʥa^{5}	ɖa$^{5'}$	ɖa^{5}	dzjɛ^{5}	*ntshjeH
20. to fool/humor (children)	–	–	–	–	–	kle^{1}	–	–	kja^{4}	kljɔu^{4}	kɛi^{4}	*glje(X)
21. that								wa^{3}	va^{3}	wə^{3}	vɛi^{5}	*ʔwe^{B}

*10c. HM *ej (37)*

H *e : HM *ej : M *ej

	1	2	3	4	5	6	7	8	9	10	11	HM/M
22. meat	ŋi^{2}	ɲa^{2}	ɴqai^{2}	ŋke^{2}	ɴqe^{A}	ŋkai^{2}	ŋɛ^{2}	–	–	ʥi^{2}	hɔi^{2}	*NGej
23. animal fat/oil								m̰ei^{1}	mei$^{1'}$	m̰əi^{1}	mi^{1}	*hmej^{A}
24. sore/boil/blister								tɕwei^{2}	sei^{2}	–	–	*k^{w}jej^{A}

Loans in set 10c:

	dej (MC)	蹄	*tí 'hoof'*	>	*HM *dej*
**[g](r)aj (OC)* >	*gje (MC)*	騎	*qí 'to ride'*	>	*HM *ɟej*
**[k]^{wʕ}raj (OC)* >	*kwæ (MC)*	蝸	*wō 'snail'*	>	*M *k^{w}lej^{A}*
	tsyeX (MC)	紙	*zhǐ 'paper'*	>	*M *tjej^{B}*
	dzyeX (MC)	是	*shì 'to be'*	>	*M *djej^{B}*
	drijH (MC)	緻	*zhì 'beautiful'*	>	*M *dzej^{C}*
	dijH (MC)	地	*dì 'non-irrigated land'*	>	*M *dej^{C}*

*10d. HM *ep (48, 68, 87, 91, 124, 220)*

H *e : HM *ep : M *ep

	1	2	3	4	5	6	7	8	9	10	11	HM
25. bear	ɭi^{7}	–	dai^{7}	ɭe^{7a}	–	–	–	kjep^{7}	kja:p^{7}	kljɛ^{7}	–	*qrep
26. to slice	ɭhei^{7}	ɭhɑ^{7}	hɭai^{7}	le^{7b}	–	ɭai^{7}	–	le^{7}	–	–	–	*hlep
27. to lick	ʑi^{8}	ʑɑ^{8}	jai^{8}	ʑe^{8}	–	ŋklai^{8}	jɛ^{8}	–	–	–	dzjɛp^{8}	*-jep

Loans in set 10d:

**[ts]ap (OC)* >	*tsjep (MC)*	接	*jiē 'to receive/accept'*	>	*HM *tsep 'to receive/borrow'*
**mə-[ts^{h}]<r>op (OC)* >	*tsrhɛp (MC)*	插	*chā 'to insert'*	>	*HM *threp*
**mə-ts^{ʕ}r[a]p (OC)* >	*tsrɛp (MC)*	眨	*zhǎ 'to wink'*	>	*HM *ntsjep*
	hɛp (MC)	狹	*xiá 'narrow'*	>	*M *hep^{D}*

*10e. HM *et (51)*

H *e : HM *et : M *et

	1	2	3	4	5	6	7	8	9	10	11	HM
28. tongue	ŋɻi^{8}	mjɑ^{8}	mplai^{6}	mple^{8}	mple^{D}	mpli^{8}	mje^{8}	bjet^{8}	bjet^{8}	blin^{8}	bɛt^{8}	*mblet

Loans in set 10e:

**[ts^{h}]i[t] 'varnish' (OC)* >	*tshit (MC)*	漆	*qī 'lacquer'*	>	*HM *thjet*
**[k]^{whʕ}et 'break; defective' (OC)* >	*khwet (MC)*	缺	*quē 'to have a gap'*	>	*HM *NK^{w}et*
**q^{wʕ}et (OC)* >	*ʔwet (MC)*	挖	*juē 'to dig'*	>	*M *ʔwet^{D}*

Discussion

An important loanword which falls into this rime set, but into none of the subsets above, is Hmong-Mien *Kəi 'chicken' (onset 5/6.1) from Chinese 雞 'chicken' (OC *k^{ʕ}e > MC kej > Man. *jī*). This is an areal word: see also Proto Tai *kəi (Li 1977).

Notes

4. In White Hmong (3), also 'to lean'.
9. Perhaps Chinese 諱 'taboo; to conceal' (MC xjwɨjH > Man. *huì*). See correspondence to HM *ʔræi 'vegetable' (2.55/12).
14. This word is found in other West Hmongic languages as well.
16. Clearly related to Mienic *ljəp^{D} (2.42.1/7), since the onsets are identical and the Hmongic word would have ended in either -p or -t (Hmong-Mien tone 8 words ending in -k merged with tone 6 in Hmongic). Compare to Tibeto-Burman *(s-)lyap 'flash; lightning' (Matisoff 2003).

17. In White Hmong (3), ‘to hide’.
20. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). The meaning of this word is given as *hǒng* as in *hǒng xiǎo há* ‘to handle children’ in Wang and Mao 1995.
23. Compare Austronesian *SimaR ‘grease/oil/fat’ (ACD).
24. Since this word has a labiovelar initial, it is probably a loan from an unknown Chinese source.
25. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).
26. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Compare Tibeto-Burman *(s-)lep ‘to slice’(Matisoff 2003). Given the tonal reflexes in Hmongic, only -p and -t are possible coda consonants in this word. The striking similarity to Tibeto-Burman *(s-)lep makes -p seem more likely.
28. Probably from Chinese 舌 ‘tongue’ (OC *m.lat > MC zyet > Man. *shé*); see parallel with Hmong-Mien *mblut ‘glutinous/sticky’ (1.36/9) from Chinese 秫 ‘glutinous millet’ (OC *m.lut > MC zywit > Man. *shú*) (both discussed in Sagart 1999:79).

11

*11a. H *ɻɛ*

	1	2	3	4	5	6	7	H
1. to grasp	mɛ^{1}	me^{1}	mua^{1}	muɑ^{1a}	–	–	–	*ʔmɻɛ^{A}

*11b. HM *ɛj (55, 93)*

H *ɻɛ : HM *ɛj : M *ai

	1	2	3	4	5	6	7	8	9	10	11	HM/M
2. to have	mɛ^{2}	me^{2}	mua^{2}	–	ma^{A}	mɔ^{2}	mĩ^{2}	ma:i^{2}	na:i^{2}	ma^{2}	–	*n-mɛj
3. to squeeze								ŋɻai$^{5'}$	ŋɻai^{5}	–	–	*hŋai^{C}

Loans in set 11b:

**m.r^{ʕ}ajʔ (OC)*	>	*mɛiX (MC)*	買	*mǎi 'to buy'*	>	*HM *mɛjX*
**m.r^{ʕ}ajʔ-s (OC)*	>	*mɛiH (MC)*	賣	*mài 'to sell'*	>	*HM *mɛjH*

*11c. HM *ɻɛj (75)*

H *ɻɛ : HM *ɻɛj : M *ɻɛi

	1	2	3	4	5	6	7	8	9	10	11	HM
4. soft	mɛ^{6}	ne^{6}	mua^{6}	noŋ^{6}	mja^{C}	mɔ^{6}	mĩ^{6}	mwei^{6}	ŋwei^{6}	mi^{6}	mai^{6}	*mlɻɛjH
5. eye	mɛ^{6}	me^{6}	mua^{6}	moŋ^{6}	ma^{C}	mɔ^{6}	mĩ^{6}	mwei^{6}	ŋwei^{6}	mi^{6}	mai^{2}	*mɻɛjH

*11d. M *ɻai (61)*

	1	2	3	4	5	6	7	8	9	10	11	M
6. to ask								na:i^{6}	na:i^{6}	na^{6}	nɔi^{6}	*nɻai^{C}

*11e. M *ɻɔi (188)*

	1	2	3	4	5	6	7	8	9	10	11	M
7. sun/day								ŋ̊ɔi^{1}	nɔ:i$^{1'}$	ŋ̊wai^{1}	nai^{1}	*hnɻɔi^{A}

Loans in set 11e:

khoj (MC)	開	*kāi 'to open'*	>	*M *khɻɔi^{A}*
twojH (MC)	碓	*duì 'tilt-hammer/pestle'*	>	*M *tɻɔi^{C}*
ʔojH (MC)	愛	*ài 'to love'*	>	*M *ʔɻɔi^{C}*

Discussion

Hmong-Mien rime 11b shares with rimes 12/17b-c and 15b, d the characteristic that the final high front vocalic element triggered the introduction of a back rounded on-glide in the development of Hmongic. For discussion, see chapter 2, section 1. Thus all words in rime 11 have an intermediate Proto Hmongic form in -ɻɛ, whether or not a back rounded on-glide is reconstructed at the Hmong-Mien level on the basis of its appearance in Mienic.

Rime sets 11d and 11e are included here because their Hmongic counterparts appear under the similar nasal rime 22 below: 'to ask' (*nɛŋ^{C}) and 'sun/day' (*hnɛŋ^{A}). The members of each pair are clearly related. A similar problem exists with four out of the five Hmongic words in sets 11a-c: these words have nasal initials, and show a nasal coda in Zongdi (4), as well as Gaopo, Fengxiang, and Bunu (not given here). It may prove to be best to separate Hmongic and Mienic in these cases as well, but since the Hmongic forms do not fit into any of the rimes 18–30 exactly, they appear here, and the final nasals are assumed to be secondary.

Notes

1. In Zongdi, 'grasp' > 'take' has narrowed to mean 'to take a wife'.

1 & 2. If Hmongic 'to grasp' had Mienic cognates, we would have four words dealing with the possession and transfer of objects involving the same root at the Hmong-Mien level: *ʔ-mɛj 'grasp', *n-mɛj 'have', *mɛj-X 'buy', *mɛj-H 'sell' (see chapter 4). The question of a possible genetic relationship between Hmong-Mien and Chinese is still open, but the deep and pervasive appearance of this basic root in both families is intriguing.

4. Medial *-l- reconstructed on the basis of Gaopo /mləŋ^{6}/ (Wang and Mao 6). Compare Proto Malayo-Polynesian *ma-lumu 'soft, tender, gentle'.

5. Possibly from Chinese 目 'eye' (OC *[m][u]k > MC mjuwk > Man. *mù*).

12/17[37]

*12/17a. H *ɻuei*

	1	2	3	4	5	6	7	H
1. belly	tɕhu^{1}	tɕhi^{1}	chau^{1}	tɕɔ^{1b}	tɕhu^{A}	the^{1}	–	*chɻei^{A}
2. to pour	ɭu^{1}	–	lau^{1}	ɭo^{1a}	ʔlu^{A}	–	–	*ʔljɻei^{A}
3. to repay	pə^{2}	pi^{2}	pau^{2}	pɔ^{2}	vu^{A}	–	–	*bɻei^{A}
4. to burn (TR)	ʈu^{3}	–	ʈau^{3}	ʂɔ^{3a}	tʂu^{B}	–	–	*krɻei^{B}
5. flour	–	–	–	plɔ^{5a}	plou^{B}	–	–	*plɻei^{B}
6. sinew	ɕhu^{3}	ɕi^{3}	–	sɔ^{3b}	su^{B}	–	si^{3}	*sjɻei^{B}
7. old	lu^{4}	–	lau^{4}	lo^{4}	lau^{B}	–	–	*lɻei^{B}
8. river deer	–	–	–	ŋko^{4}	ŋku^{B}	–	–	*ŋgɻei^{B}
9. axe	to^{5}	tɔ^{5}	tau^{7}	tɔ^{5a}	tu^{C}	ðei^{5}	ti^{5}	*tɻei^{C}
10. to boil (TR)	hu^{5}	hɔ^{3}	hau^{5}	–	–	–	–	*hɻei^{C}
11. to write	xho^{5}	ʂei^{5}	ʂau^{5}	zɻɔ^{5b}	–	–	–	*hrɻei^{C}
12. to fall (over)	ku^{6}	qɔ^{6}	qau^{6}	ho^{6}	ʁu^{C}	–	–	*ɢɻei^{C}
13. pus	pu^{6}	pɔ^{6}	pau^{6}	po^{6}	vu^{B}	pei^{6}	pɪ^{6}	*bɻei^{C}
14. thin (person)	su^{5}	ntsei^{5}	ntsau^{6}	ntso^{6}	–	ɳʈʃe^{6}	nʑi^{6}	*ndzɻei^{C}
15. young man	ɳo^{6}	–	ɳʈau^{6}	ɳʈo^{6}	ɳʈʂu^{C}	ɳʈʃi^{6}	–	*ndrɻei^{C}
16. ice	ɭu^{7}	–	dau^{7}	–	–	–	–	*qrɻei^{D}

Loans in set 12/17a:

**tˁek (OC)*	>	*tek (MC)*	蹄	*dí 'hoof'*	>	*H *trɻei^{C} 'hoof/claw/nail'*
**(mə-)t(ˁ)rek (OC)*	>	*trɛk (MC)*	摘	*zhāi 'to pluck'*	>	*H *ndrɻei^{C} 'to strip leaves'*

*12/17b. HM *ei (39, 170, 208)*

H *ɻei : HM *ei : M *ei

	1	2	3	4	5	6	7	8	9	10	11	HM/M
17. cloth	–	ntei^{1}	ntau^{1}	ntɔ^{1a}	nʔtu^{A}	nte^{1}	ni^{1}	di^{1}	–	di^{1}	dɛi^{1}	*ntei
18. four	ɭu^{1}	pʐei^{1}	plau^{1}	plɔ^{1a}	plou^{A}	ple^{1}	pi^{1}	pje^{1}	pjei^{1}	pləi^{1}	pɛi^{5}	*plei
19. hair	ɭu^{1}	pi^{1}	plau^{1}	plɔ^{1a}	plou^{A}	ple^{1}	pi^{1}	pje^{1}	pjei^{1}	pli^{1}	pɛi^{1}	*pljei
20. to know	pu^{1}	–	pau^{1}	pɔ^{1a}	–	pe^{1}	pɪ^{1}	pei^{1}	pei^{1}	pəi^{1}	bɛi^{1}	*pei
21. shell/covering	ɭhu^{7}	–	phlau^{1}	–	phlau^{C}	–	–	–	–	–	fɔu^{1}	*phlei
22. head	fhu^{3}	pʐei^{3}	hau^{3}	wɔ^{5b}	hu^{B}	–	pfi$^{3'}$	pje^{3}	pjei^{3}	pli^{3}	pɛi^{3}	*S-phreiX
23. head louse	ɕhu^{3}	ɳʈɕhi^{3}	ɳʈʂhau^{3}	ntsɔ^{3b}	nʔtshu^{B}	–	tɕhi^{3}	ɕei^{3}	tθei^{3}	–	dzɛi^{3}	*ntshjeiX
24. son-in-law	–	–	vau^{3}	wɔ^{3a}	ʔwu^{B}	ve^{3}	vi^{3}	vei^{3}	–	–	vɛi^{3}	*ʔweiX
25. soybean	pu^{3}	–	pau^{3}	–	–	–	–	–	bei^{3}	bi^{3}	mɛi^{3}	*N-peiX
26. to dream	pu^{5}	mpei^{5}	mpau^{5}	mpɔ^{5a}	mʔpu^{C}	mpe^{5}	mi^{5}	bei^{5}	bei^{5}	bəi^{5}	bɛi^{5}	*mpeiH
27. taste/try flavor	ɱhu^{5}	–	–	–	–	–	–	–	–	ɱi^{5}	–	*hmeiH
28. porcupine	ɕen^{6}	tɕi^{6}	tʂau^{6}	so^{6}	zu^{C}	ʃa^{6}	tɕi^{6}	dei^{6}	dei^{6}	–	hɛi^{6}	*N-dzjeiH
29. child								tɕwei^{3}	sei^{3}	hwjəi^{7}	–	*k^{w}jei^{B}

Loans in set 12/17b:

dzjeH (MC)	漬	*zì 'to soak'*	>	*HM *dzeiH*
mejX (MC)	米	*mǐ 'husked rice'*	>	*M *hmei^{B}*

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[37] This category merges two of the rime categories in Wang 1994, 12 and 17. These two categories differ only in the Jiwei (Qo Xiong) reflex, for which an explanation is proposed in section 2.1.3.1.

*12/17c. HM *æi (132)*

H *u̯ei : HM *æi : M *æi

	1	2	3	4	5	6	7	8	9	10	11	HM/M
30. vegetable	ɣu^{1}	ʐei^{1}	ʐau^{1}	ʐɔ^{1a}	ʔwju^{A}	ji^{1}	ɦji^{1}	gai^{1}	gjai^{1}	lai^{1}	ɛi^{1}	*ʔræi
31. shy								ŋai^{3}	ŋai^{1}	–	–	*ʔŋæi$^{A/B}$
32. thin								kje^{6}	kjai^{6}	klai^{6}	kɛi^{6}	*glæi^{C}

Loans in set 12/17c:

drij (MC)	遲	*chí 'late'*	>	*M *djæi^{A}*
sejH (MC)	細	*xì 'fine, small'*	>	*M *sæi^{C} 'small/fine'*

*12/17d. HM *u̯əi (39, 207)*

H *u̯ei : HM *u̯əi : M *u̯əi

	1	2	3	4	5	6	7	8	9	10	11	HM
33. ashes	ɕhu^{3}	ɕi^{3}	tʂhau^{3}	sɔ^{3b}	tshu^{B}	θe^{3}	ɕi^{3}	ɕwai^{3}	sa:i^{3}	swai^{3}	sɔi^{3}	*tshjʉəiX
34. knee	tɕu^{6}	tɕɔ^{6}	cau^{6}	tɕo^{6}	ʑu^{C}	–	tɕi^{6}	tɕwai^{6}	–	ʨwai^{6}	–	*ɟu̯əiH

Discussion

Hmong-Mien rimes 12/17b-c share with rimes 11b and 15b, d the characteristic that the final high front vocalic element triggered the introduction of a back rounded on-glide in the development of Hmongic. For discussion, see section 2.1.3. Thus all words in rime 12/17 have an intermediate Proto Hmongic form in *-u̯ei, whether or not a back rounded on-glide is reconstructed at the Hmong-Mien level on the basis of its appearance in Mienic. This set appears as two smaller sets in Wang 1994: 12 and 17. However, the two Hmongic sets differ only in one language: Jiwei (Qo Xiong) (2), which shows both /ei~i/ and /ɔ/ in this rime. As with two other rimes (4 and 13), conservative Jiwei may reflect an old Hmong-Mien rime contrast here. The Jiwei vowel is /ei~i/ if the Hmong-Mien rime does not have a rounded on-glide (rimes 12/17c-d above), and is /ɔ/ if the Hmong-Mien rime has a rounded on-glide (rime 12/17e above). The Jiwei form /ʐei^{1}/ for 'vegetable' (12/17d) supports this. The one exception is 'ashes', where /ɕɔ^{3}/ is expected, but /ɕi^{3}/occurs instead. Mienic counterparts have not been found for the words in rime 12/17a, but if we can find them, 'axe', 'pus' and 'fall over' should show rounded on-glides. Conversely, Hmongic counterparts have not been found for 'shed leaves' in rime 12/17b, but if they can be found, Jiwei should show the /ɔ/ vowel.

A Chinese loanword that belongs to this set is HM *mpu̯æiH 'to boil (INTR)' from Chinese 沸 'to boil (INTR)' (OC *-p[u][t]-s > MC pjɨjH (MC) > Man. *fèi*).

Notes

1. In White Hmong, cognate /chau^{1}/ means 'to crawl on one's belly' (compare the verbal use of 'belly' in English: 'to belly up to the table').

5. Compare Proto Malayo-Polynesian *palu 'sago flour' (ACD).

7. The individual forms look very much like Chinese 老 'old' (MC lawX > Man. *lǎo*), but at the Hmongic level the rime does not correspond.

11. Compare Chinese 鏤 'to incise' (OC *[r]^{ʕ}o-s > MC luwH > Man. *lòu*).

18. From Tibeto-Burman *b-ləy 'four' (Matisoff 2003). See chapter 5.

20. Possibly from Chinese 别 ‘to separate, distinguish’ (OC *N-pret > MC bjet > Man. *bié*).
21. The majority of other West Hmongic cognates have tone 1. Yanghao (1) from Office of Miao-Yao Research Lexicon 1987. The word in both Yanghao (1) and Fuyuan (5) means ‘soft membrane inside shell’. Compare Proto Tai *pl–k ‘shell, bark’.
22. Extended semantically in White Hmong to ‘base, root, origin’ as well as ‘summit’ (tone 3) and ‘leader, headman’ (tone 5).
23. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
24. Changping Mien (Wang and Mao 18) has been substituted for Luoxiang Mien (8). Compare Tibeto-Burman *krwəy ‘son-in-law’ (Matisoff 2003). This connection is strengthened by the parallel ‘sister-in-law/daughter-in-law’ *ʔɲam (4.7/24) which closely resembles Tibeto-Burman *nam ‘daughter-in-law’ (Benedict 1987a).
26. Jinxiu Mien (8) from L-Thongkum 1993:205.
27. Possibly related to Chinese 味 ‘taste (n.)’ (OC *m[ə][t]-s > MC mjɨjH > Man. *wèi*).
28. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
29. Compare Pucheng (Min) /kiãi^{3}/ ‘child’ (Norman 1988:243).
30. Perhaps Chinese 卉 ‘herbs, vegetation’ (MC xjwɨjH > Man. *huì*). See correspondence to ‘to conceal’ (2.55/10).
31. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
32. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). A word meaning ‘thin (person)’ with matching rime and tone exists in Hmongic, but its initial is *ndz- (3.6).
33. Chinese 灰 ‘ashes’ (MC xwoj > Man. *huī*) has a very different onset and a different tone, but the rime corresponds.

13
*13a. H *ow*

	1	2	3	4	5	6	7	H
1. plum	–	–	khaɯ^{1}	kə^{1b}	kho^{A}	–	–	*khow^{A}
2. soot	tɕhu^{1}	–	ŋkhaɯ^{1}	ŋkə^{1b}	ŋʔkho^{A}	–	–	*ŋkhow^{A}
3. white	l̥u^{1}	qwə^{1}	daɯ^{1}	l̥ə^{1a}	qlo^{A}	klau^{1}	kwɔ^{1}	*qlow^{A}
4. able	su^{2}	–	tsaɯ^{2}	sə^{2}	–	–	–	*dzow^{A}
5. heart	l̥u^{3}	–	plaɯ^{3}	plə^{3b}	plo^{B}	–	–	*pljow^{B}
6. paper	tu^{3}	ntə^{3}	ntaɯ^{3}	ntə^{3a}	nʔto^{B}	ntau^{3}	nɔ^{3}	*ntow^{B}
7. face	–	–	–	puɯ^{4}	–	–	–	*bow^{B}
8. foot	tu^{5}	tə^{5}	taɯ^{5}	tə^{5a}	to^{C}	–	–	*tow^{C}
9. salty	l̥u^{5}	–	daɯ^{5}	l̥ə^{5a}	–	–	–	*qrow^{C}
10. to swallow	–	–	–	ŋkə^{5a}	–	ŋkau^{5}	ŋɛ^{5}	*ɴqow^{C}
11. walnut	–	–	–	l̥ə^{5a}	qlo^{C}	–	–	*qlow^{C}
12. to gnaw	ki^{7}	ku^{7}	kaɯ^{7}	kə^{7a}	ko^{D}	–	–	*kow^{D}
13. to ignite/light	tu^{7}	–	taɯ^{7}	tɐ^{7a}	to^{D}	–	–	*tow^{D}
14. to open (door)	pu^{7}	pu^{7}	–	–	po^{D}	–	pɔ^{7}	*pow^{D}
15. to peck/dig	tɕu^{7}	ŋ̊tɕu^{7}	ɲcaɯ^{7}	ŋ̊tɕə^{7a}	ŋ̊ʔtɕo^{D}	–	tɕɔ^{1}	*ɲcow^{D}
16. pheasant	–	–	tʂaɯ^{7}	sə^{7a}	–	–	–	*tsjow^{D}
17. to pick up	tɕhə^{1}	–	khaɯ^{7}	kɯ^{7b}	kho^{D}	–	–	*khow^{D}
18. to shut (door)	shu^{7}	–	–	ʂə^{7}	–	–	–	*sow^{D}
19. bamboo	–	–	ʈaɯ^{8}	ʈə^{8}	–	–	–	*drow^{D}
20. mountain pass	–	–	daɯ^{8}	l̥ə^{8}	–	–	–	*ɢlow^{D}
21. pair	ŋ̊u^{8}	ŋoŋ^{8}	ŋkaɯ^{8}	ŋkə^{8}	ŋko^{D}	ŋ̊tʃau^{8}	ŋɤ^{8}	*ŋgjow^{D}
22. to stumble	–	–	–	–	–	–	–	*ndzjow^{D}
23. whip	–	–	mplaɯ^{8}	mplə^{8}	mpʔlo^{D}	–	–	*mblow^{D}

Loans in set 13a:

	tsjuwX (MC)	酒	*jiŭ*	*'liquor'*	>	*H *cow^{B}*
**[r]awʔ (OC)* >	*ljewX (MC)*	燎	*liăo*	*'to singe'*	>	*H *hljow^{B} 'to burn (mountain)'*

*13b. HM *ou (263)*

H *ow : HM *ou : M *ou

	1	2	3	4	5	6	7	8	9	10	11	HM/M
24. to stand/get up	ɕhu^{3}	ɕə^{3}	ʂaɯ^{3}	sə^{3b}	so^{B}	θjau^{3}	sɤ^{3}	ɕou^{3}	–	səu^{3}	fu^{3}	*sjouX
25. fire	tu^{4}	tə^{4}	taɯ^{4}	tɯ^{4}	ðo^{B}	tau^{4}	tɤ^{4}	tou^{4}	tɔu^{4}	təu^{4}	tu^{4}	*douX
26. explode	tu^{6}	tə^{6}	taɯ^{6}	tɯ^{6}	ðo^{C}	–	tɤ^{6}	–	tɔ^{6}	–	–	*douH
27. bellows								lou^{2}	lɔu^{2}	ləu^{2}	lu^{2}	*lou^{A}
28. hold w/2 hands								pou^{2}	pɔu^{2}	–	–	*bou^{A}
29. to forget								–	ŋ̊ɔu^{3}	ŋ̊au^{3}	nau^{3}	*hɲou^{B}
30. grave/tomb								θou^{3}	tθɔu^{3}	tsəu^{3}	–	*tsou^{B}

Loans in set 13b:

tsyhoH (MC)	處	*chù 'bed/place'*	>	*HM *chouH*
drjoH (MC)	箸	*zhù 'chopsticks'*	>	*HM *drouH*
hjuH (MC)	芋	*yù 'taro'*	>	*HM *wouH*
pjuX (MC)	斧	*fǔ 'axe'*	>	*M *pou^{B}*
tsyoX (MC)	煮	*zhǔ 'to boil'*	>	*M *tjou^{B}*
kjuH (MC)	句	*jù 'CLF-sentences'*	>	*M *kjou^{C}*

*13c. HM *op (237)*

H *ow : HM *op : M *op

	1	2	3	4	5	6	7	8	9	10	11	HM
31. skin	tu^{3}	tə^{3}	taɯ^{5}	tə^{3a}	to^{B}	–	–	dup^{7}	dup^{7}	din^{7}	dip^{7}	*N-top

*13d. HM *ot (256)*

H *ow : HM *ot : M *ot

	1	2	3	4	5	6	7	8	9	10	11	HM
32. to stop up/plug	–	ntshu^{7}	ɳʈʂaɯ^{7}	ntsəu^{5a}	nʔtsu^{D}	ɳʈʃau^{7}	sɔ^{7}	tsot^{7}	–	–	–	*ntsjot

Loans in set 13d:

**[s][r][o]t (OC)*	>	*srwæt (MC)*	刷	*shuā 'to brush'*	>	*M *sot^{D} 'to wipe'*
		khwot (MC)	堀	*kū 'hole'*	>	*M *khot^{D}*

*13e. HM *ok (186, 203)*

H *ow : HM *ok : M *ok

	1	2	3	4	5	6	7	8	9	10	11	HM/M
33. few/lack	ɕu^{6}	–	tʂaɯ^{6}	–	zo^{C}	ʃau^{6}	tɕɤ^{6}	θo^{8}	tθɔ^{6}	tshɔ^{8}	hu^{8}	*dzjok
34. finger								do^{7}	dɔ^{7}	dɔ^{7}	–	*ʔdok^{D}
35. turbid								glo^{8}	glɔ^{6}	–	–	*ŋglok^{D}

*13f. HM *əut (255)*

H *ow : HM *əut : M *ut

	1	2	3	4	5	6	7	8	9	10	11	HM
36. navel	tu^{7}	ntu^{7}	ntaɯ^{7}	ntə^{7a}	nʔto^{D}	ntu^{7}	–	dut^{7}	du:t$^{7'}$	din^{7}	–	*ntəut

Discussion

The variant reflexes in Jiwei (Qo Xiong) (2) and Pa-Hng (12) are in complementary distribution. In Jiwei the rime is /u/ in tone 7 and /ə/ elsewhere, which follows the generalization made in the introduction to the reconstruction (2.1.3) that traces of coda consonants can be detected in vowel distinctions in this language. In Pa-Hng the distribution of rimes is conditioned by the register of the initial consonant: it is /ɤ/ after low register tones 4, 6, 8 and /ɔ/ after high register tones 1, 3, 7.

Notes

7. Also Shimen /bey^{4I}/, Qingyan /pau^{4}/, Gaopo /pə^{4}/, Fengxiang /pɔ^{4}/ (Wang and Mao 1995). Xuyong /bleu^{4}/ with medial -l- may also be cognate.

13, 25 & 26. The first of these may stand in a morphological relationship to the other two: *tow 'to ignite/light', *douX 'fire', *douH 'to explode' (see chapter 4).

15. There is a similar word in Mienic: Jiangdi Mien (Wang and Mao 15) /dzo^{7}/ and Xiangnan Mien (Wang and Mao 16) /dzəu^{7}/ 'to peck'; however, the rimes do not correspond. The word is listed twice in Wang and Mao, once as 'to peck' and once as 'to dig' because in Yanghao (1) 'to peck' has tone 5 and 'to dig' has tone 7. The forms in all other locations with these meanings are identical, which suggests the differentiation is limited to Yanghao. It is also used in White Hmong to mean 'to hoe/clean the ground'. Compare Chinese 掘 'to dig' (OC *[g]ot > MC gjwot > Man. *jué*).

20. This may be the same as Chinese 峽 'gorge between two mountains' (OC *N-k^{ʕ}<r>ep > MC hɛp > Man. *xiá*; the same word as 狹 'narrow'), but the Chinese word does not have a rounded vowel.

22. This word is only represented by two West Hmongic languages in Wang 1994: Xianjin /ɳtʂeu^{8}/ and Shimen /ɳdʐɦey^{8II}/, but even on the basis of such scant evidence seems to fit into rime 13.

27. Possibly from Chinese 蘆 'reed' (MC lu > Man. *lú*), since Hmong and Mien bellows are made from a cylinder with a pump inside (Lemoine 1972:130–131).

28. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

29. Compare Hmongic *hnuŋ^{B} 'to forget' (2.8/27).

32. Compare Cantonese /tsat/, Hainan Mun /tjat^{7}/ 'to plug (a hole)'. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

34 & 35. Given the merger of two different Hmong-Mien rimes to Mienic *-ok, these words could equally well have been placed in rime 9e.

34. Compare Hmongic *nta^{B} 'finger' (2.4/4).

35. Compare Hmongic *ŋkro^{B}/*ŋgro^{B} 'turbid' (5.49/7).

14
HM *ɲui (20)

H *ɲuu : HM *ɲui : M *ɲui

	1	2	3	4	5	6	7	8	9	10	11	HM
1. two	o^{1}	ɯ^{1}	ɔ^{1}	ɔ^{1a}	u^{A}	u^{1}	va^{1}	vi^{1}	i^{1}	wəi^{1}	vi^{5}	*ʔɲui

Discussion

A correspondence "set" containing only one word is not of great significance to the reconstruction. 'Two' is a common word which is phonologically slight. There is no supporting external evidence for this reconstruction from Chinese loans that pattern the same way. Nonetheless, this reconstruction is faithful both to the Hmongic and Mienic reflexes and to the pattern of preservation of the initial part of the rime in Hmongic, and seems reasonable.

15
*15a. H *u̯a*

	1	2	3	4	5	6	7	H
1. otter	ɕha^{1}	ɳʈɕhɑ^{1}	ɳʈʂhua^{1}	ntsa^{1b}	nʔtsha^{A}θja^{1}		–	*ntshju̯a^{A}
2. spinning wheel	–	–	tʂhua^{1}	–	tsha^{A}	–	–	*tshju̯a^{A}
3. to twist/rub	fha^{1}	–	sua^{1}	sa^{1b}	sa^{A}	va$^{1'}$	–	*S-phu̯a^{A}
4. to open out/undo	tha^{3}	nthɑ^{3}	nthua^{3}	–	nʔtha^{B}	–	–	*nthu̯a^{B}
5. to marry (a woman)	qha^{5}	–	–	ha^{5a}	ka^{C}	–	–	*qu̯a^{C}
6. to tear	ɭ̊i^{5}	–	dua^{5}	ɭ̊a^{5a}	qla^{C}	–	kwɛ^{3}	*qru̯a^{C}
7. to throw on (clothes)	pa^{5}	–	mpua^{5}	mpa^{5a}	–	–	ma^{5}	*mpu̯a^{C}
8. to be used to	ɭ̊a^{6}	ɭ̊ɑ^{6}	–	ɭ̊ə̈a^{6}	la^{C}	–	–	*lju̯a^{C}
9. duck	ka^{6}	–	–	–	ʁwa^{C}	–	–	*ɢu̯a^{C}
10. to meet	tɕa^{6}	–	cua^{6}	tɕə̈a^{6}	ʑa^{C}	–	–	*ɟu̯a^{C}
11. rat	–	–	tʂua^{6}	pʐə̈a^{6}	vja^{B}	–	–	*bru̯a^{C}

Loans in set 15a:

bjuX (MC)	腐	*fǔ 'rotten'*	>	*H *bu̯a^{B} 'bad/spoiled'*
dzjak (MC)	嚼	*jué 'to chew'*	>	*H *cu̯a^{C}* [38]

*15b. HM *əj (94, 151)*

H *u̯a : HM *əj : M *əi

	1	2	3	4	5	6	7	8	9	10	11	HM/M
12.excrement	qa^{3}	qɑ^{3}	qua^{3}	ha^{3a}	qa^{B}	ka^{3}	ka^{3}	dai^{3}	dai^{3}	kai^{3}	kai^{3}	*N-KəjX
13. to do	ɛ^{5}	–	ua^{5}	aŋ^{5a}	a^{C}	–	ĩ^{5}	–	ai^{5}	wəi^{5}	ai^{5}	*ʔəjH
14. to kill	ta^{5}	tɑ^{5}	tua^{5}	ta^{5a}	–	ta^{5}	ta^{5}	tai$^{5'}$	tai^{5}	tai^{5}	dai^{5}	*təjH
15. to die	ta^{6}	tɑ^{6}	tua^{6}	tə̈a^{6}	ða^{C}	ta^{6}	te^{6}	tai^{6}	tai^{6}	tai^{6}	tai^{6}	*dəjH
16. bamboo shoot /orphan	za^{6}	mzɑ^{6}	ɳʈʂua^{6}	mpʐə̈a^{6}	mpja^{C}	mpja^{6}	mje^{6}	bje^{6}	bjai^{6}	blai^{6}	bɛi^{6}	*mbrəjH
17. diligent	ŋa^{6}	ŋɑ^{6}	ɴqua^{6}	ŋkə̈a^{6}	ɴqa^{C}	ŋka^{6}	ŋe^{6}	–	–	gwai^{6}	–	*NGəjH
18. to fly								dai^{5}	dai$^{5'}$	dai^{5}	–	*ʔdəi^{C}

Loans in set 15b:

**[r][ə][j] (OC)*	>	*lij (MC)*	梨	*lí 'pear'*	>	*HM *rəj*
		tsij (MC)	粢	*zī 'sacrificial grain'*	>	*M *tjəi^{A} 'millet'*
		dzyiX (MC)	柿	*shì 'persimmon'*	>	*M *djəi^{B}*

*15c. HM *u̯əj (222)*

H *u̯a : HM *u̯əj : M *u̯əj

	1	2	3	4	5	6	7	8	9	10	11	HM/M
19. sweet potato	na^{2}	–	–	–	–	–	–	du^{2}	dɔːi^{2}	dwai^{2}	dai^{2}	*ndu̯əj

[38] If this is indeed the source of the word in Hmongic, an explanation is needed for the register difference. See also Chinese 噍 'to chew' (OC *[dz]ewk-s > MC dzjewH > Man. *jiào*).

*15d. HM *aj (74, 112, 150, 151)*

H *u̯a : HM *aj : M *ai

	1	2	3	4	5	6	7	8	9	10	11	HM/M
20. medicine	tɕa^{1}	ŋkɑ^{1}	–	ka^{1a}	ka^{A}	ðja^{1}	ŋa^{1}	–	gja:i^{1}	hja^{1}	tsɛi^{1}	*N-kjaj
21. to come	ta^{2}	–	tua^{2}	ta^{2}	ða^{A}	–	te^{2}	ta:i^{2}	ta:i^{2}	ta^{2}	tɛi^{2}	*daj
22. waist	l̥a^{3}	qwɑ^{3}	dua^{3}	l̥a^{3a}	qla^{B}	kla^{3}	la^{3}	kla:i^{3}	kla:i^{3}	kla^{3}	lai^{3}	*qlajX
23. to crow	qa^{5}	qɑ^{5}	qua^{5}	ha^{5a}	qa^{C}	ka^{5}	ŋa^{5}	ka:i$^{5'}$	ka:i^{5}	–	kɔi^{5}	*KajH
24. sharp	ɣa^{6}	zɑ^{6}	zu̯a^{6}	–	wja^{C}	ŋkja^{6}	–	gai^{6}	gjai^{6}	lai^{6}	hɛi^{6}	*-rajH
25. river								–	–	da^{2}	dɔi^{2}	*ndai^{A}
26. which								la:i^{5}	–	ha^{2}	–	*[hl]ai^{C}

Loans in set 15d:

**p^{hʂ}aj-s (OC)*	>	*phaH (MC)*	破	*pò 'to break'*	>	*HM *phajH 'to cut open'*
**[k]^{wʂ}aj-s (OC)*	>	*kwaH (MC)*	過	*guò 'to pass/surpass'*	>	*HM *K^{w}ajH 'to cross (river)'*
**[dz]^{ʂ}aj (OC)*	>	*dza (MC)*	齹	*cuó 'salty'*	>	*M *ndzai^{A}*

Discussion

Hmong-Mien rimes 15b, d share with rimes 11b and 12/17b-c the characteristic that the final high front vocalic element triggered the introduction of a back rounded on-glide in the development of Hmongic. For discussion, see chapter 2, section 1. Thus all words in rime 15 have an intermediate Proto Hmongic form in *u̯a, whether or not a back rounded on-glide is reconstructed at the Hmong-Mien level on the basis of its appearance in Mienic.

Notes

2. The meaning of this word in White Hmong is 'machine'. It is probably from Chinese 車 'cart, chariot, thing with wheel' (MC tsyhæ > Man. *chē*).
3. This word is probably the same as Mienic *ɕæt^{D} 'to twist/rub' (4.13/5).
6. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
7. In White Hmong, 'to wrap around the body'. Possibly from Chinese 被 'to cover self' (OC *m-p(r)ajʔ > MC bjeX > Man. *bèi*).
9. Also Fengxiang (West Hmongic) /qa^{6}/ (Wang and Mao 9). Expressive phonology.
14. Yanghao (1) from Office of Miao-Yao Research Lexicon 1987.
14 & 15. These words are important in the reconstruction of morphology in Hmong-Mien, as they bear a morphological relationship to each other: see chapter 4. They are also to be related in some fashion to proto-Austronesian *ma-aCay 'to die' and *pa-aCay 'to kill' (ACD).
16. This root also means 'orphan, widow(er)' in all Hmongic languages except Jiongnai, Ho Ne and Pa-Hng. It may be that 'bamboo shoot' is basic and 'orphan, widow(er)' is a derived meaning since the distribution of 'bamboo shoot' is wider. However, given Proto Tai *br[a] 'orphan', perhaps 'orphan/widow(er)' is the basic meaning.
21. To come to a place other than one's home.
23. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). Possibly from Chinese 歌 'to sing; a song' (OC *[k]^{ʂ}aj > MC ka > Man. *gē*), although this word is not used for the song of animals, and the tones do not correspond.

16
*16a. H *u*

	1	2	3	4	5	6	7	H
1. to blow	tsho^{1}	phzo^{1}	tʂhua^{1}	pʐa^{1b}	phja^{A}	phu^{1}	phjo^{1}	*phru^{A}
2. to trap/ensnare	–	–	cua^{1}	tɕæ^{1a}	tɕa^{A}	–	–	*cu^{A}
3. fern	xhə^{1}	ʂo^{1}	ʂua^{1}	ʐa^{1b}	sa^{A}	ŋkjeu$^{1'}$	–	*-hru^{A}
4. on top of	–	–	–	sa^{1b}	sa^{A}	–	–	*sju^{A}
5. sound/noise	xhə^{1}	ʂo^{1}	ʂua^{1}	ʐa^{1b}	sa^{A}	ŋkjeu$^{1'}$	ɕo^{1}	*-hru^{A}
6. tree	fhu^{3}	–	–	wa^{1b}	–	–	–	*S-phru^{A}
7. fog/cloud	ho^{1}	ho^{1}	hua^{1}	ɦa^{1b}	ha^{A}	–	ho^{1}	*hu^{A}
8. green/blue	zo^{2}	mzo^{1}	ɳtʂua^{1}	mpʐa^{1a}	mʔpja^{A}	–	mjo^{1}	*mpru^{A}
9. firm/durable	–	–	ʈua^{2}	ʈa^{2}	–	–	–	*dru^{A}
10. to sprinkle /spill	–	ɳtɕho^{3}	ɲchua^{3}	ɳtɕha^{3b}	ɳʔtɕha^{B}	–	–	*ɲchu^{B}
11. rabbit	–	–	lua^{3}	ɭa^{3a}	ʔla^{B}	–	–	*ʔlju^{B}
12. sorghum	–	–	ɳtʂua^{7}	ntsa^{7a}	–	–	–	*ntsju^{C}
13. to weed/hoe	–	ntho^{5}	nthua^{5}	–	–	–	–	*nthu^{C}
14. ragged/shabby	nei^{6}	–	ntua^{6}	–	qla^{C}	–	–	*ɴɢlu^{C}

Loans in set 16a:

	ʔu (MC)	烏	*wū*	*'crow'*	>	*H *ʔu^{A}*
**[k](r)u (OC)* >	*kjuw (MC)*	鳩	*jiū*	*'turtledove'*	>	*H *ɴqu^{A} 'pigeon'*[39]
	ʔjiewH (MC)	要	*yào*	*'important/to want'*	>	*H *ʔju^{B} 'to ask for/want'*

*16b. HM *u (111, 225)*

H *u : HM *u : M *u

	1	2	3	4	5	6	7	8	9	10	11	HM/M
15. drum	ŋə^{4}	ŋɑŋ^{4}	ŋʃua^{4}	ŋʧəa^{4}	ŋtʂa^{B}	ŋʧu^{4}	mjo^{4}	dzo^{4}	ɖu^{4}	du^{4}	–	*ndruX
16. to launder	sho^{5}	ntsho^{5}	ntshua^{5}	ntsa^{5b}	nʔtsha^{C}	ŋʧu^{5}	ŋo^{5}	do^{5}	du$^{5'}$	dzu^{5}	du^{5}	*ntshuH
17. ramie/hemp	no^{6}	no^{6}	ntua^{6}	ntəa^{6}	nta^{C}	ntu^{6}	mjo^{6}	do^{6}	du^{6}	du^{6}	–	*nduH
18. tortoise	–	–	–	–	–	–	–	to^{6}	tu^{6}	–	–	*duH
19. return home								mu^{4}	mu^{4}	mu^{4}	mu^{4}	*mu^{B}

Loans in set 16b:

**tˤuʔ (OC)* >	*tawX (MC)*	搗	*dǎo*	*'to husk/pound'*	>	*HM *tuX*
**[dz]ˤu (OC)* >	*dzaw (MC)*	槽	*cáo*	*'trough'*	>	*M *dzu^{A}*

*16c. HM *uə (191)*

H *u : HM *uə : M *uə

	1	2	3	4	5	6	7	8	9	10	11	HM
20. nine	tɕə^{2}	tɕo^{2}	cua^{2}	tɕa^{2}	ʑa^{A}	tʃu^{2}	ko^{2}	du^{2}	du^{2}	ju^{2}	ku^{2}	*N-ɟuə
21. cattle pen	ŋə^{2}	–	ŋkua^{2}	ŋka^{2}	ŋka^{A}	–	tɛð^{2}	–	gu^{2}	glu^{2}	dzu^{2}	*ŋgluə
22. thunder	–	–	–	–	–	–	mo^{1}	bu^{1}	bu^{5}	–	bjau^{1}	*mpuə

[39] This word also could have been borrowed from Tibeto-Burman *k(r)əw 'dove' (Matisoff 2003).

Loans in set 16c:
**[g](r)aʔ (OC)* > *gjoX (MC)* 粔 *jù 'rice cake'* > *HM *ŋkjuəX*
**[b]ək-s (OC)* > *bjuwH (MC)* 伏 *fú 'to hatch'* > *HM *buəH 'to hatch/embrace'*

*16d. HM *ow (172)*

H *u : HM *ow : M *ow

	1	2	3	4	5	6	7	8	9	10	11	M
23. shuttle								gou^{4}	glɔu^{4}	–	–	*ɴGlow^{B}

Loans in set 16d:
**[g](r)aw (OC)* > *gjew (MC)* 橋 *qiáo 'bridge'* > *HM *ɟow*
mjuH (MC) 霧 *wù 'fog' (Cantonese /mou^{6}/)* > *M *mow^{C}*

Discussion

There was a merger of Hmong-Mien *uw (3f), *u̯o (7c), and *u (16c) to Mienic *u. 'Tortoise', 'to return home', and 'trough' have been placed here, in rime 16c. But it should be remembered that these words are not necessarily to be taken back to *u in Proto Hmong-Mien.

Notes

1. There are Chinese words with ph- meaning 'to blow', but this may be independent use of expressive phonology in both language groups.
6. The Yanghao (1) form is a classifier for vegetation (Office of Miao-Yao Research Lexicon 1987), as is West Hmongic Shimen /faɯ^{1}/ (Wang and Mao 4).
8. 'Green/blue' and Mienic *ʔbɔu^{B} (1.4/3) 'grey' may be cognate: Mienic 'grey' in Hainan Mun also means 'blue' (Shintani and Yang 1990).
10. Also 'to pour out'.
12. Upon inspection of more cognates, it becomes clear that tone 7 in these two forms for 'sorghum' are tone sandhi forms derived from tone 5.
14. Reflexes in Xianjin (/ŋʈua^{6}/) and Qingyan (/ŋʈo^{6}/) have retroflex initials, so this word might better be reconstructed as *ɴGru^{C}. It is possibly from a prefixed form of Chinese 陋 'humble, mean' (OC *[r]ˤo-s > MC luwH > Man. *lòu*).
18. Reconstructed to Proto Hmong-Mien on the basis of its appearance in Mienic and Qibainong Bunu /tu^{6}/ (Wang and Mao 10).
20. From Tibeto-Burman *gəw 'nine' (Matisoff 2003). See chapter 5.
21. Biao Min (10) is from Solnit 1982. This may be the same as Chinese 圉 'prison, pen' (OC *m-q(ʰ)(r)aʔ > MC ngjoX > Man. *yǔ*).
22. This may be related to Hmongic *S-pho^{A} 'thunder' (1.2/7). See discussion under onset 1.2.
23. This is probably related to the Hmongic word for 'shuttle', *ɴGəŋ^{B} (5-6.6/21).

18

*18a. H *in*

	1	2	3	4	5	6	7	H
1. to dry in sun	–	–	ʐia^{1}	ʐæin^{1a}	–	–	–	*ʔrin^{A}
2. monkey	lei^{1}	–	lia^{1}	læin^{1a}	–	lai^{1}	–	*ʔlin^{A}
3. red	–	–	lia^{1}	læin^{1a}	ʔlen^{A}	–	–	*ʔlin^{A}
4. skirt	tei^{1}	tɛ^{1}	tia^{1}	tæin^{1a}	ten^{A}	ðai^{1}	tĩ^{1}	*tin^{A}
5. to weave/plait	hei^{1}	hɛ^{1}	hia^{1}	ɦæin^{1b}	hen^{A}	xan^{1}	–	*hin^{A}
6. alive	–	–	cia^{2}	tɕein^{2}	ʑi^{A}	–	–	*ʝin^{A}
7. front surface	–	–	ntia^{2}	–	ɴqlen^{A}	–	–	*ɴɢlin^{A}
8. level	–	–	tia^{2}	tæin^{2}	–	–	–	*din^{A}
9. crop of bird	pi^{3}	–	tsia^{5}	pjein^{5a}	pu^{B}	pai^{3}	pẽ^{1}	*pjin^{B}
10. ginger	khi^{3}	–	qhia^{3}	hæin^{3b}	qhwjen^{B}	khai^{3}	–	*qhin^{B}
11. grape	qei^{3}	qɛ^{3}	–	hæin^{3a}	qen^{B}	–	ji^{3}	*qin^{B}
12. cooking pot/pan	vi^{4}	wɛ^{4}	jia^{4}	ʑein^{4}	wen^{B}	van^{4}	vĩ^{4}	*ɯjin^{B}
13. cool (water)	sei^{4}	tsɛ^{4}	tsia^{4}	sein^{4}	–	tʃai^{4}	tɕɦĩ^{4}	*dzin^{B}
14. persimmon	mi^{4}	mɛ^{4}	–	–	men^{B}	–	–	*min^{B}
15. to drive in (nail)	–	ŋ̊tɕɛ^{5}	ŋ̊tʂia^{5}	–	nʔtsen^{C}	–	ni^{5}	*ntsjin^{C}
16. mussel/clam	l̥iə^{6}	pɹɛ^{4}	plia^{6}	–	–	–	–	*blin^{C}
17. to be wedged in	–	ŋ̊ʈhɑ^{7}	–	ŋ̊ʈei^{5b}	–	–	–	*ntrin^{C}
18. female	mi^{8}	–	nia^{8}	mi^{8}	men^{C}	mai^{8}	mɛ̃^{7}	*min^{D}

Loan in set 18a:
sying (MC) 升 *shēng 'liter measure' > H *sjin^{A} 'measure for grain'*

*18b. HM *im (4, 5)*

H *in : HM *im : M *im

	1	2	3	4	5	6	7	8	9	10	11	HM/M
19. bitter	i^{1}	ɛ^{1}	ia^{1}	æin^{1a}	–	an^{1}	jĩ^{1}	im^{1}	im^{1}	in^{1}	jɛm^{1}	*ʔim
20. thorn								jim^{3}	ɖ̊im^{3}	–	–	*ʔʝim^{B}

Loans in set 18b:
ljem (MC) 鎌 *lián 'sickle'* > *HM *ljim*
sim (MC) 心 *xīn 'heart'* > *M *sim^{A}*
tsyim (MC) 箴 *zhēn 'needle'* > *M *sim^{A}*

*18c. HM *in (7)*

H *in : HM *in : M *in

	1	2	3	4	5	6	7	8	9	10	11	HM
21. tooth	m̥hi^{3}	ɕɛ^{3}	hn̥ia^{3}	mi^{3b}	m̥jen^{B}	m̥ai^{3}	mĩ^{3}	–	–	mjen^{3}	–	*hmjinX

Loans in set 18c:

**-[b]ˁe[n]ʔ (OC)*	>	*benX (MC)*	辮	*biàn 'a braid'*	>	*HM *mbjinX 'to braid/a braid'*
		pjien (MC)	鞭	*biān 'whip' (Cant. /pin^{1}/)*	>	*M *pin^{A}*

*18d. HM *iŋ (8)*

H *in : HM *iŋ : M *iŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
22. field	l̥i^{2}	–	lia^{2}	l̥æin^{2}	len^{A}	leŋ^{2}	lĩ^{2}	giŋ^{2}	gi:ŋ^{2}	ljɛ^{2}	ljaŋ^{2}	*ljiŋ
23. monkey								biŋ^{1}	bi:ŋ^{1}	–	bjaŋ^{1}	*ʔbiŋ^{A}
24. crop (of bird)/gizzard								tɕiŋ^{3}	d̥iŋ^{3}	–	–	*ciŋ^{B}

Loans in set 18d:

syeng (MC)	聲	*shēng 'sound'*	>	*M *siŋ^{A}*
sengX (MC)	醒	*xǐng 'to sober up'*	>	*M *siŋ^{B}*
		Cant. /pɛ:ŋ^{5}/ 'to hide onself'	>	*M *piŋ^{C}*

*18e. HM *i̥əm (135)*

H *in : HM *i̥əm : M *i̥əm

	1	2	3	4	5	6	7	8	9	10	11	HM/M
25. to sniff at	m̥hi^{5}	–	hni̥a^{5}	mi^{5b}	m̥jen^{C}	m̥ai^{5}	mi^{5}	hom^{5}	hɔ:m$^{5'}$	m̥ja^{5}	–	*hmji̥əmH
26. to cover (with tile)								hom^{6}	hɔ:m^{3}	–	hum^{3}	*hi̥əm$^{B/C}$

*18f. HM *i̥ən (119, 137)*

H *in : HM *i̥ən : M *i̥ən

	1	2	3	4	5	6	7	8	9	10	11	HM
27. liver	xhi^{1}	ʂɛ^{1}	ʂia^{1}	z̥æin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	hĩ^{1}	gan^{1}	gjen$^{1'}$	łan^{1}	–	*-hri̥ən

Loan in set 18f:

ngin (MC)	銀	*yín 'silver'*	>	*HM *ŋ^{w}i̥ən*

*18g. HM *i̥əŋ (83, 159)*

H *in : HM *i̥əŋ : M *i̥əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
28. high/ tall	xhi^{1}	ʂɛ^{1}	ʂia^{1}	z̥æin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	hĩ^{1}	gaŋ^{1}	gjaŋ$^{1'}$	łaŋ^{1}	dzɔŋ^{1}	*-hri̥əŋ
29. new	xhi^{1}	ɕɛ^{1}	tʂhia^{1}	sæin^{1b}	sen^{A}	ŋkheŋ$^{1'}$	sĩ^{1}	ɕaŋ^{2}	saŋ^{2}	saŋ^{1}	sjaŋ^{1}	*tshji̥əŋ
30. plum	–	–	–	–	–	–	le^{3}	gaŋ^{3}	–	łaŋ^{3}	ŋ̥ɔŋ^{3}	*hli̥əŋX
31. shallow	–	–	ŋkla^{3}	–	–	–	–	glaŋ^{3}	gjaŋ^{3}	–	lɛŋ^{3}	*ŋkli̥əŋX
32. smooth /glossy	–	mjɛ^{6}	mpla^{6}	mplein^{6}	mplen^{C}	–	wĩ^{6}	–	bjaŋ^{6}	–	–	*mbli̥əŋH
33. POSSESSIVE								ŋ̥aŋ^{1}	ŋ̥aŋ^{1}	nin^{2}	–	*ʔŋi̥əŋ^{A}

Loan in set 18g:

**N-s-ɻeŋ (OC)*	>	*tshjeng (MC)*	清	*qīng 'clear'*	>	*HM *ntshji̥əŋ*

Discussion

Note the close similarity in the reflexes of rime 18 (*-in) and 20 (*-en). The final Hmongic *-n disappeared in most languages: it survives only in West Hmongic (as in Zongdi (4) and Fuyuan (5) above), and in Pa-Hng as nasalization on the vowel.

Notes

2. The Mienic word for 'monkey' (*ʔbiŋ^{A} 1.4/18) shares the same tone and rime with this word, but begins with a different initial, suggesting the possibility of an ancient disyllabic source. Compare Proto Tai *liŋ 'monkey' (Li 1977).
2 & 3. These may be the same word, if the monkey was referred to as 'the red one'. How the connection between 'monkey' and 'red' may relate to the connection suggested above between the Hmongic and Mienic words for 'monkey' is unclear.
7. There are also Hmongic forms that match this word in meaning, rime, and tone but have an *mbl- initial: Gaopo /mplɛ^{2}/, Zongdi /mplæin^{2}/, and Fengxiang /mplen^{2}/ (Wang 1994).
16. Yanghao (1) and Jiwei (2) from Office of Miao-Yao Research Lexicon 1987.
18. 'Female' probably did not originally have a nasal coda: expected nasal codas in Gaopo (7) above, as well as in Qingyan and Qibainon Bunu (West Hmongic) do not appear, and the tone category 8 suggests a final -p or -t. But based on the overall correspondence, it is placed here for the time being. In White Hmong, 'mother'.
21. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). This word for 'tooth' could also fall under rime 18f and be reconstructed *hmjɻənX.
22. Compare the almost identical Chinese 田 'field; to hunt' (OC *lˤiŋ > MC den > Man. *tián*) and Tibeto-Burman *liŋ 'field' (Matisoff 2003). Both Haudricourt and Strecker (1991) and Sagart (1999:183–184) entertain the possibility that this was a loan from Hmong-Mien to Chinese.
23. The Hmongic word for 'monkey' (*ʔlin^{A} 2.40/18) shares the same tone and rime with this word, but begins with a different initial, suggesting the possibility of an ancient disyllabic source.
24. Downer (1973) gives Cantonese /khan/ 'gizzard' as the source of Mien /kien^{1}/, although this is not obviously the same word.
25. Both 'to sniff at' and 'to taste/try' (Hmong-Mien *hmeiH, 1.8/12) mean to smell or taste intentionally. Different words exist for 'to smell' and 'to taste' unintentionally. Compare Tibeto-Burman *s-nam 'to smell' ('directive, causative, intensive' s- prefix; see Matisoff 2003:99 ff.).
26. These forms for 'to cover', as well as Mienic *kom^{B} (5.1/21), appear to be borrowings from Tai-Kadai (see entries in section 2.2). The Mienic reflexes in both tone 3 and tone 6 suggest an initial voicing alternation as well as a tone alternation, but the tones may simply be "loan-tones" (see chapter 3), chosen to reflect the tone of the donor language(s) as closely as possible.
29. This may be from a variant of Chinese 清 'clear', given its close resemblance to pre-nasalized *ntshjɻəŋ in this set (3.20/18); see chapter 4.
30. This may be from Chinese 李 'plum' (MC liX > Man. *lǐ*).
31. Green Mong has been substituted for White Hmong (3).
32. In White Hmong, 'brilliant'.

19

19a. H *æn

	1	2	3	4	5	6	7	H
1. bamboo pipes	ki^{2}	–	qen^{2}	hæin^{2}	ʁwjaŋ^{A}	–	–	*ɢæn^{A}
2. person	nɛ^{2}	ne^{2}	nɛŋ^{2}	–	na^{A}	nai^{2}	–	*næn^{A}
3. crossbow	n̥hen^{3}	–	hn̥ɛŋ^{3}	nein^{3b}	n̥a^{B}	–	n̥ɛ̃^{3}	*hnæn^{B}
4. horse	ma^{4}	–	nɛŋ^{4}	mein^{4}	ma^{B}	me^{4}	mɪ̃^{4}	*mjæn^{B}
5. lazy	ŋi^{4}	ɲe^{4}	ŋkɛŋ^{4}	ɳʨein^{4}	ŋkaŋ^{B}	–	ŋɛ^{4}	*ŋglæn^{B}

19b. HM *æn (42, 175, 247)

H *æn : HM *æn : M *æn

	1	2	3	4	5	6	7	8	9	10	11	HM/M
6. footprint/track	m̥ha^{3}	–	nen^{3}	mein^{3a}	m̥a^{B}	–	–	m̥wan^{3}	ŋwa:n$^{3'}$	m̥jɛn^{3}	–	*hmjænX
7. tiger								ʣan^{2}	gja:n^{2}	jɛn^{2}	kjɛn^{2}	*ŋgljæn^{A}
8. person/Mien								mwan^{2}	mun^{2}	min^{2}	min^{2}	*mjæn^{A}
9. spirit/ghost								m̥wan^{3}	ŋwa:n^{3}	m̥jɛn^{3}	mjɛn^{3}	*hmjæn^{B}

19c. HM *an (99, 118)

H *æn : HM *an : M *an

	1	2	3	4	5	6	7	8	9	10	11	HM/M
10. cogongrass	qɛ^{1}	–	ɴqɛŋ^{1}	ŋkæin^{1a}	–	ŋkan^{1}	ŋɛ^{1}	ga:n^{1}	ga:n^{1}	gwan^{1}	gɔn^{1}	*NKan
11. CLF-people	lɛ^{2}	le^{1}	lɛŋ^{2}	læ^{2}	–	laŋ^{1}	læ̃^{2}	la:n^{2}	la:n^{2}	–	na^{1}	*lan
12. back (of body)								tan^{4}	tan^{4}	–	–	*dan^{B}
13. to snore								gaŋ^{2}	da:n^{2}	–	–	*ŋgjan^{A}
14. to disperse								da:n^{5}	da:n$^{5'}$	dzan^{5}	–	*dzhan^{C}
15. pullet/hen								ka:n^{5}	kja:n^{5}	–	–	*klan^{C}

Loans in set 19c:

**[tʰ]ᶜa[n]-s (OC)*	>	*thanH (MC)*	炭	*tàn 'charcoal'*	>	*HM *thanH*
		kjin (MC)	筋	*jīn 'sinew'*	>	*M *kʷjan^{A}*

Notes

2 & 8. Wang and Mao link these Hmongic forms in n- that mean only 'person' to the Mienic forms in m- that mean both 'person' and serve as autonyms for the different Mienic groups. This Mienic word *mjæn^{A} (1.24/19), which probably comes from Chinese 民 'people' (OC *mi[ŋ] > MC *mjin > Man. *mín*), is entered separately here. Pa-Hng /mjɛ^{2}/ patterns with Mienic, as it does in a number of other instances (see 'chaff/husk' and 'thunder').

3. This is undoubtedly the same word as Mienic *hnək^{D} 'crossbow' (2.8/7). Compare Mon-Khmer *snaʔ (Shorto #97), Chinese 弩 (OC *[n]ˁaʔ > MC nuX > Man. *nǔ*), and Proto Tai *hnaa B1.

4. Although Hmongic 'horse' is ultimately related to Chinese 馬 (OC *mˁraʔ > MC mæX > Man. *mǎ*), these forms suggest a more direct connection to some Tibeto-Burman language (TB *mraŋ, Matisoff 2003). Furthermore, the rime matches item 6 in this set,

'footprint/track', which is also a Tibeto-Burman borrowing. Mienic words for 'horse' are all borrowings from Chinese.
5. Compare Chinese 懶 'lazy' (OC *[r]ˤanʔ > MC lanX > Man. *lǎn*).
6. Probably from a derivative of Tibeto-Burman *s-naŋ 'to follow' (Matisoff 2003).
7. Compare Mon-Khmer *klaʔ 'tiger' (Shorto #197).
8. See also Mien dialects Jiangdi (Wang and Mao 15) /mjen^{2}/ and Xiangnan (Wang and Mao 16) /mjəŋ^{2}/. Pa-Hng /mjɛ^{2}/ patterns with Mienic here as it does in a number of other instances (see 'chaff/husk' and 'thunder'). The probable source of the Mienic autonym, which takes the variant forms 'Mien', 'Mun', and 'Min', is Chinese 民 'people' (OC *mi[ŋ] > MC mjin > Man. *mín*). Wang and Mao link these Mienic forms in m- that mean both 'person' and 'group' to the Hmongic *næn^{A} 'person' (2.9/19) since the rimes and tones correspond. The Hmongic word for 'person' is entered separately here for the time being.
8 & 9. The sporadic -w- is secondary: -j- dropped, then -w- developed between a labial and /a/.
11. Compare Chinese 郎 'young man' (Man. *láng*); in Min a homophonous word means 'person'.
12. This word is reconstructed with an -a- on the basis of the long vowel in Jiangdi Mien /taːn^{4}/ (Wang and Mao 15).
13. Compare Chinese 鼾 'to snore' (MC xan > Man. *hān*), which matches in rime, but not in onset.

20

*20a. H *en (24)*

	1	2	3	4	5	6	7	H
1. forehead	ŋ̊haŋ^{1}	ɕɛ^{1}	–	ŋi^{1b}	–	–	nĩ^{1}	*hɲen^{A}
2. cooked/ripe	ɕ̊haŋ^{3}	ɕɛ^{3}	ʂia^{3}	sæin^{3b}	sen^{B}	θeŋ^{3}	sĩ^{3}	*sjen^{B}
3. shallow	ŋ̊i^{4}	–	–	ŋ̊i^{4}	–	–	ŋ̊ɦɪ^{4}	*ɲen^{B}

Loan in set 20a:
nyemX (MC) 姌 *rǎn 'slender'* > *H *ɲen^{B} 'thin'*

*20b. HM *em (59)*

H *en : HM *em : M *em

	1	2	3	4	5	6	7	8	9	10	11	HM/M
4. to steal	ŋ̊aŋ^{6}	ŋ̊ɛ^{6}	ŋ̊ia^{6}	ŋ̊i^{6}	ŋ̊en^{C}	ŋ̊iŋ^{6}	ŋ̊ĩ^{6}	nim^{6}	ne:m^{6}	–	ŋ̊ɛm^{6}	*ɲemH
5. petal								ɬim^{5}	le:m^{5}	–	ɬiŋ^{5}	*hlem^{C}

*20c. M *ŋ̊iem (40)*

	1	2	3	4	5	6	7	H	HM	8	9	10	11	M
6. mountain (range)										kem^{2}	ki:m^{2}	kleŋ^{2}	–	*gliŋ̊em^{A}
7. to scold/curse										he:m^{5}	–	–	–	*hiŋ̊em^{C}

Loan in set 20d:
**N-kˢem 'to doubt' (OC)* > *hem (MC)* 嫌 *xián 'to dislike'* > *M *ɣiŋ̊em^{A} 'to dislike'*

*20d. HM *eŋ (44)*

H *en : HM *eŋ : M *eŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
8. 1st day of month	–	–	sia^{1}	sæin^{1b}	sen^{A}	–	–	–	–	–	hɛŋ^{1}	*seŋ
9. to lift	–	–	–	–	–	–	tɕõ^{1}	tɕɛŋ^{1}	ʈe:ŋ^{1}	kjɛ^{1}	kaŋ^{1}	*kjeŋ
10. to choke	–	–	–	–	–	ŋʈʃei^{5}	ni^{5}	ʤɛ:ŋ^{5}	–	ʤɛ^{5}	jaŋ^{5}	*ntsjeŋH
11. pair								–	ge:ŋ^{6}	lɛ^{6}	dzaŋ^{6}	*reŋ^{C}

Loan in set 20e:
ngængH (MC) 硬 *yìng 'hard/solid'* > *M *ŋjeŋ^{C}*

*20e. HM *æm (79)*

H *en : HM *æm : M *æm

	1	2	3	4	5	6	7	8	9	10	11	HM
12. to weep	ŋ̊aŋ^{1}	ŋ̊ɛ^{3}	ŋ̊ia^{3}	ŋ̊i^{3a}	ʔŋ̊en^{B}	ŋ̊iŋ^{3}	–	ŋ̊em^{3}	ŋ̊jim^{3}	ŋ̊an^{3}	ŋ̊ɛm^{3}	*ʔɲæmX

Discussion

Note the close similarity in the reflexes of rime 18 (*in) and 20 (*-en). Notable is the absence of Hmong-Mien *en in this rime set, which has been reconstructed for rime 25 instead (Hmong-Mien *en > H *ɛŋ, M *ei). It may be that Hmong-Mien *en was inherently unstable.

Most of the words in this rime set have palatal onsets; this may eventually make it possible to combine it with another rime set. The distribution remains unclear, however.

Wang and Mao rime sets 23 and 24 also belong here. Wang and Mao rime 23 consists of one word: Hmong-Mien *k^{w}jan 'catty' from Chinese 斤 (MC kjɨn > Man. *jīn*). Hmong-Mien *an goes to Hmongic *en in this word rather than to the expected Hmongic *æn (rime 19 above). Wang and Mao rime 24, in addition to 'forehead', 'cooked', and 'thin' above, includes Chinese 'thousand' and 'money', which can be reconstructed for Hmong-Mien with *i̱en:

tshen (MC)	千	*qiān*	'thousand'	>	HM *tshi̱en
dzjen (MC)	錢	*qián*	'money'	>	HM *dzi̱en

Notes

3. 'Shallow' could as easily have been reconstructed *ɲin^{B} and placed in rime 18a above. It does not fit into either set precisely. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).

5. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

6. Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10).

7. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This may belong with Hmongic *qe^{C} (5-6.1/10) 'to scold/curse', as represented in Wang and Mao 1995 (327).

10. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).

21

*21a. H *əŋ*

	1	2	3	4	5	6	7	H
1. to be at/live	ɳaŋ^{1}	ɳi^{1}	ɳɔ^{1}	ɳɔ^{1a}	ʔɳoŋ^{A}	ɳɐŋ^{1}	ɳõ^{1}	*ʔɲəŋ^{A}
2. breast/chest	–	–	ɳʃɔ ^{1}	ɳʃoŋ^{1a}	–	–	–	*ntrəŋ^{A}
3. animal fat/oil	ʈaŋ^{2}	–	ʈɔ^{2}	ʂoŋ^{2}	ʐoŋ^{A}	–	–	*grəŋ^{A}
4. boat/ship	ɳaŋ^{2}	ŋɑŋ^{2}	ŋkɔ^{2}	ŋkoŋ^{2}	ŋkoŋ^{A}	ɳʈʃoŋ^{2}	ŋɯ^{2}	*ŋgjəŋ^{A}
5. to sink	taŋ^{2}	–	tɔ^{6}	toŋ^{6}	toŋ^{A}	–	tæ̃^{4}	*dəŋ^{A}
6. to low/bellow	–	–	ɴqɔ^{3}	ŋkoŋ^{3a}	ɴʔqoŋ^{B}	–	–	*ɴqəŋ^{B}
7. to return	ʈaŋ^{3}	–	ʈɔ^{3}	ʈoŋ^{3a}	tʂoŋ^{B}	–	–	*trəŋ^{B}
8. to roll down	ɭaŋ^{3}	cɑŋ^{3}	dɔ^{3}	–	qloŋ^{B}	–	–	*qləŋ^{B}
9. to bury	ɭaŋ^{4}	ɭɑŋ^{4}	lɔ^{4}	ɭoŋ^{4}	loŋ^{B}	–	læ̃^{4}	*ljəŋ^{B}
10. Allium	–	–	dɔ^{4}	ɭoŋ^{4}	ʁloŋ^{B}	–	–	*ɢləŋ^{B}
11. shuttle	ŋaŋ^{4}	nɑŋ^{4}	ɴqɔ^{4}	ŋkoŋ^{4}	ɴqoŋ^{B}	ŋwaŋ^{4}	–	*ɴɢəŋ^{B}
12. to swallow	ŋaŋ^{4}	ŋu^{4}	–	–	ɴqoŋ^{B}	–	–	*ɴɢəŋ^{B}
13. to wait	taŋ^{4}	tɑŋ^{4}	tɔ^{4}	toŋ^{4}	ðoŋ^{B}	–	te^{4}	*dəŋ^{B}
14. to let go	ɕaŋ^{5}	tɕɑŋ^{5}	tʂɔ^{5}	–	–	–	tɕõ^{5}	*tsjəŋ^{C}
15. to wipe	ɕhaŋ^{5}	ɕɑŋ^{5}	ʂɔ^{5}	soŋ^{5b}	soŋ^{C}	–	–	*sjəŋ^{C}
16. to be	–	–	jɔ^{6}	ʑoŋ^{6}	ʑoŋ^{C}	–	ɳɯ^{6}	*jəŋ^{C}
17. interior	ɳaŋ^{6}	ɳɑŋ^{6}	ɳʃɔ^{6}	–	–	–	–	*ndrəŋ^{C}

Loan in set 21a:
**[k]^{hʕ}oŋʔ (OC) > khuwngX (MC)* 孔 *kǒng 'hole' > H *qhəŋ^{B}*

*21b. M *əm (229)*

	1	2	3	4	5	6	7	8	9	10	11	M
18. to be at/live								jem^{1}	jam^{1}	jan^{1}	–	*ʔjəm^{A}
19. bracelet								tɕem^{2}	sam^{2}	–	–	*gjəm^{A}

Loan in set 21b:
**[r][ə]m (OC) > lim (MC)* 淋 *lín 'to pour' > M *rəm^{A} 'to water'*

*21c. HM *ən (157, 176, 194)*

H *əŋ : HM *ən : M *ən

	1	2	3	4	5	6	7	8	9	10	11	HM/M
20. to shoot	paŋ^{3}	pɑŋ^{3}	pɔ^{3}	poŋ^{3a}	poŋ^{B}	poŋ^{3}	põ^{3}	pwan^{3}	fan^{3}	–	bun^{3}	*pənX
21. fine (flour)	moŋ^{4}	mɑŋ^{4}	mɔ^{4}	–	–	–	mæ̃^{4}	mwən^{6}	–	mun^{6}	mun^{6}	*mənX/H
22. oneself								kan^{2}	kan^{2}	kan^{4}	–	*gən^{A}

Loan in set 21c:
ʔwanX (MC) 碗 *wǎn 'bowl' > M *ʔwən^{B}*

*21d. HM *əŋ (140)*

H *əŋ : HM *əŋ : M *əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
23. night	m̥haŋ^{5}	m̥hɑŋ^{5}	hm̥ɔ^{5}	mɔ^{5b}	m̥oŋ^{C}	–	mæ̃^{4}	m̥aŋ^{3}	–	m̥ɔŋ^{5}	mɔŋ^{5}	*hməŋH

Loans in set 21d:

**(mə.)rəʔ (OC)*	>	*liX (MC)*	里	*lǐ 'village'*	>	*HM *rəŋX*
**N-[dz]eŋ-s (OC)*	>	*dzjengH (MC)*	淨	*jìng 'clean'*	>	*M *ndzəŋ^{C}*

*21e. HM *əum (193)*

H *əŋ : HM *əum : M *om

	1	2	3	4	5	6	7	8	9	10	11	HM/M
24. to hear	ŋ̊haŋ^{3}	ŋ̊hɑŋ^{3}	hŋ̊ɔ^{3}	nɔ^{3b}	ŋ̊u^{B}	ŋ̊ɐŋ^{3}	ŋ̊õ^{3}	nom^{3}	num^{3}	ŋ̊ən^{3}	–	*hnəumX
25. to swell	aŋ^{5}	ɑŋ^{5}	ɔ^{5}	oŋ^{5a}	oŋ^{C}	oŋ^{5}	ʔõ^{5}	om$^{5'}$	ɔm^{5}	ən^{5}	–	*ʔəumH
26. to cover								kom^{3}	kɔm^{3}	–	–	*kom^{B}

*21f. HM *əun (214)*

H *əŋ : HM *əun : M *un

	1	2	3	4	5	6	7	8	9	10	11	HM
27. tender	ɣaŋ^{5}	ʐɑŋ^{5}	–	–	–	ɳʈʃoŋ^{5}	–	gun$^{5'}$	–	lun^{5}	in^{5}	*ʔrəunH
28. to be fat	ʇaŋ^{6}	ʈɑŋ^{6}	ʈɔ^{6}	ʂoŋ^{6}	ʐoŋ^{C}	ʃoŋ^{6}	tɶõ^{6}	kun^{6}	kun^{6}	klin^{6}	tin^{6}	*grəunH

*21g. HM *əuŋ (218)*

H *əŋ : HM *əuŋ : M *uŋ

	1	2	3	4	5	6	7	8	9	10	11	M
29. deaf								–	duŋ^{1}	dwə^{1}	dɔŋ^{1}	*ʔduŋ^{A}
30. to bark								tɶuŋ$^{5'}$	ʇuŋ^{5}	ɖ̊wə^{5}	–	*cuŋ^{C}

Loans in set 21g:

**mˤoŋʔ (OC)*	>	*muwngX (MC)*	蠓	*měng 'midge'*	>	*HM *məuŋX 'fly (N.)'*
		kjang (MC)	薑	*jiāng 'ginger'*	>	*M *khjuŋ^{A}*
		pjangH (MC)	放	*fàng 'to let go'*	>	*M *puŋ^{C}*

*21h. HM *əaŋ (101)[40]*

H *əŋ : HM *əaŋ : M *aŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
31. cooked rice	–	–	hŋ̊ɔ^{5}	ŋɔ^{5b}	–	–	–	naːŋ^{5}	naŋ$^{5'}$	ŋ̊aŋ^{5}	nɔŋ^{5}	*hnrəaŋH

Discussion

Set 21b, made up of Mienic words entirely, is included here because it is assumed that Hmongic 'to be at/live' with a palatal nasal initial in set 21a is related to Mienic 'be at/live' with a palatal glide initial. Sets 21c and 21d contain words with labial initials that developed a rounded glide in Mienic before -əN (see also rime 28).

There is only one loanword to exemplify each of two more rimes belonging to set 21:

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[40] All other words in Wang and Mao rime set 101 are attested in Mienic only, and can be placed in rime 24. 'Rope' has Hmongic cognates meaning 'sash/cord/belt', and the expanded set also belongs in rime 24 rather than here.

21i. HM *əan (194): HM *phəan 'CLF-quilts' from Chinese 片 'half; partial; one-sided' (MC phenH > Man. *piàn*).
21j. HM *ɻuen (194): HM *chɻuen 'to thread' from Chinese 穿 'to bore through' (MC tsyhwen > Man. *chuān*).

Notes

1. Mienic *ʔjəm^{A} (4.10/21) 'to be at/live' is probably related to this word.
3 & 28. Although only attested in Hmongic, 'animal fat/oil' clearly involves the same root as 'to be fat' under rime 21f. It appears that the widespread 'to be fat' derived from the now more restricted 'animal fat/oil' via C-tone derivation (see chapter 4).
4. Compare Central Malayo-Polynesian *waŋka[ŋ] 'canoe' (ACD).
9. This may be from Chinese 斂 'to dress a corpse' (Man. *liàn*), although the tones do not correspond.
11. Mienic forms for 'shuttle' are probably related to this set (Luoxiang Mien /gou^{4}/, Liangzi Mun /dlou^{4}/, Lanjin Mun /glɔu^{4}/). But there is no final nasal in Mienic, and this rime correspondence is not attested elsewhere; the initials are also problematic.
18. Hmongic *ʔɲəŋ^{A} (4.7/21) 'to be at/live' probably fits with the Mienic *ʔjəm^{A}, but the absence of a nasal initial in Mienic is hard to explain (Wang and Mao explain it as function word reduction).
19. Also Changping Mien /kjəm^{2}/ (Wang and Mao 1995). Compare Lungchou (Tai-Kadai) /kiim^{2}/ (Li 1977).
20. Compare Malayo-Polynesian *panaq 'to shoot' and Mon-Khmer *paŋʔ 'to shoot' (Shorto #905). In White Hmong, 'to throw'.
20 & 21. The labial initial gave rise to a medial -w- in Mienic. The -w- persists in Luoxiang (8), and rounded the vowel in Biao Min and Zao Min (10 & 11).
22. This is technically Hmong-Mien, since this word also appears in Ho Ne (Hmongic): /kan^{4}/. This form is irregular, however, and looks like a loanword from some Mienic language.
23. Chinese 晚 'evening' (Man. *wǎn*) > Mien /muən^{1}/ seems to be different. More likely connections are to Tibeto-Burman *s-muːŋ 'dark' (Matisoff 2003) or Mon-Khmer *m[h][ɯə]h 'evening, night' (Shorto #264) or *maŋ 'night, evening' (Shorto #638).
26. This word for 'to cover', as well as Mienic *hi̯əm$^{B/C}$ 'to cover (with tile)' (7.13/18), appear to be recent borrowings from Tai-Kadai. Li (1977) reconstructs a number of similar words with this general meaning: *xr[um]^{B1} 'to cover, veil; *ɣ[um]^{B2} 'to cover, protect'; *hom^{C1} 'to cover up'. See also the Mienic forms under 'to cover' with initial g- in L-Thongkum's reconstruction: Mien /gom^{3}/, Mun /gəm^{3}/, etc. (1993:204).
31. Possibly from Chinese 饟 'bring food to workers in the field' > 'food brought to workers in the field' (OC *n̥aŋ(ʔ)-s > MC syangH > Man. *xiǎng*).

22

*22a. H *ɛŋ*

	1	2	3	4	5	6	7	H
1. black	l̥ɛ^{1}	qwe^{1}	du^{1}	l̥oŋ^{1a}	qlaŋ^{A}	klaŋ^{1}	–	*qrɛŋ^{A}
2. clay pot/earthen jar	–	–	hu^{1}	ɦoŋ^{1b}	haŋ^{A}	–	–	*hɛŋ^{A}
3. CLF-bowls/houses	lɛ^{1}	le^{1}	lu^{1}	noŋ^{1a}	ʔlaŋ^{A}	xoŋ^{1}	lɔ̃^{1}	*ʔlɛŋ^{A}
4. to feed	pɛ^{1}	–	pu^{1}	–	–	–	–	*pɛŋ^{A}
5. star	qɛ^{1}	qe^{1}	qu^{1}	hoŋ^{1a}	qaŋ^{A}	ka^{1}	kɔ̃^{1}	*qɛŋ^{A}
6. sun/day	n̥hɛ^{1}	n̥he^{1}	hn̥u^{1}	noŋ^{1b}	n̥a^{A}	n̥ɔ$^{1'}$	n̥ɛ̃^{1}	*hnɛŋ^{A}
7. tree of heaven	–	–	ju^{2}	ʑoŋ^{2}	ʑaŋ^{A}	–	–	*jɛŋ^{A}
8. 1SG (I/me)	–	–	ku^{3}	koŋ^{3a}	kaŋ^{B}	–	–	*kɛŋ^{B}
9. artemisia	xhi^{3}	–	–	ʐoŋ^{3b}	saŋ^{B}	–	–	*hrɛŋ^{B}
10. husked rice/millet	shɛ^{3}	se^{3}	tshu^{3}	soŋ^{3b}	tshaŋ^{B}	–	–	*tshɛŋ^{B}
11. short	lɛ^{3}	le^{3}	lu^{3}	loŋ^{3a}	ʔlaŋ^{B}	laŋ^{3}	lɔ̃^{3}	*ʔlɛŋ^{B}
12. 1SG (I/me)	vi^{4}	we^{4}	–	–	–	va^{4}	vɔ̃^{4}	*wɛŋ^{B}
13. CLF-horses	tɛ^{4}	–	tu^{4}	toŋ^{4}	ðaŋ^{B}	–	–	*dɛŋ^{B}
14. midday meal	–	–	ʂu^{5}	soŋ^{5b}	saŋ^{C}	–	–	*sjɛŋ^{C}
15. to ask	nɛ^{6}	ne^{6}	nu^{6}	noŋ^{6}	na^{C}	nɔ^{6}	nĩ^{6}	*nɛŋ^{C}

Loans in set 22a:

ljang (MC) **量** *liáng 'to weigh/measure'* > *H *ljɛŋ^{A} 'to measure (rice)'*
ʔjang (MC) **秧** *yāng 'seedling'* > *H *ʔjɛŋ^{A}*
yangH (MC) **養** *yàng 'to keep, support'* > *H *jɛŋ^{C} 'to raise (chickens)'*

*22b. HM *ɛm (174)*

H *ɛŋ : HM *ɛm : M *əm

	1	2	3	4	5	6	7	8	9	10	11	HM/M
16. body louse	tɛ^{3}	te^{3}	tu^{3}	toŋ^{3a}	taŋ^{B}	taŋ^{3}	nɔ̃^{3}	tam^{3}	tam^{3}	dan^{3}	dam^{3}	*tɛmX
17. to ladle								dam^{3}	–	–	da^{3}	*ʔdəm^{B}

Loans in set 22b:

(pə.)r[ə]mʔ (OC)* > *limX (MC)* **廩 *lǐn 'barn/granary'* > *HM *rɛmX*
nemH (MC) **念** *Cant. /nɐm^{3}/ 'to think of'* > *M *hnəm^{B}~*hləm^{B}*

*22c. HM *u̯ɛn (100)*

H *ɛŋ : HM *u̯ɛn : M *u̯ɛn

	1	2	3	4	5	6	7	8	9	10	11	HM
18. son/boy	tɛ^{1}	te^{1}	tu^{1}	toŋ^{1a}	taŋ^{A}	–	tɔ̃^{1}	–	tɔ:n^{1}	twan^{1}	dan^{1}	*tu̯ɛn
19. wet	–	nte^{1}	ntu^{1}	ntoŋ^{1a}	nʔtaŋ^{A}	ntaŋ^{1}	tɔ̃^{4}	–	dɔ:n^{1}	–	–	*ntu̯ɛn

Loan in set 22c:

ljen (MC) **聯** *Cant. /ly:n^{2}/ 'to sew'* > *M *lju̯ɛn^{A}*

*22d. HM *ɛŋ (102, 104)*

H *ɛŋ : HM *ɛŋ : M *əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
20. sky/heaven	vɛ^{2}	–	–	–	–	–	vɔ̃^{2}	–	–	–	vaŋ^{2}	*wɛŋ
21. to snap	tɛ^{5}	te^{5}	tu^{5}	toŋ^{5a}	taŋ^{C}	taŋ^{5}	tɔ̃^{5}	–	–	taŋ^{5}	daŋ^{5}	*tɛŋH
22. to put on /wear(jewelry)								taŋ^{2}	taŋ^{2}	–	–	*dəŋ^{A}
23. to resemble								n̥aŋ^{2}	naŋ$^{3'}$	–	–	*hnəŋ^{B}
24. short								naŋ^{3}	niŋ^{3}	naŋ^{3}	naŋ^{3}	*ʔnəŋ^{B}

Loans in set 22d:

**s-təŋ-s (OC)*	>	*tsingH (MC)*	甑	*zèng 'rice steamer'*	> *HM *tsjɛŋH*
		tongH (MC)	凳	*dèng 'stool/bench'*	> *M *təŋ^{C}*

*22e. HM *u̯ɛŋ (252)*

H *ɛŋ : HM *u̯ɛŋ : M *u̯ɛŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
25. full	pɛ^{3}	pe^{3}	pu^{3}	poŋ^{3a}	paŋ^{B}	paŋ^{3}	pɔ̃^{3}	pwəŋ^{3}	pɔŋ^{3}	pɔŋ^{3}	baŋ^{3}	*pu̯ɛŋX
26. cold (day)								ʦwəŋ^{3}	sɔŋ^{3}	ʦɔŋ^{3}	kuŋ^{3}	*kju̯ɛŋ^{B}
27. quilt								ɕwəŋ^{5}	tθɔŋ$^{5'}$	sɔŋ^{5}	suŋ^{5}	*su̯ɛŋ^{C}

Loans in set 22e:

tsyowngH (MC)	種	*zhòng 'to grow'*	>	*HM *n-tju̯ɛŋH*
phjowngX (MC)	奉	*fèng 'to present with both hands'*	>	*M *phu̯ɛŋ^{B} 'to carry in 2 hands'*
bjuwX (MC)	婦	*fù 'woman/wife'*	>	*M *mbu̯ɛŋ^{B} 'daughter-in-law/bride'*

*22f. HM *ɛɔm (100, 173, 245)*

H *ɛŋ : HM *ɛɔm : M *ɛɔm

	1	2	3	4	5	6	7	8	9	10	11	HM/M
28. hot (water)	khi^{1}	ce^{1}	ku^{1}	koŋ^{1a}	kaŋ^{A}	khjaŋ^{1}	kɔ̃^{1}	kɔm^{1}	kjɔ:m^{1}	klœn^{1}	tsam^{1}	*k(h)lɛɔm
29. CLF-bowls /houses								nɔm^{1}	nɔ^{1}	nɔ^{1}	na^{1}	*ʔnɛɔm^{A}

*22g. HM *ɛɔŋ (215)*

H *ɛŋ : HM *ɛɔŋ : M *ɛɔŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
30. horn	ki^{1}	ce^{1}	ku^{1}	koŋ^{1a}	kaŋ^{A}	kjaŋ^{1}	kɔ̃^{1}	kɔŋ^{1}	kjɔ:ŋ^{1}	klɔ^{1}	kɔu^{1}	*klɛɔŋ
31. to crawl								ŋ̥ɔŋ^{1}	ŋ̥ɔ:ŋ^{1}	–	–	*ʔŋɛɔŋ^{A}

*22h. HM *ɛuŋ (268)*

H *ɛŋ : HM *ɛuŋ : M *ɛuŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
32. sky/heaven	–	–	–	–	ɴqwaŋ^{A}	ŋkuŋ^{2}	ŋwɔ^{2}	guŋ^{2}	gu:ŋ^{2}	–	–	*ɴgɛuŋ
33. sky/heaven	–	–	ntu^{2}	ntoŋ^{2}	–	–	–	–	–	–	–	*ndɛuŋ

Discussion

On the Hmongic side, this rime is similar to oral rime 11. The similarity points to a common origin for Hmongic *nɛŋ^{C} (2.9/22) and Mienic *nu̱ai^{C} (2.9/11) 'to ask', and for Hmongic *hnɛŋ^{C} (2.8/22) and Mienic *hnu̱ɔi^{A} (2.8/11) 'sun/day'.

Notes

1. This is no doubt related to Mienic *qrɻ̱ɛk^{D} 'black' (6.46/1).
3 & 29. These two classifiers are related: see discussion in chapter 6, section 6.2.1.
4. In Yanghao (1), 'to allow'; in White Hmong, 'to give'. Yanghao (1), Xuyong /po^{1}/ 'to feed', Shimen /pu^{1}/ 'to feed' from Office of Miao-Yao Research Lexicon 1987.
7. *Ailanthus altissima*.
8. This is the Hmong-Mien first person singular pronoun with the widest distribution; see chapter 3. Although it appears to be cognate to Dongshan Biao Min /kəu^{3}/ 'I/me' (Wang and Mao 21) and Sunjiang Biao Min /kɔ^{3}/ 'I/me' (Wang and Mao 22), it is not possible to place these forms into any existing Hmong-Mien rime set. The Proto Hmong-Mien form must have had an initial *k- and a back rounded vowel, however, since the *k- did not retract to q- in Hmongic; see chapter 2, section 1.2.
11 & 24. These two words for 'short' are related: see discussion in chapter 6, section 6.2.1.
17. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). Possibly from Chinese 斟 'to ladle out' (OC *t.[q][ə]m > MC tsyim > Man. *zhēn*).
20, 32, & 33. These three forms for 'sky/heaven' share the same rime, and have similar onsets. Since no language shows more than one of the three, it appears they belong together in a very irregular set.
23. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
28. Jiwei (2) from Office of Miao-Yao Research Lexicon (1987). Sunjiang Biao Min (Wang and Mao 22) has been substituted for Dongshan Biao Min (10). Aspiration has been tentatively reconstructed for Hmong-Mien because of the aspirated initials in Hmongic.
30. The forms for Zongdi (4) and Fuyuan (5) come from Wang 1994. These forms were entered inconsistently in Wang and Mao 1995. Although the tones do not correspond, this is probably the widespread word for 'horn', Chinese 角 (OC *k.rˤok > MC kæwk > Man. *jiǎo*).
31. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
32. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
33. Representing Mienic, see Changping Mien /ðuŋ^{2}/ (Wang and Mao 18).

23

23a. HM *euŋ (153)

H *ɨŋ : HM *euŋ : M *eu

	1	2	3	4	5	6	7	8	9	10	11	HM
1. intestines	–	ɕe^{3}	ŋ̊u^{3}	ŋ̊oŋ^{3b}	ŋ̊en^{B}	ŋ̊ɔ^{3}	ŋ̊ŋ^{3}	ŋ̊eu^{3}	ŋ̊ɔu^{3}	–	–	*hɲeuŋX
2. mother's brother	nen^{4}	ne^{4}	nu^{4}	noŋ^{4}	ŋ̊i^{B}	nɔ^{4}	nɯ^{4}	nau^{4}	nau^{4}	nau^{4}	nuŋ^{4}	*neuŋX

23b. HM *iəŋ (269)

H *ɨŋ : HM *iəŋ : M *iəŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
3. flea	m̥hen^{1}	–	hm̥ɔ^{1}	mɔŋ^{1b}	m̥en^{A}	mɔ^{1}	n̥^{1}	mɛŋ^{1}	muŋ$^{1'}$	m̥au^{1}	mɔŋ^{1}	*hmiəŋ

Discussion

None of the words in set 23 is limited to Hmongic, thus none directly represents the intermediate *ɨŋ. The final nasal of 'water buffalo/cow' was innovated (compare Proto Tai *ŋwue 'ox/cow' and Proto Tibeto-Burman *ŋwa 'cattle') at the Hmong-Mien level (Downer 1973).

Two other words in this set are Chinese, and each represents a unique pattern; both have a front vowel followed by a back vowel which merged to the intermediate Hmongic rime *ɨŋ.

23c. Wang and Mao rime 196: HM *ŋiuŋ 'water buffalo/cow' from Chinese 牛 'ox/cow' (OC *[ŋ]^{w}ə > MC ngjuw > Man. *niú*)

23d. Wang and Mao rime 265: HM *kjeəm 'gold' from Chinese 金 'metal' (OC *[k](r)[ə]m > MC kim > Man. *jīn*)

24
*24a. H *aŋ*

	1	2	3	4	5	6	7	H
1. attic	–	–	ntha^{1}	ntua^{1b}	nʔthen^{A}	–	–	*nthaŋ^{A}
2. to float	–	nten^{1}	nta^{1}	–	–	–	–	*ntaŋ^{A}
3. spirit/ghost	l̥aŋ^{1}	qwei^{1}	da^{1}	l̥ua^{1a}	qlen^{A}	kli^{1}	kwɛ^{1}	*qraŋ^{A}
4. stomach	–	–	pla^{1}	–	–	–	–	*plaŋ^{A}
5. winnowing fan	vaŋ^{1}	wei^{1}	va^{1}	wua^{1a}	ʔwen^{A}	ven^{1}	vɛ^{1}	*ʔwaŋ^{A}
6. armspan	l̥aŋ^{2}	ci^{2}	da^{2}	l̥ua^{2}	ʁlei^{A}	–	–	*craŋ^{A}
7. to groan/ moan	zaŋ^{2}	mʐei^{2}	ɳʈʂa^{2}	mpʐua^{2}	mpen^{A}	mpwen^{2}	–	*mbraŋ^{A}
8. long sword	–	–	nta^{2}	ntua^{2}	nten^{A}	–	–	*ndaŋ^{A}
9. perilla (*sū má*)	n̥haŋ^{3}	n̥hen^{3}	hn̥a^{3}	–	n̥en^{B}	–	–	*hnaŋ^{B}
10. mouse/rat	naŋ^{4}	nei^{4}	na^{4}	–	–	nen^{4}	nĩ^{4}	*naŋ^{B}
11. to breed/ propagate	ɕhaŋ^{5}	–	ɕa^{5}	–	–	–	–	*ɕaŋ^{C}
12. to fly	ʑaŋ^{5}	ʑi^{5}	ja^{5}	ʑua^{5a}	ʔʑen^{C}	i^{5}	je^{5}	*ʔjaŋ^{C}
13. grave/tomb	saŋ^{5}	ntsei^{5}	ntsa^{5}	ntsua^{5a}	–	–	ŋ̈e^{5}	*ntsaŋ^{C}
14. wild dog	m̥haŋ^{5}	–	hm̥a^{5}	ma^{5b}	–	–	–	*hmaŋ^{C}
15. maggot	kaŋ^{5}	–	ka^{7}	kua^{7a}	tɕen^{C}	–	kɛ^{1}-lõ^{7}	*klaŋ^{C}

Loans in set 24a:

**N-kʷˁaŋ (OC)*	>	*hwang (MC)*	黃	*huáng 'yellow'*	>	*H *ɢʷaŋ^{A} 'bright/light'*
**N-kʷˁaŋ (OC)*	>	*hwang (MC)*	黃	*huáng 'yellow'*	>	*H *ɢʷaŋ^{A} 'yellow'*
**l̥ˁaŋ (OC)*	>	*thang (MC)*	湯	*tāng 'hot liquid'*	>	*H *hlaŋ^{A} 'to scald'*[41]
		trjang (MC)	張	*zhāng 'CLF-tools'*	>	*H *traŋ^{A}*
		yang (MC)	煬	*yáng 'to melt'*	>	*H *jaŋ^{A} 'to dissolve/melt'*
		dzam (MC)	慚	*cán 'ashamed'*	>	*H *dzaŋ^{A}*
**[ɢ]ʷan (OC)*	>	*hjwon (MC)*	園	*yuán 'garden'*	>	*H *waŋ^{A}*
		nyem (MC)	髯	*rán 'whiskers'*	>	*H *ɲaŋ^{C} 'beard'*

*24b. HM *am (78, 97, 154)*

H *aŋ : HM *am : M *am

	1	2	3	4	5	6	7	8	9	10	11	HM/M
16. sister-in-law	ŋ̈aŋ^{1}	ŋ̈i^{1}	ŋ̈a^{1}	ŋ̈a^{1a}	ʔŋ̈en^{A}	ŋ̈i^{1}	–	–	ŋ̈a:m^{1}	ŋ̈an^{1}	ŋ̈ɛm^{1}	*ʔŋam
17. rib	taŋ^{3}	–	ta^{3}	tua^{3a}	ten^{B}	–	–	–	ta:m^{3}	–	–	*tamX
18. blood	ɕhaŋ^{3}	ɳ̈tɕhi^{3}	ɳʈʂha^{3}	ntsua^{3b}	nʔtshen^{B}	θi^{3}	n̥e^{3}	ɕam^{3}	sa:m^{3}	san^{3}	dzjɛm^{3}	*ntshjamX
19. half (of day)	taŋ^{4}	–	ta^{4}	–	–	–	–	da:m^{2}	da:m^{2}	–	–	*N-dam(X)
20. to spill								ɕa:m^{5}	ja:m^{6}	ja^{6}	–	*(ʔ)jam^{C}

Loans in set 24b:

**mə-tˁam (OC)*	>	*tam (MC)*	擔	*dān 'to carry on shoulder'*	>	*HM *ntam*
**[k]ˁam (OC)*	>	*kam (MC)*	甘	*gān 'sweet'*	>	*HM *Kam*
**Cə.[r]ˁam (OC)*	>	*lam (MC)*	藍	*lán 'indigo'*	>	*HM *ŋglam*
				Early Min /tsjäm/ 'bland'[42]	>	*M *tsam^{B}*

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[41] The meaning of the Hmongic word is the same as a related Chinese word with the C tone now written 燙 'to scald' (Man. *tàng*).

[42] Jíyùn dictionary: Norman 1988:232.

*24c. HM *aŋ (101, 120, 158)*

H *aŋ : HM *aŋ : M *aŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
21. fragrant	–	–	–	–	–	nten^{1}	nɛ^{1}	da:ŋ^{1}	da:ŋ^{1}	daŋ^{1}	dɔŋ^{1}	*ntaŋ
22. snake	naŋ^{1}	nei^{1}	na^{1}	na^{1a}	ʔnen^{A}	nen^{1}	nẽ^{1}	na:ŋ^{1}	na:ŋ^{1}	naŋ^{1}	nɔŋ^{1}	*ʔnaŋ
23. sash/cord/rope	l̥haŋ^{1}	–	hl̥a^{1}	l̥ua^{1b}	–	–	–	l̥a:ŋ^{1}	la:ŋ^{1}	ɬaŋ^{1}	–	*hljaŋ
24. neck	–	–	da^{1}	–	–	–	–	kla:ŋ^{1}	kla:ŋ^{1}	klaŋ^{1}	kuŋ^{1}	*qlaŋ
25. back (vs.front)	qaŋ^{1}	–	qa^{1}	hua^{1a}	–	–	–	da:ŋ^{1}	da:ŋ^{1}	–	kɔŋ^{1}	*N-Kaŋ
26. to put on/wear	naŋ^{4}	n̥hei^{3}	hn̥a^{3}	na^{3b}	–	nen^{4}	n̥ẽ^{3}	–	–	–	nɔŋ^{3}	*(h)naŋX
27. eagle/hawk	l̥aŋ^{3}	qwei^{3}	da^{3}	l̥ua^{3a}	–	klen^{3}	kwɤ^{3}	kla:ŋ^{3}	kla:ŋ^{3}	klaŋ^{3}	kjaŋ^{3}	*qlaŋX
28. firewood								θa:ŋ^{2}	tθa:ŋ^{2}	tsaŋ^{2}	hɔŋ^{2}	*dzaŋ^{A}
29. boat/ship								da:ŋ^{3}	da:ŋ^{3}	dzaŋ^{3}	dɔŋ^{3}	*ʔdzaŋ^{B}
30. in front								da:ŋ^{6}	da:ŋ^{6}	–	–	*ndaŋ^{C}
31. word/ character								–	daŋ^{6}	dzaŋ^{6}	–	*ndzaŋ^{C}

Loans in set 24c:

**[tsʰ]raŋ (OC)*	>	*tsrhjang (MC)*	瘡	*chuāng 'sore (n.)'*	>	*HM *tshaŋ 'sore/boil/blister'*
**maŋ-s (OC)*	>	*mjangH (MC)*	望	*wàng 'to look at'*	>	*HM *maŋH*
**lraŋ (OC)*	>	*drjang (MC)*	腸	*cháng 'intestines'*	>	*M *ɕl̥jaŋ^{A}*
		ʔjang (MC)	秧	*yāng 'seedling'*	>	*M *ʔjaŋ^{A}*

*24d. HM *i̯aŋ (121)*

H *aŋ : HM *i̯aŋ : M *i̯əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
32. flower	paŋ^{2}	pei^{2}	pa^{2}	pua^{2}	ven^{A}	pen^{2}	pɛ^{2}	pwaŋ^{2}	faŋ^{2}	pjaŋ^{2}	pjaŋ^{2}	*bi̯aŋ
33. male (human)	tɕaŋ^{6}	–	–	tɕua^{6}	–	ŋʈʃi^{6}	–	tɕaŋ^{2}	–	–	kjaŋ^{2}	*ɟi̯aŋH
34. winnowing fan								ɕaŋ^{1}	saŋ$^{1'}$	ʇaŋ^{1}	–	*ɕi̯əŋ^{A}
35. to remember								tɕjaŋ$^{5'}$	saŋ^{5}	ʇaŋ^{5}	kɛŋ^{5}	*kji̯əŋ^{C}

Loans in set 24d:

**k$^{w\varsigma}$aŋʔ (OC)*	>	*kwangX (MC)*	廣	*guǎng 'wide'*	>	*HM *K^{w}i̯aŋX*
**N-k$^{w\varsigma}$aŋ (OC)*	>	*hwang (MC)*	黃	*huáng 'yellow'*	>	*M *ʔg^{w}i̯əŋ^{A} 'bright'*
**[ɢ]$^{w\varsigma}$aŋ (OC)*	>	*hwang (MC)*	皇	*huáng 'yellow and white spotted'*	>	*M *w̥i̯əŋ^{A} 'yellow'*

*24e. HM *æŋ (63)*

H *aŋ : HM *æŋ : M *eŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
36. insect/worm	kaŋ^{1}	ci^{1}	ka^{1}	kua^{1a}	tɕen^{A}	kjen^{1}	kɛ^{1}	kɛŋ^{1}	kje:ŋ^{1}	klɛ^{1}	tsaŋ^{1}	*klæŋ
37. frog	qaŋ^{3}	–	qa^{3}	hua^{3a}	qen^{B}	ken^{3}	kɤ^{7}	–	ʇe:ŋ^{3}	kwa^{3}	–	*KæŋX

*24f. HM *i̯æŋ (139)*

H *aŋ : HM *i̯æŋ : M *i̯eŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
38. beeswax	tɕaŋ^{1}	tɕi^{1}	cia^{1}	tɕua^{1a}	tɕen^{A}	–	–	–	–	ʤjɛ^{1}	–	*N-ci̯æŋ

*24g. HM *ɔn (45, 121)*

H *aŋ : HM *ɔn : M *ɔn

	1	2	3	4	5	6	7	8	9	10	11	HM
39. grain head/bag	ɲhaŋ^{1}	ɲhei^{1}	hɲa^{1}	na^{1b}	ɲen^{A}	ɲen$^{1'}$	ɲẽ^{1}	–	nɔ^{1}	nan^{1}	–	*hnɔn

Notes

6. In White Hmong, this measure is for a double arms' length (fingertip to fingertip).
9. Perilla is a medicinal herb in the mint family (also known as "shiso").
10. This is probably the same as Mienic *nau^{B} 'mouse/rat' (2.9/3).
12. Also 'to run' in Pa-Hng (Niederer 1997:120).
13. In Yanghao (1), 'to store a body before burial' (Wang 1994).
14. This word refers variously to 'wolf', 'fox', 'jackal', etc. Compare Proto Tai *hma^{1} 'dog' (Li 1977).
15 & 34. Hmong-Mien 'insect' and Hmongic 'maggot' have the same root. The medial -l- may be evident in the Pa-Hng (7) disyllabic form. 'Maggot' seems to have been derived from 'insect' by C-tone derivation (see chapter 4). Compare Austronesian */qulej/ 'maggot' and the following note by Blust: "Most problematic is the evidence from Puyuma, Western Bukidnon Manobo and Tagabili that PAN */qulej/ meant not only 'maggot', but also 'insect'" (ACD). Forms with tone 7 are secondary tones derived by tone sandhi.
16. Also 'daughter-in-law; bride'. Compare Tibeto-Burman *s-nam 'daughter-in-law' (Benedict 1987a:18).
18. Compare Mon-Khmer *jhaam 'blood' (Shorto #1430).
20. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). This word has reflexes with both tone 5 and tone 6; it could equally well be reconstructed *jam^{C}.
21. Compare Kam /taaŋ^{1}/ and Mak /taaŋ^{1}/ 'fragrant' (Downer 1978).
23. The meaning 'sash/cord/belt' is associated with this word in Hmongic; the meaning 'rope' is associated with this word in Mienic. Hmongic forms from Wang 1994. Possibly from Chinese **繩** 'string, cord' (OC *m.ləŋ > MC zying > Man. *shéng*).
24. Compare Chinese **頸** 'neck' (OC *keŋʔ > MC kjiengX > Man. *jǐng*). Wang and Mao (1995) give two different forms for Zao Min 'neck', and note that both are irregular in rime: /kan^{1}/ (341) and /kuŋ^{1}/ (500). It is not clear if these are variants, or if one form was entered in error. /kuŋ^{1}/ is arbitrarily entered here.
25. See also Mien (Wang and Mao 16) /gaŋ^{1}/.
26. Since tone 3 and tone 4 are equally well-attested, the initial h- is placed in parentheses.
27. Compare Mon-Khmer *klaŋ 'hawk, large raptor' (Shorto #714), Tibeto-Burman *(g)laŋ 'eagle' (Matisoff 2003).
28. Downer (1973:21) says this is a loanword from Chinese **柴** 'firewood' (MC dzrɛ > Man. *chái*), one of a number that show a relationship between final -i or -u in Chinese and final -ŋ in Mien.
31. This is probably from Chinese **字** 'word, character' (OC *Cə-[dz]ə-s > MC dziH > Man. *zì*), despite the difference in rime. Downer (1973:21) cites this as one of a number of examples where Middle Chinese -i or -u corresponds to Mienic -ŋ.

32. The -w- in Luoxiang Mien (8) is secondary: -j- dropped, then -w- developed between a labial and /a/. Compare Austronesian *buŋa ‘blossom of fructifying tree or bush’ (ACD), Written Burmese /pwɑŋ[1]/ ‘blossom’, and Laqua (Tai-Kadai) /puŋ/ (Benedict 1975:295).
33. In White Hmong, the cognate may be /ca[6]/ in the phrase *ob cag* /ʔɔ[1] ca[6]/ ‘others’.
34. Probably from Chinese 扇 ‘fan’ (MC syenH > Man. *shàn*).
37. Compare Proto Austronesian *keŋkeŋ ‘frog; hollow sound’ (ACD).
39. Chinese 囊 ‘bag’ (OC *nˁaŋ > MC nang > Man. *náng*) may have been borrowed from Hmong-Mien, since it shows only the derivative meaning (see chapter 7). Yet compare Tibeto-Burman *s-nam ‘ear of grain’ (Matisoff 2003).

25
25a. HM *ein (26, 36, 170)

H *ein : HM *ein : M *ei

	1	2	3	4	5	6	7	8	9	10	11	HM
1. vine	–	ɕi^{1}	hm̥a^{1}	ma^{1b}	m̥oŋ^{A}	m̥e$^{1'}$	m̥a^{1}	m̥ei^{1}	mei$^{1'}$	m̥əi^{1}	mɛi^{1}	*hmein
2. this	noŋ^{3}	nei^{3}	nɔ^{5}	na^{3a}	ʔnoŋ^{B}	ne^{3}	n̥^{3}	nei^{3}	nei^{3}	na^{3}	na^{3}	*ʔneinX
3. heavy	ŋ̊hoŋ^{3}	hei^{3}	hŋ̊a^{3}	ŋ̊a^{3b}	ŋ̊oŋ^{B}	ŋ̊e^{3}	ŋ̊a^{3}	ŋ̊i^{3}	ni^{3}	ŋ̊i^{3}	nɛi^{3}	*hnjeinX

Discussion

All three Hmong-Mien words in set 25 begin with a nasal consonant. This could suggest the nasal in the coda of some Hmongic languages is secondary, given the absence of word-final nasal consonants in Mienic for these three words. However, three facts argue against this analysis: (1) It is just as common in this family for nasal-initial words to lose final nasalization through dissimilation (see 'to sniff', for example 1.23/18); (2) If the Mienic forms reflect the protolanguage rime and these words originally had syllable-final -i, they should have yielded a rime in Proto Hmongic with a rounded onset (see section 2.1.3); and (3) The Chinese word for 'creeping plant' 蔓 (OC *ma[n]-s > MC mjonH > Man. *wàn*), which may be the same as this word for 'vine', ends in an -n. Therefore, the analysis chosen here is that *-n in Mienic dropped in a heavy syllable after a nasal onset (*Nein > Nei).

26

All of the words in this set are Chinese. They are placed together because they merged into one rime in Hmongic, here reconstructed as **i̯aŋ*.

26a. Wang and Mao rime 161, Wang 1994 rime 26:

H *ɲci̯aŋ^{A} 'straight' from Chinese 正 (MC tsyengH > Man. *zhèng*)
H *ji̯aŋ^{A} 'poplar tree' from Chinese 楊 (MC yang > Man. *yáng*)
H *wi̯aŋ^{C} 'ten thousand' from Chinese 萬 (MC mjonH > Man. *wàn*)

26b. Wang and Mao rime 65:

HM *dzi̯ɔŋH 'craftsman' from Chinese 匠 (MC dzjangH > Man. *jiàng*)
M *ɣji̯ɔŋ^{B} 'elephant' from Chinese 象 (MC zjangH > Man. *xiàng*)

26c. Wang and Mao rime 161:

H *li̯aŋ^{B} and M *lji̯oŋ^{B} 'tael (40 grams)' from Chinese 兩 'tael' (MC ljangX > Man. *liǎng*)

27

*27a. H *uŋ*

	1	2	3	4	5	6	7	H
1. to eat	naŋ^{2}	noŋ^{2}	nɔ^{2}	nɔ^{2}	noŋ^{A}	nɐŋ^{2}	nɔ^{2}	*nuŋ^{A}
2. to forget	n̥hoŋ^{1}	noŋ^{3}	hn̥ɔ^{3}	na^{3a}	n̥oŋ^{A}	n̥ɐŋ^{3}	nõ^{3}	*hnuŋ^{B}
3. wheat	maŋ^{4}	–	mɔ^{6}	məŋ^{6}	mu^{C}	–	–	*muŋ^{C}

*27b. M *um (136)*

	1	2	3	4	5	6	7	8	9	10	11	M
4. to winnow								ŋ̊um^{5}	ŋ̊um$^{5'}$	n̥ən^{5}	num^{5}	*hɲum^{C}

Loan in set 27b:
nyemX (MC) 染 *rǎn 'to dye (cloth)' > M *ɲum^{C}* [43]

*27c. HM *un (195, 231)*

H *uŋ : HM *un : M *un

	1	2	3	4	5	6	7	8	9	10	11	HM/M
5. illness/pain	moŋ^{1}	moŋ^{1}	mɔ^{1}	məŋ^{1a}	ʔmoŋ^{A}	mɐŋ^{1}	mæ̃^{1}	mun^{1}	mun^{1}	mən^{1}	man^{1}	*ʔmun
6. round	–	–	–	–	–	–	ka^{1}-lɔ̃^{4}	klun^{2}	klun^{2}	klin^{2}	–	*ɢlun
7. to stroke								phjun^{1}	–	phlən^{1}	–	*phlun^{A}
8. to water								dzun^{2}	–	–	–	*ɲɟun^{A}

Loans in set 27c:
gjun (MC) 裙 *qún 'skirt' > M *gjun^{A}*
hjwon (MC) 園 *yuán 'garden' > M *hwun^{A}*

*27d. HM *u̥ɔm (98)*

H *uŋ : HM *u̥ɔm : M *əm

	1	2	3	4	5	6	7	8	9	10	11	HM
9. cold	–	noŋ^{5}	nɔ^{5}	nɔ^{5a}	–	nɐŋ^{5}	ŋ̊ɔ̃^{5}	nam$^{5'}$	nam^{5}	nan^{5}	nam^{5}	*ʔnu̥ɔmH

*27e. M *ən (62)*

	1	2	3	4	5	6	7	8	9	10	11	M
10. to eat								ŋ̊en^{6}	ŋjin^{6}	ŋ̊in^{6}	ŋ̊an^{6}	*ɲən^{C}

Loan in set 27e:
kjinX (MC) 緊 *jǐn 'tight' > M *kjən^{B}*

Notes

1 & 10. Rime 27e is provisionally placed here on the possibility that the Hmongic and Mienic words for 'to eat' are the same.

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[43] This may be a borrowing through a neighboring language. Compare Lao /njɔm/, Mak /njum/, and Vietnamese *nhuộm*.

2. Compare Mienic *hɲou^{B} ‘to forget’ (4.8/13).
6. Compare Chinese 輪 ‘wheel; round’ (MC lwin > Man. *lún*); see chapter 4 on the significance of Pa-Hng disyllabic form for interpreting Hmong-Mien clusters. Yanghao /l̥en^{2}/ and Xuyong /khun^{2}/ ‘round’ may be related, but the rimes do not correspond (forms from Office of Miao-Yao Research Lexicon 1987).
7. Mien (8) from Office of Miao-Yao Research Lexicon 1987 and Biao Min (10) from Solnit 1982. Compare Hmongic *phlɯ^{C} ‘to stroke’ (1.32/8) and Chinese 撫 ‘to caress’ (OC *[p^{h}](r)aʔ > MC phjuX > Man. *fǔ*).
8. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
9. In Mienic, the meaning is ‘cool (water)’.

28

*28a. H *oŋ*

	1	2	3	4	5	6	7	H
1. ditch	koŋ^{1}	–	–	kaŋ^{1a}	koŋ^{A}	kjɐŋ^{1}	–	*koŋ^{A}
2. steep	shoŋ^{1}	ntshoŋ^{1}	ntsha^{1}	ntsaŋ^{1b}	nʔtshoŋ^{A}	ɳʈʃɐŋ^{3}	–	*ntshoŋ^{A}
3. to lead	–	tɕoŋ^{1}	ca^{1}	tɕaŋ^{1a}	tɕoŋ^{A}	–	–	*coŋ^{A}
4. trough	l̥oŋ^{1}	coŋ^{1}	da^{1}	l̥aŋ^{1a}	qloŋ^{A}	kjɐŋ^{1}	ljõ^{1}	*qroŋ^{A}
5. root	tɕoŋ^{2}	tɕoŋ^{2}	ca^{6}	tɕaŋ^{6}	ʑoŋ^{A}	–	kõ^{2}	*ɟoŋ^{A}
6. bellows	thoŋ^{3}	thɑŋ^{3}	–	thaŋ^{3b}	thoŋ^{B}	–	tho^{3}	*thoŋ^{B}
7. CLF-rooms	tɕhoŋ^{3}	–	cha^{3}	tɕaŋ^{3b}	khoŋ^{B}	–	–	*choŋ^{B}
8. neck	qoŋ^{3}	qoŋ^{3}	–	haŋ^{3}	–	kɐŋ^{3}	–	*qoŋ^{B}
9. plain (level ground)	–	–	ɳʈa^{4}	–	ɳʈʂoŋ^{B}	–	–	*ndroŋ^{B}
10. rain	noŋ^{6}	noŋ^{6}	na^{6}	naŋ^{6}	noŋ^{C}	nɐŋ^{6}	mõ^{6}	*m-noŋ^{C}
11. to crawl	ɳoŋ^{6}	–	ŋka^{6}	ɳ̊tɕaŋ^{6}	–	–	–	*ŋgjoŋ^{C}
12. owl	l̥ioŋ^{5}	–	pla^{7}	–	–	–	–	*ploŋ^{D}

Loans in set 28a:

duwng (MC) 筒 *tóng 'tube'* > *H *droŋ^{A} 'flute/tube'*
luwng (MC) 聾 *lóng 'deaf'* > *H *loŋ^{A}*
pjuwngH (MC) 風 *fèng 'to blow'* > *H *poŋ^{C} 'air'*

*28b. HM *oŋ (178, 216)*

H *oŋ : HM *oŋ : M *oŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
13. to stretch	ɕhoŋ^{1}	–	ɕa^{1}	–	–	–	ɕõ^{1}	ɕoŋ^{1}	–	–	–	*ɕoŋ
14. to ask for								noŋ^{6}	nɔŋ^{6}	nɔŋ^{6}	–	*[n/l]oŋ^{C}

Loans in set 28b:

**truŋ (OC)* > *trjuwng (MC)* 中 *zhōng 'center/middle'* > *HM *ntroŋ*
**mə-roŋ (OC)* > *ljowng (MC)* 龍 *lóng 'dragon'* > *HM *-roŋ*
**mə-loŋ-s (OC)* > *yowngH (MC)* 用 *yòng 'to use'* > *M *[n/l]oŋ^{C}*

*28c. HM *uŋ (179, 180, 249, 250)*

H *oŋ : HM *uŋ : M *uŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
15. earth-worm	tɕoŋ^{1}	coŋ^{1}	ca^{1}	tɕaŋ^{1a}	tɕoŋ^{A}	jɐŋ^{1}	jõ^{1}	duŋ^{1}	–	hwjə^{1}	dziŋ^{1}	*N-cuŋ
16. bone	shoŋ^{3}	soŋ^{3}	tsha^{5}	saŋ^{3b}	tshoŋ^{B}	θɐŋ^{3}	sõ^{3}	θuŋ^{3}	tθuŋ^{3}	swə^{3}	hiŋ^{3}	*tshuŋX
17. seven	ɕoŋ^{6}	tɕoŋ^{6}	ɕa^{5}	tɕaŋ^{6}	zoŋ^{C}	ʃɐŋ^{6}	tɛɤ^{6}	(sje^{6})	–	–	–	*djuŋH
18. root								duŋ^{2}	du:ŋ^{2}	–	–	*ndzuŋ^{A}
19. pig								tuŋ^{4}	tuŋ^{4}	twə^{4}	tiŋ^{4}	*duŋ^{B}
20. rain								bluŋ^{6}	buŋ^{6}	blə^{6}	biŋ^{6}	*mbluŋ^{C}

Loans in set 28c:

yang (MC)	羊	*yáng 'sheep/goat'*	>	*HM *juŋ*
suwngH (MC)	送	*sòng 'to send/deliver'*	>	*HM *suŋH*
tsyang (MC)	獐	*zhāng 'fallow-deer'*	>	*M *cuŋ^{A} 'deer'*
trjang (MC)	張	*zhāng 'CLF-tools'*	>	*M *truŋ^{A}*
yang (MC)	煬	*yáng 'to melt'*	>	*M *juŋ^{A} 'to dissolve/melt'*
ljowng (MC)	龍	*lóng 'dragon'*	>	*M *kljuŋ^{A}*
sræwng (MC)	雙	*shuāng 'pair'*	>	*M *suŋ^{A}*
yangX (MC)	養	*yǎng 'to nourish, raise'*	>	*M *juŋ^{B}*

Discussion

It is interesting that Hmong-Mien *uŋ patterns differently from Hmong-Mien *um and *un: *uŋ merged with what is reconstructed here as Hmongic *oŋ, whereas *um and *un merged with what is reconstructed here as Hmongic *uŋ (rime 27 above).

Notes

1. Compare Biao Min /khlɛ^{1}/ 'ditch, ravine, mountain stream' (Solnit 1982). Zao Min (11) /ku^{1}/ appears to have been borrowed from Chinese 溝 'ditch, irrigation canal' (MC kuw > Man. *gōu*).
4. Wenjie Pa-Hng (Wang and Mao 12) has been substituted for Baiyun Pa-Hng (7).
5 & 16. These two words for 'root' may be related.
6. This word bears a slight resemblance to Chinese 橐 'sack, bellows' (MC thak > Man. *tuó*).
7. Possibly from Chinese (房) 間 'room' (MC kɛŋ > Man. *(fáng)jiān*), although the rime does not correspond.
8. Compare Chinese 頸 'neck' (OC *keŋʔ > MC kjiengX > Man. *jǐng*).
10 & 20. Although the initials do not match, Hmongic and Mienic 'rain' may well belong together, since they both belong to this rime set.
12. Yanghao (1) from Office of Miao-Yao Research Lexicon 1987.
14. This word alternates l- and n- onsets, like the Chinese loanword 'to use' in this rime set. It is not possible to reconstruct an onset.
17. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8). The initial seems to tie the Mien form to the Hmongic set, but the rime obviously does not agree. Mienic *ŋji^{C} (5.24/1) may be related, but the correspondence is difficult. Hmong-Mien 'seven' is from Tibeto-Burman *s-nis 'seven' according to Benedict (1987a:13); see chapter 5.
19. Perhaps from Chinese 豚 'young pig' (OC *[d]^{ʂ}u[n] > MC dwon > Man. *tún*), although the tones and final nasals do not correspond.
20. Compare Khmer /phliəŋ/ 'rain, to rain'.

29

*29a. H *ɔŋ*

	1	2	3	4	5	6	7	H
1. crops	qə^{1}	–	qɔŋ^{1}	haŋ^{1a}	–	–	–	*qɔŋ^{A}
2. needle	ʨu^{1}	ʨu^{1}	kɔŋ^{1}	kaŋ^{1a}	koŋ^{A}	ʧwaŋ^{1}	kɔ̃^{1}	*kjɔŋ^{A}
3. puttees	ʈhu^{1}	ɳʈhu^{1}	ɳʈhɔŋ^{1}	ɳʈaŋ^{1b}	ɳʔʈʂhoŋ^{A}	ɳʈʃwaŋ$^{1'}$	ɳ̊ɔ̃^{1}	*nthrɔŋ^{A}
4. thin	–	ɕu^{1}	ʂɔŋ^{1}	saŋ^{1b}	soŋ^{A}	θjɔŋ^{1}	–	*sjɔŋ^{A}
5. thrush	ʨu^{1}	ʨu^{1}	cɔŋ^{1}	ʨaŋ^{1a}	ʨoŋ^{A}	ʧwaŋ^{1}	ʨɔ̃^{1}	*cɔŋ^{A}
6. crazy	–	–	–	mpjaŋ^{2}	mpzoŋ^{A}	–	–	*mbljɔŋ^{A}
7. leaf	nə^{2}	nu^{2}	mploŋ^{2}	mplaŋ^{2}	ploŋ^{A}	mploŋ^{2}	mjɔ̃^{2}	*mbloŋ^{A}
8. table/bench	–	–	ʈɔŋ^{2}	ʈaŋ^{2}	ʐoŋ^{A}	–	ʦe^{2}	*drɔŋ^{A}
9. forest	ɣu^{3}	ʐu^{3}	ʐɔŋ^{3}	–	ʔwjoŋ^{B}	ŋkjɔŋ^{3}	jɔ̃^{3}	*-ʔrɔŋ^{B}
10. mosquito	ʑu^{3}	–	jɔŋ^{3}	ʑaŋ^{3a}	ʔʑoŋ^{B}	–	jõ^{3}	*ʔjɔŋ^{B}
11. to winnow	–	pʐu^{3}	tʂɔŋ^{3}	pʐaŋ^{3b}	pjoŋ^{B}	pjɔŋ^{3}	–	*prɔŋ^{B}
12. to finish	ʨu^{4}	ʨu^{4}	–	ʨəŋ^{4}	–	–	–	*ɟɔŋ^{B}
13. cloud/haze	en^{5}	–	ɔŋ^{5}	aŋ^{5a}	–	–	–	*ʔɔŋ^{C}
14. year	–	ʨu^{5}	ɕɔŋ^{5}	ʨaŋ^{5a}	–	–	ʨɔ̃^{5}	*ɕɔŋ^{C}
15. thick (liquid)	ŋu^{6}	–	ŋkɔŋ^{6}	ŋkəŋ^{6}	ŋkoŋ^{C}	–	ŋa^{8}	*ŋgjɔŋ^{C}

*29b. M *ɔm (192)*

	1	2	3	4	5	6	7	8	9	10	11	M
16. leaf								nɔm^{2}	nɔːm^{2}	nan^{2}	num^{2}	*nɔm^{A}
17. asleep								gɔm^{2}	–	–	–	*ŋgjɔm^{A}

Loan in set 29b:
-[g]ˤ[ə]m (OC) > hom (MC)* **含 *hán 'to hold in mouth' > M *ʔgjɔm^{A}*

*29c. HM *ɔp (219, 254)*

H *ɔŋ : HM *ɔp : M *ɔp

	1	2	3	4	5	6	7	8	9	10	11	HM
18. to cough	ŋo^{4}	–	hn̥ɔŋ^{7}	naŋ^{7}	n̥o^{D}	–	–	n̥op^{7}	–	n̥ən^{7}	–	*hnɔp

Loan in set 29c:
kop (MC) **鴿** *gē 'pigeon' > M *kɔp^{D}*

*29d. HM *ɔŋ (142)*

H *ɔŋ : HM *ɔŋ : M *ɔŋ

	1	2	3	4	5	6	7	8	9	10	11	HM
19. good	ɣu^{5}	ʐu^{5}	ʐɔŋ^{5}	ʐaŋ^{5a}	ʔwjoŋ^{C}	ŋwaŋ^{5}	jɔ̃^{5}	gwəŋ$^{5'}$	gɔŋ^{5}	lɔŋ^{5}	dzɔŋ^{5}	*-ʔrɔŋH
20. to put on/ wear (cap)	tə^{5}	ntu^{5}	ntɔŋ^{5}	ntaŋ^{5a}	nʔtoŋ^{C}	ntwaŋ^{5}	no^{5}	doŋ$^{5'}$	dɔŋ^{5}	dɔŋ^{5}	dɔŋ^{5}	*ntɔŋH

Loans in set 29d:

**-lˤoŋ (OC)*	>	*duwng (MC)*	銅	*tóng 'copper'*	>	*HM *dɔŋ*[44]
		thuwngX (MC)	桶	*tǒng 'bucket'*	>	*HM *thɔŋ(X)*
		tsuwng (MC)	騣	*zōng 'mane'*	>	*M *ʔdzɔŋ*[A 45]
		nowng (MC)	膿	*nóng 'pus'*	>	*M *nɔŋ*[C]

*29e. HM *u̯ɔŋ (85)*

H *ɔŋ : HM *u̯ɔŋ : M *u̯əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
21. to listen	–	–	mlɔŋ^{6}	mzu̯əŋ^{6}	–	–	mæ̃^{5}	moŋ^{5}	muŋ$^{5'}$	m̥ɔŋ^{5}	maŋ^{5}	*(S-)mru̯ɔŋH
22. carrying pole								moŋ^{5}	muŋ^{4}	mɔŋ^{4}	–	*mu̯əŋ^{B}

*29f. HM *ɔk (205)*

H *ɔŋ : HM *ɔk : M *ɔk

	1	2	3	4	5	6	7	8	9	10	11	HM/M
23. bird	nə^{6}	nu^{6}	nɔŋ^{6}	nəŋ^{6}	no^{C}	nwaŋ^{6}	mõ^{6}	nu^{8}	nɔ^{6}	n̥ɔ^{8}	nɔu^{8}	*m-nɔk
24. bamboo bowl								–	–	–	–	*khɔk^{D}

Loan in set 29f:

tsræwk (MC) 捉 *zhuō 'to take'* > *M *tɻɔk*^{D}

*29g. HM *u̯əm (212, 246)*

H *ɔŋ : HM *u̯əm : M *u̯əm

	1	2	3	4	5	6	7	8	9	10	11	HM/M
25. water	ə^{1}	u^{1}	–	aŋ^{1a}	oŋ^{A}	waŋ^{1}	ʔɔ̃^{1}	wəm^{1}	wɔm^{1}	ən^{1}	m̥^{3}	*ʔu̯əm
26. pillow	–	ɳʈɕɯ^{5}	ɲcɔŋ^{5}	ɳʈɕaŋ^{5a}	ɳʔʈɕoŋ^{C}	ntjoŋ^{5}	ŋɔ^{5}	dzum^{6}	ɖam^{5}	–	–	*ɲcu̯əmH
27. to play (flute)								pwəm^{3}	pjɔm^{3}	–	–	*phlu̯əm^{B}

*29h. HM *u̯əŋ (102)*

H *ɔŋ : HM *u̯əŋ : M *əŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
28. tree	tə^{5}	ntu^{5}	ntɔŋ^{5}	–	nʔtoŋ^{C}	ntwaŋ^{5}	–	djaŋ$^{5'}$	ɡjaŋ^{5}	djaŋ^{5}	djaŋ^{5}	*ntju̯əŋH
29. year	ŋ̊hu^{5}	–	–	–	–	ŋ̊waŋ^{5}	–	ŋaŋ^{5}	ŋaŋ$^{5'}$	ŋ̊aŋ^{5}	ŋaŋ^{5}	*hɲu̯əŋH
30. to walk								jaŋ^{2}	jaŋ^{2}	ŋ̊aŋ^{2}	dzaŋ^{2}	*jəŋ^{A}
31. wife of m.'s brother								mwaŋ^{2}	ŋwaŋ^{2}	mjaŋ^{2}	mjaŋ^{2}	*mjəŋ^{A}

Loan in set 29h:

tsyhingH (MC) 秤 *chèng 'balance'* > *HM *nthju̯əŋH*

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[44] Laurent Sagart points out that in the Hmongic language Bunu, 'copper' has the initial l- of Old Chinese (/loŋ^{2}/, see Mao, Meng, and Zheng 1982:192), which suggests that this word was borrowed more than once.

[45] Chinese 'mane' was borrowed independently by Hmongic: *tsɯŋ^{A} (rime 30a).

*29i. HM *ɻuem (60)*

H *ɔŋ : HM *ɻuem : M *em

	1	2	3	4	5	6	7	8	9	10	11	HM
32. seed	ŋ̊hu^{1}	ŋu^{1}	nɔŋ^{1}	ŋaŋ^{1a}	ŋ̊o^{A}	nwaŋ^{1}	ŋõ^{1}	ŋem^{1}	ŋjim$^{1'}$	ŋ̊jɛn^{1}	num^{1}	*hnrɻem
33. raw/unripe	ŋu^{4}	ŋu^{4}	ŋɔŋ^{4}	–	ŋo^{B}	ŋwaŋ^{4}	ŋõ^{4}	–	ŋjim^{4}	–	–	*ɲɻemX

*29j. HM *ɻueŋ (46)*

H *ɔŋ : HM *ɻueŋ : M *eŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
34. door/gate	ʈu^{2}	ʈu^{2}	ʈɔŋ^{2}	ʂaŋ^{2}	ʐoŋ^{A}	ʃwaŋ^{2}	tɛõ^{2}	kɛŋ^{2}	keːŋ^{2}	klɛ^{2}	–	*grɻeŋ
35. green/blue								mɛŋ^{1}	meːŋ^{1}	mɛ^{1}	mɛŋ^{1}	*ʔmeŋ^{A}
36. rock								bɛŋ$^{5'}$	–	bɛ^{5}	bɛŋ^{5}	*ʔbeŋ^{C}

Loan in set 29j:
**breŋ (OC) > bjæng (MC)* 平 *píng 'even' > M *beŋ^{A} 'level'*

Discussion

There is only one loanword to exemplify another set 29 rime:
29k. HM *ɻən (248): HM *mphɻənH 'to scatter/sprinkle' from Chinese 噴 'to spatter, sprinkle' (OC *p^{hs}ur-s > MC phwonH > Man. *pèn*).
A final rime fits best in this set as well, although this is a tentative placement, since these Chinese loanwords to Mienic have no Hmongic counterparts:
29l. M *ɻam (211): M *sɻam^{A} 'beard' from Chinese 髟 'long hair' (MC sræm > Man. *shān*) and M *jɻam^{A} 'armspan' from Hakka /njam/ (Downer 1973:19).

Notes

2. Compare Chinese 箴 'needle' (OC *t.q[ə]m > MC tsyim > Man. *zhēn*).
3. Tan Trinh Pa-Hng (Niederer 1997) has been substituted for Baiyun Pa-Hng (7).
7 & 16. Although the initials do not match, these two sets for 'leaf' may well belong together, since they both belong to this rime and have the same tone. The two words in rime 29b are thus included here, even though they appear to be attested in Mienic only. Compare Proto Malayo-Polynesian *buluŋ 'medicinal herbs' which has come to be used as 'leaf' in many Austronesian languages (ACD).
9. Jiongnai (6) from Mao and Li 2001.
14 & 29. These may be related to Chinese 年 'year' (OC *[n]^{s}i[n] > MC nen > Man. *nián*), but as suggested by Mortensen (2002), a Tibeto-Burman source (TB *s-niŋ 'year', Matisoff 2003) better explains the final velar nasal.
17. Also Hainan Mun /gjoːm^{2}/.
18. Jiangdi Mien (Wang and Mao 15) has been substituted for Luoxiang Mien (8).
21. Biao Min (10) from Office of Miao-Yao Research Lexicon 1987.
23. The final -k of 'bird' is reflected in a velar nasal in Hmongic (the shift to a final nasal conditioned by the nasal initial). Compare Proto Malayo-Polynesian *manuk 'bird/chicken' (ACD) and Proto Tai *n-lok 'bird' (Li 1977).
24. Not attested in these four Mienic languages, but Jiangdi Mien and Xiangnan Mien /khɔ^{7}/ correspond.

26. Perhaps from a C-tone variant of Chinese 枕 ‘pillow’ (OC *[t.q][ə]mʔ > MC tsyimX > Man. *zhěn*).
27. Changping Mien (Wang and Mao 18) /phləm^{3}/. Compare the similar Hmongic *phro^{B} ‘to play (flute)’ (1.47/7).
28. Perhaps the same as Chinese 樹 ‘tree’ (OC *m-toʔ-s > MC dzyuH > Man. *shù*), but compare Mon-Khmer *t_2ʔɔɔŋ ‘tree’ (Shorto #491).
31. The -w- in Luoxiang Mien (8) and Lanjin Mun (9) is secondary: -j- dropped, then -w- developed between a labial and /a/.
32. Downer (1973) noted the similarity between this word and Cantonese /ŋan/ ‘seed’.
32 & 33. The rimes of ‘seed’ and ‘raw/unripe’ differ strikingly in Jiangdi Mien and Xiangnan Mien, not represented here (Jiangdi /ɳ̊iːm^{1}/ and /ɳ̊om^{4}/; Xiangnan /ɳ̊iŋ^{1}/ and /ɳ̊əŋ^{4}/). Without a better alternative, the two words are put together here.
35. Hmongic *mpru^{A} (1.49/16) ‘green/blue’ may be related.

30

30a. H *ʉŋ

	1	2	3	4	5	6	7	H
1. to fall	–	–	pɔŋ[1]	paŋ[1a]	poŋ[A]	–	–	*pʉŋ[A]
2. Hmong	m̥hu[1]	ɕoŋ[1]	hm̥ɔŋ[1]	maŋ[1b]	m̥jo[A]	–	ŋ̊ŋ[1]	*hmʉŋ[A]

Loans in set 30a:

**[ɢ]$^{w\varsigma}$aŋ (OC) > hwang (MC)* 蝗 *huáng 'locust' > H *gʉŋ^{A} 'grasshopper'*
tsuwng (MC) 騣 *zōng 'mane' > H *tsʉŋ^{A}* [46]

30b. HM *iŋ (9)

H *ʉŋ : HM *uŋ : M *iŋ

	1	2	3	4	5	6	7	8	9	10	11	HM/M
3. to go	moŋ[4]	moŋ[4]	mu[4]	məŋ[4]	mu[B]	ŋ̃ŋ[4]	nĩ[2]	miŋ[2]	niŋ[2]	–	mi[2]	*n-muŋ(X)
4. to lift								niŋ[5]	niŋ[5']	–	–	*hniŋ[C]

Notes

1. Possibly from Chinese 崩 'to fall, collapse (of mountain)' (OC *Cə.pˤəŋ > MC pong > Man. *bēng*).
2. 'Mien' and its variants is probably from Chinese 民 'people' (OC *mi[n] > MC mjin > Man. *mín*).
3. Note that the tones do not correspond across the Hmongic-Mienic divide (see chapter 2, section 1.4).
4. Despite the tone mismatch, this is probably the same word as Chinese 拎 'to carry, lift' (Cant. /nɪŋ[1]/, Man. *līng*).

[46] Chinese 'mane' was borrowed independently by Mienic: *ʔdzɔŋ^{A} (rime 29d).

Additional Mienic sets

It is not possible to place the following three sets of loanwords into one of the rimes above, since there is no Hmongic evidence to show the direction of the merger, nor do they pattern exactly like any other sets in Mienic.

*A. M *iu (3)*

Loans in set A:

kjuwX (MC)	韭	*jiǔ* 'Allium'	>	M *ɲiu^{B}
tsjuwX (MC)	酒	*jiǔ* 'liquor'	>	M *tiu^{B}
mjewH (MC)	廟	*miào* 'temple'	>	M *miu^{C}

*B. M *u̯ok (258)*

Loans in set B:

tsyuwk (MC)	粥	*zhōu* 'porridge'	>	M *tju̯ok^{D}
dzyuwk (MC)	熟	*shú* 'cooked/ripe'	>	M *dju̯ok^{D}

*C. M *ien (6)*

Loans in set C:

mjienH (MC)	面	*miàn* 'face'	>	M *hmien^{A}
khen (MC)	牽	*qiān* 'to lead'	>	M *khien^{A}

3 *Tonogenesis and tone development*

3.1 Introduction

The earliest in-depth work on the Hmong-Mien language family involved the reconstruction of the tones by Kun Chang in a series of articles published over several decades (Chang 1947, 1953, 1966, 1972). This important work is summarized in Niederer 1998 (216–250). For the most part, Hmong-Mien tonal categories correspond to those of Chinese, Vietnamese, and Tai, the languages of the 'Sinosphere'[47]—Chinese and those languages in close contact with and profoundly influenced by Chinese—and the similarity of their tonal systems makes it appear that these languages all developed tones in the same way. We therefore assume that tonogenesis in Hmong-Mien followed a series of developments first elucidated by Haudricourt (1954b) to explain tonogenesis in Vietnamese. By this account, tonal contrasts first arose upon the loss of syllable-final laryngeal consonants *-ʔ and *-h (< *-s), yielding a three-way tonal contrast:

A (*ø) B (*ʔ) C (*h)

Haudricourt (see also Matisoff 1973) has proposed that these three tones were level, rising, and falling respectively.[48] Syllables with final voiceless stops *-p, *-t, *-k developed their own tonal characteristics at a later date, yielding a fourth major tone category, D.

These original tones subsequently doubled to eight following the merger of syllable-initial voiced and voiceless obstruents (preglottalized and voiceless sonorants patterned with the voiceless initials), as represented below:[49]

1 (voiceless initials)	A1 (1)	B1 (3)	C1 (5)	D1 (7)
2 (voiced initials)	A2 (2)	B2 (4)	C2 (6)	D2 (8)

It is generally accepted that the 'upper register' tones (A1, B1, C1, and D1 from syllables with voiceless initials) were initially higher in pitch, while the 'lower register' tones (A2, B2, C2, and D2 from syllables with voiced initials) were initially lower in pitch. The physiological connection between initial consonant voicing and the development of pitch contrasts has been widely discussed, although there have been problems with finding a

[47] "Sinosphere" is a term coined by James A. Matisoff (Matisoff 1990), as is the invaluable term "tonogenesis" itself (Matisoff 1970).

[48] On the other hand, Benedict believed that the original contrast was between a falling tone (A) and a rising tone (B), while C was a level sandhi tone, added later (see, for example, Benedict 1997).

[49] The most common way of referring to these historical categories in the literature on Asian tone languages, and in the present work, is by the numbers 1–8, as indicated.

direct causal link between the two: see for example Hombert 1978, Hombert, Ohala and Ewan 1979, Maddieson 1984a and section 3.3 below.

In a few languages of the family the obstruent merger and the tone split did not both occur: Fuyuan (West Hmongic) has only four 'unsplit' tones, while Shimen (West Hmongic) has split the tones on the basis of initial consonant voicing, but did not lose its voicing contrasts. Subsequent tonal splits are local developments, and did not necessarily affect all tone categories. Most common among these is a secondary tone split based on aspiration, as in the West Hmongic language Zongdi and the Mun of Hainan Island (for more examples, see Niederer 1998:246–247). Prenasalization conditioned another type of secondary tone split in North Hmongic (Niederer 1998:247–248). Almost all languages exhibit tone mergers of two or more of the original eight categories: for example, the reflexes of categories B2 and D1 have merged in White Hmong.

For those who are unused to thinking in terms of historical tone categories (A1, A2, B1, B2, etc.) as opposed to phonetic tone values (high level, low rising, etc.), it is useful to think of them this way: all the words in a particular tone category have a common historical origin in terms of initial and final consonantism (A1 < *voiceless initial, open syllable or syllable with a nasal coda). This ensures that when the original consonantism is transphonologized into tone, all of the words belonging to each original category as defined by syllable type will continue to pattern together tonally. Although phonetic studies have shown that the newly emergent tones will have certain properties due directly to the type of consonant lost, once tones are created, they morph quite quickly into other things: originally high tones may lower, low tones may raise, tones may merge, contours may simplify, etc. Therefore, across languages in a family, words that belong to a particular tone category may have quite different phonetic realizations. For example, Hmong-Mien words in the A1 category have a variety of different phonetic values: they may be mid rising, high level, low rising, mid falling, or mid level. This cross-linguistic variability is true of every tone category. The categories themselves, on the other hand, are remarkably stable: in all Hmong-Mien languages, the members of the group of cognates which includes 'to give', 'deep', 'three', 'thatch grass' and 'snake' will all have the same tone in each language of the family (the A1 reflex), regardless of the phonetic value of that tone in any particular language. The stability of tonal categories explains why, of all aspects of Hmong-Mien historical phonology, tone was the first to be reconstructed.

Although the accepted account of Asian tonogenesis sketched above explains the general structure of the Hmong-Mien tone system, many difficult and interesting topics with regard to tonogenesis remain to be addressed. Two such topics make up the substance of this chapter. In section 3.2, the question of the timing of tonogenesis in Chinese and Hmong-Mien is raised through an examination of Chinese loanwords in Hmong-Mien. Since these loanwords show perfect tone category correspondence across the two families, it is argued that the loans were made at a time when neither donor nor borrower was tonal. In section 3.3, a detailed, family-internal account of the development of tones in Hmong-Mien is presented. On the basis of tone reflex patterns and the characterization of certain modern-day tones by non-modal phonation, it is proposed that two overlapping layers of phonation type contrasts preceded, and led to, the development of full tonal contrasts in Hmong-Mien languages.

3.2 Relative timing of Chinese and Hmong-Mien tonogenesis[50]

The classic account of the segmental origin of tonal contrasts works well for Hmong-Mien: there is good indirect evidence for the presence of final laryngeals that led to the earliest tonal contrasts (see section 3.3 below), and ample comparative evidence for the subsequent tone split. There is a problem, however, in understanding how this Sinospheric system of tonal contrasts might have been propagated across unrelated language groups. It has been claimed, explicitly by Paul Benedict, but implicitly by others, that this whole system of tonal contrasts (4 tones times 2 registers) was borrowed from Chinese by Hmong-Mien, Tai and Vietnamese, all of which were originally atonal. Benedict writes '…Vietnamese, under direct Chinese domination lost the…initial syllables of MK [Mon-Khmer] *while directly borrowing the tonal system*…' (Benedict 1997:4, emphasis added).

The perfect tone category correspondences in Chinese loanwords from the Early Middle Chinese period is also somehow attributed to the fact that Hmong-Mien borrowed its four-by-two tonal system from Chinese. For example, Lin Ying (1972:56), in an article on Chinese loans in Hmong-Mien, writes "If we compare these loans with Qièyùn rhyme tables, we find that the tones have been borrowed by Miao *primarily on the basis of the píng, shǎng, qù, and rù tone categories*"[51] (emphasis added). Following are examples of Middle Chinese loanwords in Hmong-Mien which have the same tone category in both the donor and the borrower:

(1)		*MC*	*PHM*	*Tone category in both*
金	*jīn* 'metal'	kim	*kjeəm 'gold'	A1
秧	*yāng* 'seedling'	ʔjang	*ʔjɛŋ^{A} (PH)	A1
千	*qiān* 'thousand'	tshen	*tsh̬ien	A1
銅	*tóng* 'copper'	duwng	*dɔŋ̬	A2
羊	*yáng* 'sheep/goat'	yang	*juŋ̬	A2
銀	*yín* 'silver'	ngin	*ŋ^{w}i̬ən	A2
桶	*tǒng* 'bucket'	thuwngX	*thɔŋ(X)	B1
瓦	*wǎ* 'tile'	ngwæX	*ŋ^{w}æX	B2
甑	*zèng* 'rice steamer'	tsingH	*tsjɛŋH	C1
炭	*tàn* 'charcoal'	thanH	*thanH	C1
竈	*zào* 'stove'	tsawH	*N-tsoH	C1
箸	*zhù* 'chopsticks'	drjoH	*drouH	C2
漆	*qī* 'lacquer'	tshit	*thjet	D1
百	*bǎi* 'hundred'	pæk	*pæk	D1
十	*shí* 'ten'	dzyip	*gju̬ɛp	D2[52]

At first, this seems reasonable for Hmong-Mien, because not only is there internal evidence of the development of the Chinese type of tone system within Hmong-Mien, the languages in this family show the imprint of Chinese contact at every level of structure (see chapter 6, section 6.2, and Downer 1973, Ratliff 1999b, 2000, 2001a, 2009a,b). But how do speakers hear and borrow tone categories? How do speakers hear and borrow

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[50] Earlier versions of this section were given at the 28th Annual Meeting of the Berkeley Linguistics Society Meeting (2002) and at the Ninth Spring Workshop on Theory and Method in Linguistic Reconstruction in Ann Arbor, MI (2002). It was first published as Ratliff 2005.

[51] These are the traditional Chinese names for the four historical categories here labelled A, B, C, and D.

[52] This might also be a loan from Tibeto-Burman (see chapter 5, section 2).

whole systems? There is nothing in the speech signal that would enable them to do this. And how does a borrowed word that has a particular niche within the donor language system, the historical antecedents of which have been lost because the rise of tones depends on their being lost, embed that borrowing in a perfectly analogous place within a whole system that mirrors that of the donor language?

In order to support the idea that the borrowing of tone categories happened in the distant past, one would ideally like to point to a modern-day contact situation which has recently yielded, or is in the process of yielding, a pattern similar to this one: identically structured systems, and borrowed words which occupy analogous places in the systems of both donor and borrower language. What follows is a review of some recent situations where words have been borrowed under each logically possible combination of tonal and atonal donor and borrower languages to show that in three out of the four possible contact situations between donor and borrower—atonal donor and tonal borrower, tonal donor and tonal borrower, tonal donor and atonal borrower (the dominant theory)—all the known cases have yielded patterns quite different from this one. The best conclusion is that, by elimination, and with the knowledge of how easily prosodic systems have diffused through Southeast Asia, it was the fourth contact situation—atonal donor and atonal borrower—which held at the time of these borrowings. According to Sagart, Chinese tones developed after Old Chinese but before Early Middle Chinese, so somewhere between 500 BCE and 500 CE (1999:101). On the basis of good segmental correspondences, the Chinese borrowings above can be dated to only slightly before Early Middle Chinese, which we know was a tonal language, or to the first five hundred years of the Common Era.[53] Tonogenesis was ready to happen at this point, but it had not happened yet. It is not clear that the innovation began with Chinese and then spread to the other languages of the area; it is just as likely that the languages of the Sinosphere all developed tone together, at roughly the same time.

3.2.1 Tone assignment in different contact situations

The four possible Chinese/Hmong-Mien contact situations with respect to tone at the time of borrowing are outlined below. A discussion of the tonal outcomes each type of contact situation has yielded in known cases will be presented and will be compared to the pattern of Chinese/Hmong-Mien correspondences that require an explanation.[54]

Donor atonal, Borrower tonal

For the case where the donor is atonal and the borrower is tonal, Matisoff (2001:321–322) reports that two variations of one basic strategy are employed in Southeast Asia: one or two common tones are selected as 'loan-tones', or a rare tone is used as the loan-tone which instantly identifies the word as a borrowing (such as English borrowings in Lahu and Cantonese). In no reported case are all native tonal contrasts realized in words borrowed from an atonal language.

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[53] Pulleyblank (1978), however, suggests that the development of tones was rather late, and that certain rimes with final -s persisted down to the 6th century CE.

[54] Matisoff (2001) gives a very useful catalog of contact situations involving borrowing of words between tonal and atonal languages similar to this one. He also includes consideration of the relative prestige of donor and borrower.

The 'common loan-tone' strategy often involves an attempt to reflect stress or intonation contour in the donor language through tone. Court's 1975 study of Malay borrowings in Satun Thai indicates that the pitch correlates of stress and intonation are re-interpreted within a tonal context as tones. He reports that the high rising-falling tone of Satun Thai is used to represent the falling intonation on phrase-final open syllables in Malay loanwords. The high level tone is assigned to other syllables which do not occur at a point which corresponds to the Malay intonation peak. Gandour (1979) found a similar stress-to-tone mapping in a majority of English polysyllabic loanwords in Thai. Although the details are considerably more complex, in general the stressed syllable of a polysyllabic English word is assigned a high tone.

Although Hmong speakers in the United States do not now transliterate nativized English borrowings into Hmong orthography which makes tone assignment easy to see (they simply use the English spelling), variation in early nativized loans show employment of the same basic strategies: an attempt to mirror either English intonation or stress through tone assignment, or the use of a 'loan tone':

(2) 'America'

ɑmɛlikà	Mid-Mid-Mid-Low (an attempt to represent English intonation)
àmɛ̀lǐkà	Low-Low-Rising-Low (an attempt to represent English stress)[55]
àmɛ̀lìkà	Low-Low-Low-Low (loan-tone assignment)

If Hmong-Mien had been tonal and Chinese had not been tonal at the time the loans listed above were made, presumably all pre-Early Middle Chinese loanwords into common Hmong-Mien would have been realized with one or two tones: the then-current 'loan-tones', either a common tone (or two), or a rare tone. The tonal categories for all the loanwords of this stratum would then have belonged to a restricted subset of the eight across which native words are distributed, and would have been the same for all Hmong-Mien languages—which is clearly not the case.

Donor and Borrower both tonal

The 'rare loan-tone' strategy may also be used in the case of borrowings between tone languages (Matisoff 2001:321). Bunu, for example, a Hmong-Mien language of Guangxi Province in China, assigns sandhi tones to Chinese and Zhuang borrowings, tones which are restricted in use in the native portion of the vocabulary. Apparently speakers feel that these minor tones are appropriate for marking all 'special purpose' words—they are also used to mark baby-names such as 'little rat', 'little frog', etc. (Mao and Chou 1972, Meng 1983).

However, when both parties are tonal it is more common for borrowers to look for a match between the tone of the loanword in the donor language and a tone in their language. Since tone categories (as identified by sets of words that all have the same tone) are remarkably stable over time, but tone values are remarkably changeable, it is easy to see that this surface mapping strategy would not yield a neat historical pattern like the one we are attempting to explain.

For example, recent Chinese loanwords in Hmong-Mien languages are borrowed by matching the tone value of the word in the local variety of Chinese with the closest tone

[55] Although for native speakers, the stress falls on the second syllable, not the third syllable.

value in the borrowing language. 'Basically, modern loans use Miao initials, finals, and tones to reflect southwestern Mandarin phonology.' (Ying 1972:64). In the varieties of local Chinese spoken in the area of three major Hmongic languages—Yanghao (Eastern Hmongic), Jiwei (Northern Hmongic), and Xuyong (Western Hmongic)—there is one rising tone, a reflex of category C1. The tone it will have within each borrowing Hmongic language is determined by phonetics: the rising tone of each Hmongic language is chosen, even though in Yanghao the rising tone is a reflex of category B1, in Jiwei the rising tone is a reflex of category A1, and in Xuyong the rising tone is a reflex of category D2:

(3)
丈 *zhàng* '3 1/3 meters'
Yanghao tsɑŋ B1 [35], Jiwei ʈɑŋ A1 [35], Xuyong tʂɑŋ D2 [13]
上 *shàng* 'to start (class)'
Yanghao sɑŋ B1 [35], Jiwei ʂɑŋ A1 [35], Xuyong ʂɑŋ D2 [13]
(Office of Miao-Yao Research Lexicon 1987)

L-Thongkum (1997) presents an interesting case study of language change in progress among younger speakers of Mien, a tone language, in a village near Chiangmai. Standard Thai, also a tone language, is used as the medium of instruction, and both Northern Thai and Standard Thai are spoken widely. In this dialect of Mien, speakers are in the process of reducing their number of tones from six to five, bringing Mien in line with Standard Thai, and are also adjusting the phonetic values of the tones themselves to be more in accord with the phonetic values of Thai tones. However, tone category correspondences do not result as a by-product of this contact-induced change:

(4)

'evolving' Mien	*Thai*	*Mien*	*Thai*
33	33	A1	A1a, A2
31	51	A2	B1, C2, D2L
45	45	B1	B2
34	15	B2, C1	A1b
21	21	C2	C1, D1

(L-Thongkum 1997:158)

Finally, Chamberlain (1972) has also given a brief account of how tones are assigned to Lao borrowings in five minority Tai languages of Northeast Thailand. All of these languages, both donor and borrowers, are tonal. The purpose of his paper was to support the proposal that speakers borrow tone shapes, but not patterns of splits and mergers, by showing that tone borrowing in these five cases were governed by judgments of phonetic similarity. Although tone category membership correspondences concern us here, whereas Chamberlain was interested in patterns of tone category coalescence and splitting, both are footprints of earlier historical events, and his findings are consistent with the claim made here—that the process of borrowing does not cause borrowers to reproduce the history of the donor language within their own language.

Therefore if both Chinese and Hmong-Mien had been tone languages at the time of the loans, then Middle Chinese loanwords in Hmong-Mien would have the phonetic values of reflexes of various Hmong-Mien tone categories just as they do in modern Chinese loans. This would reflect an effort to match the tone in the donor language to the closest tone in

the borrowing language. A borrowed word would not yield reflexes of only one tone category across the board, moreover that one tone category which provides a perfect match to the donor language in terms of its place in an identical system.

Donor tonal, Borrower atonal

This is the traditional view of the state of things at the time of early contact, especially under the Austro-Tai hypothesis which holds that Hmong-Mien was originally atonal like its Austronesian relatives (Benedict 1975). But in the modern day, we only have evidence for three basic types of outcomes from contact of this sort. First, words may be borrowed without tones because the borrowers cannot hear tone, especially if contact is minimal to non-existent and the number of borrowings is small, as is the case for the handful of Chinese borrowings in English:

(5)

麻將	*má jiàng*	>	‘mahjong’
烏龍	*wū lóng*	>	‘oolong (tea)’
山東	*Shāndōng*	>	‘shantung (silk)’

Second, in a situation of greater contact, we may get the odd situation that has been reported by Filbeck (1972) for one dialect of Mal (called T’in at a higher node in the tree), an atonal Mon-Khmer language of Southeast Asia spoken in the northeast part of Thailand. Mal has acquired tones in two ways. First, Northern Thai numerals have been borrowed along with their tones. Although this may have arisen as a recitation effect, the numerals are pronounced with their Northern Thai tones even in running speech. At the same time, other Thai words have been borrowed with a rising pitch profile—presumably because of its salience, because it does not correspond to the pitch contours of the borrowings as pronounced in Thai:

(6)

Thai	*Mal*	
yâak	ɲăak	‘difficult’
lâak	lăak	‘to drag’
khèɛk	khĕɛk	‘guest’
klaaŋ	kăaŋ	‘middle’

(Filbeck 1972:115)

This rising contour also marks words borrowed from other atonal Mon-Khmer languages, and, inexplicably, a couple of native words well.

The third situation, one of intense and prolonged contact, is probably closest to what proponents of the theory that Hmong-Mien acquired tones from Chinese must assume for early Chinese/Hmong-Mien contact, given the strong influence Chinese has had upon Hmong-Mien languages over the centuries. There is one good modern day case where, in the face of widespread multilingualism, the prosodic model of a dominant tonal language (or in this case, languages) caused an atonal language to develop a complex system of tones. This is the case of the development of tones in the originally atonal Austronesian language Tsat of Hainan Island as described by Thurgood in a series of publications (see Thurgood 1999 for a full account and further references). Tones developed in Tsat under

the influence of two tone languages: the local (Min) varieties of Chinese, and the Tai-Kadai language Li. The tonal system that developed in Tsat is similar in nature to the Thai-influenced Mien described by L-Thongkum: the number of tones and the tone values are almost the same as those of these two neighboring languages which the Tsat speakers know well (Thurgood 1999:231), a case of surface convergence:

(7)

	Tsat	Chinese (Tanchou)	Li (Tongshi)	Li (Yuanmen)
high level	55	55	55	55
falling	42	--	43	42
mid level	33	22	33	44
rising	24	35	13	13
low level	11	11	11	11

But the key difference between this situation and the early Sinospheric contact situation that we are trying to understand is that Tsat developed tones in its own way, in a two-by-three system, where the initials started the tonogenetic process and the later split was conditioned by the finals. Thus there can be no corresponding categories in Tsat for Chinese loanwords to map onto—a four-by-two system cannot map directly onto a two-by-three system. Chinese borrowings in Tsat are pronounced with whatever tone is phonetically most similar (Thurgood, p.c. 2002). Although given the assumptions about tone spread in Southeast Asia this should be the model we are looking for, the kind of cross-linguistic category correspondence pattern characteristic of the Sinosphere is not found here. As Thurgood (1999:231) writes, "it is not being argued that the Tsat tonal *system* is borrowed from one of these languages".

Donor and Borrower both atonal

Given our inability to find a present-day (or recent past) model that could account for the correspondence of tones in the Sinosphere under these three contact situations, we must turn to the last possible scenario. If neither Hmong-Mien *nor* Chinese had tones at the time these early loans above were made, we can indeed imagine how the striking cross-family correspondence of tone categories in loanwords could have arisen. Hmong-Mien could have borrowed the Chinese words with the (perhaps already decomposing) segmental material which eventually gave rise to tones intact. Then if both developed tones in the exactly same way, out of the laryngeal features of word-final consonants as tonogenesis swept across the area—started by an unknown trigger language, not necessarily by Chinese—then we would get these regular correspondences. This is the most likely explanation of what happened.

The following table contains a summary of the four types of contact described above:

(8)

1. Donor atonal, Borrower tonal	2. Donor and Borrower both tonal
• assignment to a common tone (interpretation of stress/intonation as tone): English > Hmong, Malay > Thai, English > Thai • assignment to a rare tone: English > Cantonese, Lahu	• phonetic mapping: Modern Chinese > HM, Lao > Tai dialects • surface convergence: Thai > Mien • assignment to a rare tone: Chinese, Zhuang > Bunu
3. Donor tonal, Borrower atonal	4. Donor and Borrower both atonal
• words borrowed without tones: Chinese > English • individual words borrowed with tones: N. Thai > T'in (numerals) • assignment to a distinctive pitch profile: N. Thai > T'in (other borrowings) • systems of independent origin, surface convergence: Chinese, Li > Tsat	• the languages both stay atonal • the languages both become tonal

3.2.2 Sinospheric languages developed tones together

One striking piece of evidence in support of the hypothesis that Chinese itself was atonal when it lent Hmong-Mien the words in the first set above is the fact that an even older stratum of Chinese loans shows regular tonal correspondences between the two families. Most scholars believe that Old Chinese was toneless (Mei 1970, Baxter 1992, Sagart 1999). How else, then, can the correspondences in this oldest stratum of loanwords be explained other than to say that tones developed in the two languages in a parallel fashion after the words were borrowed? And how else can the identical pattern in the later stratum of loanwords be explained other than to say that tones developed in the two languages families after these words were borrowed as well?

(9)		*MC*	*OC*	*PHM*	*Tone category in both*
廩	*lǐn* 'barn/granary'	limX	*(pə.)r[ə]mʔ	*rɛmX	B2
鐵	*tiě* 'iron'	thet	*l̥ˤik	*hrɛk^{D} (PM)	D1
力	*lì* 'strength'	lik	*kə.rək	*-rək	D2

Although Chinese contact is probably to be credited with making Hmong-Mien and other languages of the south monosyllabic word and thus 'tone prone' (Matisoff 1973:89), it is not clear that Chinese acquired tones before other languages in the area. Since the later merger of initials and compensatory tone split are understood as happening in a wave across the whole area, it is plausible that the initial wave of tonogenesis was an areal phenomenon as well. If we accept the proposal that Hmong-Mien borrowed its earliest Chinese loanwords before tones developed, it will no longer be necessary to answer the ill-conceived question of how these languages might have borrowed a tone system and historical tone categories. Furthermore, to the extent that these early loans can be dated on the basis of the segmental correspondences, so, too, can the onset of tonogenesis be dated in both Chinese and the languages that have been so profoundly influenced by Chinese.

Future discussions of tonogenesis in Chinese should no longer rest exclusively on internal evidence, but should also make use of the external loanword evidence in attempting to date the onset of this important typological change.

3.3 Phonation-to-tone development[56]

In the secondary tone split conditioned by the voicing of initial consonants, pitch contrasts were not realized immediately, as in the classic scenario sketched in the introduction, but rather through an intermediate stage of contrasting phonation type. An originally voiced initial consonant left its trace as a lower register tone through the intermediate stage of breathiness on the vowel: ba > pa̤ > pà.[57] The extensive cross-linguistic support and phonetic justification for this stage of development is laid out clearly in Thurgood 2002 and will not be repeated here. In this section, facts about patterns of pitch level, remnant phonation contrasts, vowel quality, and complex contour tones across the modern-day Hmong-Mien languages are presented, facts which can only be explained by positing an even earlier phonation contrast that arose upon loss of final laryngeal distinctions in the syllable coda. The idea that the loss of final glottal stop and final -h should give rise to creakiness and breathiness is not controversial (Thurgood 2002:341–342). But in order to account for observed patterns in the modern-day languages, we must assume that there was a period when these two sets of phonation contrasts *co-existed*—the more recent arising from the breakdown of consonant contrasts at the front of the syllable, and the older arising from the loss of consonant contrasts at the back of the syllable. In other words, the new phonation contrast that arose upon loss of the initial consonant voicing contrast was 'layered' upon a pre-existing phonation contrast that arose upon loss of final laryngeal distinctions. The three traditional tonal categories (A, B, C) were thus initially phonation categories—modal, creaky, and breathy voice respectively—and these ancient 'tones' were still primarily differentiated by phonation when the voiceless and voiced initial obstruents merged, yielding a 'tone' split (A1/A2, etc.) which was originally the introduction of a second layer of phonation contrasts.

The historical development would have thus passed through four stages. The first stage would have preceded the development of either phonation or tone:

	A	B	C
Stage I	CV(N)	CV(N)ʔ	CV(N)h

The second stage would have involved the loss of final laryngeal consonants and the consequent development of phonation contrasts:

	A	B	C
Stage II	CV(N)	C̰V(N)	C̤V(N)

[56] An earlier version of the material in this section was given at the 1999 Meeting of the Linguistics Society of America in Los Angeles (Ratliff 1999a). I am indebted to Haiyong Liu for his help in the early stages of research on this topic.

[57] Breathy phonation is often represented as a voiced aspirated initial in the Chinese literature (pfia). The breathiness may in fact have been more prominent at the beginning of the syllable in the early stages of the tone split.

The third stage would correspond to a time when these phonation contrasts had not become fully tonal but when the 'tone' split (first, and in part to this day, a phonation split), triggered by the merger of initial voiced and voiceless obstruents, was beginning. Thus, one layer of phonation contrasts—modal vs. breathy—came to overlap another layer of phonation contrasts—modal vs. creaky vs. breathy:

	A	B	C
Stage III	CV(N)	C̰V(N)	C̤V(N)
	ChV(N)	Ch̰V(N)	Ch̤V(N)

Finally, the fourth stage represents the present day, a time in which most of the Hmong-Mien languages have tones characterized by modal voice and pitch contrasts alone. Note, however, that across the family breathy voice is occasionally found in reflexes of category A2, is still common in reflexes of category B2, and is even more common than modal voice in reflexes of category C2.

	A	B	C
Stage IV	CV(N)	CV(N)	CV(N)
	CV(N) ~ C̤V(N)	CV(N) ~ C̤V(N) ~ C̰V(N)	C̤V(N) ~ CV(N)

The evidence for this hypothesis consists of four wholly independent facts about Hmong-Mien, to be discussed in sections 3.3.1 through 3.3.4 below, which can only be explained by positing a phonation contrast that arose upon loss of the coda consonants, and that still existed at the time of the tone split.

3.3.1 Distribution of low-pitch tones in modern languages

The first pattern which suggests the historical scenario described above is that relative pitch height values as a reflection of ancient initial consonant voicing are more or less preserved in categories B and C across the family, whereas in category A they are not. That is, reflexes of the "lower register" tones B2 and C2 are actually lower in pitch than their upper register counterparts B1 and C1. On the other hand, in category A it is impossible to predict, for any given Hmong-Mien language dialect, whether the A2 reflex will be lower or higher in pitch than its A1 counterpart. A survey was made of 70 Hmong-Mien "tongues" (some different languages, some different dialects of the same language which differ tonally): 22 languages/dialects of the Wang and Mao 1995 reconstruction (omitting Fuyuan, which did not undergo a tone split), 43 languages/dialects from Chang 1972 (omitting dialects represented in Wang and Mao 1995 and dialects that did not undergo a tone split), Green Mong (Andruski and Ratliff 2000), two dialects of Pa-Hng (Niederer 1997), Houei Sai Mun (Strecker 1990), and Biao Min (Solnit 1985). In 81% of the 70 dialects (57 locations), B2 is lower than B1; and in 89% of the 70 dialects (62 locations), C2 is lower than C1. This demonstrates the expected depressor effect of the initial voiced consonant. On the other hand, in only 50% of the 70 dialects (exactly 35

locations) is A2 lower in pitch than A1.[58] Many B2 and C2 tones are also breathy (C2 slightly more often than B2), which may help explain why the pitch of these tones are comparatively low.

But the question arises: why is this not also true of category A2, since ancient voiced initials in words of this category must also have yielded breathiness on the following vowel, presumably leading to a depressed pitch? The difference between categories B and C on the one hand, and category A on the other can be explained if we assume that the phonation type of syllables differed at the time of the tone split. Then the breathiness from the original voiced initial, supported by the non-modal quality of the rest of the syllable, whether breathy or creaky, could have kept the pitch of B2 and C2 depressed. In A2, however, initial-induced breathiness on a modal voice syllable was not as easily sustained.

3.3.2 Residual phonation contrasts in modern languages

The manifestation of breathy voice in tone categories derived from original voiced initials in modern languages differs according to tone category: (1) it is rare in category A2, and when present weak: for example, Yaoli Bunu (Wang and Mao 1995:35); (2) it is common in category C2, and when present robust: for example, Yanghao Hmu (Wang and Mao 1995:32) and Green Mong (Andruski and Ratliff 2000); (3) B2 words across the family show an intermediate status between these two in both frequency and robustness. The relative rarity of breathiness in tone A2 can be attributed to the dominance of unmarked modal phonation in the A syllable. The common occurrence of breathiness in tone C2 can easily be attributed to breathiness from the back of the syllable meeting breathiness from the front of the syllable. Tone B2, on the other hand, presents a mixed picture, with two marked phonation types meeting mid-syllable. Across the family, words with tone B2 are less often breathy than C2 words, but more often breathy than A2 words, which were originally characterized by modal voice. An implicational universal thus holds with respect to the manifestation of breathy voice in syllables with originally voiced initials: if A2 is breathy in a particular dialect, then so are B2 and C2; if B2 is breathy in a particular dialect, then so is C2.[59]

In addition, there appears to be retention of category B creakiness in modern varieties of Mun. The best evidence for this comes from Houei Sai Mun, where categories B1 and B2 (53ʔ) are glottalized at the end: "Tone B appears to have had a short period of glottalization at the very end of the syllable. […] Tone B corresponds to Middle Chinese shang sheng or rising tone, which has been reconstructed as ending in a glottal stop (see especially Mei 1970)" (Strecker 1990:29). However, tone C2 in this dialect is also glottalized, and moreover is glottalized throughout the syllable. Strecker tentatively

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[58] An analysis of pitch by tone register across tone categories in Niederer 1998 (239–243) did not yield such dramatic results, but it is interesting that for the five languages of her sample that have *level* tones for both upper and lower register in category A, the lower register is always higher than the upper register. This may be accidental, however.

[59] Tone mergers can obscure this pattern. Iu Mien of Chiang Rai shows breathiness only in category B2, but C2 and D2 have merged into a 11 tone (Downer 1961, Purnell, forthcoming) which obscures the original distribution of phonation types. Similarly, Biao Min shows breathiness only in category A2, but B2, C2, and D2 have merged into a 42ʔ tone (Solnit 1985:182). Since A2 is breathy, it is likely that both B2 and C2 were breathy originally, and the merged tone terminated by a glottal stop reflects the detritus of final stop consonants. Shimen (A-Hmao) is a true exception, where breathiness is found in A2, B2, and D2, but not in C2.

attributes C2 glottalization to a final glottal stop in category C as well, but that could hardly be true—B and C must have corresponded to different syllable types. More likely, since C2 and D2 (22) have merged, the tenseness is due to properties of the D2 syllable, which ended in a final stop consonant (D1 is also glottalized).

In Lanjin Mun (Wang and Mao 1995:37), category C2 words are 31 and tense; however, since this tone falls to the bottom of the pitch range, this may be attributed to the natural breakup of creakiness that accompanies falling below one's normal pitch range ("vocal fry"). But the category B2 tone is not a low tone, and it is "especially tense" (44).[60]

3.3.3 Breathy voice and vowel quality splits

Additional support for this hypothesis from vowel quality evidence comes from only one language to date. In Zongdi, a Mashan dialect of West Hmongic, there is regular vowel quality raising, a lax-glottis effect (Matisoff 1973:76), in categories B2 and C2 but *not* in A2, which is characterized by weaker breathiness cross-linguistically. Zongdi tones B2 and C2 are no longer characterized by breathiness; the vowel quality contrast is all that remains of the earlier phonation type contrast.

(10)

	Tones B2 and C2	*Other tones*
Rime 3[61]	e	æ
Rimes 5, 15, 16	əa	a
Rimes 6, 12, 17	o	ɔ
Rime 7	u	o
Rime 8	u	ou
Rime 13	ɯ	ə
Rimes 18, 19	ein	æin
Rimes 29, 30	əŋ	aŋ

(Wang 1994:4–5; Wang and Mao 1995:34)

3.3.4 Complex contour tones as phonation 'gear switches'

Complex contour tones occur almost exclusively in reflexes of category B.[62] This can be understood as a 'gear-switching' adjustment required in the mid-syllable transition from modal to creaky (B1) and from breathy to creaky (B2). These modern-day B-tone words with complex contours are no longer characterized by creaky voice; the complex contour is all that remains of the earlier phonation type contrast.

Examples of complex contour tones from Wang and Mao 1995 (WM), Niederer 1998 (N), and Chang 1972 (C) appear below:

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[60] Niederer (1998:249–250) reports that Iu Mien as spoken in Thailand has creaky voice in category C2, and only in category C2. However, Downer (1961:532) describes tone C2 as 'very low, falling slightly, with some weak glottal closure ('creakiness')'. Given the fall from 'very low', the creakiness here can also be attributed to vocal fry.

[61] Rime numbers refer to the categories in this book (and in Wang 1994).

[62] Exceptions include the following: A1 Jiongnai (Wang and Mao 1995 #13) 343, A1/C1/D1 Kim Di Mun (Niederer 1998 #37) 354, A1 Houei Sai Mun (Strecker 1990) 534, D1 Houei Sai Mun (Strecker 1990) 4232, C2 Xinzhai (Niederer 1998 #24) 343.

(11)

B1 complex tones (< modal-creaky)	*B2 complex tones (< breathy-creaky)*
Zongdi Mang (WM #7) 232	Hsiao-miao-chai Miao (C #15) 213
Shuijungping Mang (N #23) 232	Tu-an Miao (C #51) 231
Biao Muen (N #32) 354	Qibainong Bunu (WM #10) 232, 454
Thailand/Laos Mien (N #33) 452	Meizhu Bunu (N #25) 231
Liangzi Mun (WM #19) 545	Dapingjiang Mien (N #30) 231
Lanjin Mun (WM #20) 434	Thailand/Lao Mien(N #33) 231
Hainan Mun (N #35) 354	Jiangdi Mien (WM #15) 231
Hwei-kang-pa Yao (C #67) 453	Xiangnan Mien (WM #16) 232
	Luoxiang Mien (WM #17) 213
	Changping Mien (WM #18) 121
	Hsing-an Yao (C #63) 231
	Hwei-kang-pa Yao (C #67) 231

The recent birth of a complex 213 tone in White Hmong—called the *-d* tone, after its written form—gives an illustration of how complex contours develop when a transition between two phonation types must be made. A small number of words with this tone arise from a phrase consisting of a locative with a 21ʔ contour and a demonstrative with a 33 tone (Ratliff 1992a:112–120, after Downer 1967:597–598).[63] The first syllable of the phrase is glottalized or creaky due to its being a reflex of category D2, a syllable with an original stop consonant in the coda, and the second syllable has modal phonation. There is no glottalization or creakiness in the resulting complex contour.

(12)

tɔ^{21ʔ}	nɔ^{33}	⇒	tɔ^{213}
there	DEM		over there

3.3.5 Summary

Below is a representation of Hmong-Mien tonogenesis under the 'layered phonation' hypothesis:

HM tone	*HM initial*	*Ancient voice quality*		*Modern voice quality*
A modal	voiceless	A1 modal-modal	>	modal
	voiced	A2 breathy-modal	>	modal (rare: breathy)
B creaky	voiceless	B1 modal-creaky	>	modal
	voiced	B2 breathy-creaky	>	modal or breathy (rare: tense)
C breathy	voiceless	C1 modal-breathy	>	modal
	voiced	C2 breathy-breathy	>	breathy or modal

As has been demonstrated above, evidence for this hypothesis comes from a striking asymmetry in the pitch heights of category A2 words versus B2 and C2 words in a sample

[63] Other words with a demonstrative (or vocative) force have acquired the 213 tone by analogy with this set of words.

of 70 Hmong-Mien dialects. In most dialects, B2 and C2 are lower than B1 and C1, demonstrating the expected depressor effect of the original voiced initial, whereas in only 35/70 dialects is A2 lower in pitch than A1. It is clear that breathiness from the original voiced initial, supported by the non-modal quality of the rest of the syllable, has kept the pitch of B2 and C2 depressed. In A2, however, the effect of initial-induced breathiness on a modal voice syllable was comparatively transitory. Predictably, in A2 syllables breathiness is rare and when present weak (Yaoli), in C2 syllables it is common and when present robust (Yanghao). B2 and C2 words show regular vowel quality raising in the Zongdi dialect, a lax-glottis effect. Some Mun dialects have been characterized as still having tense or creaky voice qualities in words of category B2 (Houei Sai Mun, Lanjin Mun). Finally, double contour tones (rising-falling or falling-rising) are common only in the B category across dialects, reflecting an old phonation gear switch to creaky mid-syllable.

Layered phonation contrasts are typical of Mon-Khmer languages, a few of which have only recently started to develop tones (see especially the Pearic language Chong—Diffloth 1989, L-Thongkum 1991), but have never been demonstrated for Chinese, Tai-Kadai, or Hmong-Mien, the three families of Asia which are today fully tonal and which share similar modern tonal systems and tonal histories. The reconstruction of layered phonation systems for one of these families may thus have relevance for all three.

4 *Morphology*

4.1 Introduction

Other than compounding, there is little internal word structure in present-day Hmong-Mien languages, and there is only fragmentary evidence for complex words at the Proto Hmong-Mien level. However, given the fact that languages rarely remain constant with regard to morphological type throughout the course of their history, one expects to find, and can find, evidence of both new morphological developments and relics of old morphological contrasts in these "isolating" languages.

Among the morphological processes that can be found in all languages of the Sinosphere are both single compounding of two morphemes and double compounding of four morphemes (of the ABAC or ABCB type, where repeated elements are either identical or closely related semantically). Reduplication is also widespread. Within Hmongic, reflexes of the reciprocal prefix *sjɨ$^{A\text{-}D}$ (2.28/2) in some languages harmonize with the verb root in tone and/or rime (Wang 1994:43, Ratliff 1992a:40–42).[64] In White Hmong, compounds phonologically linked by tone sandhi can signal subtle meaning differences (Ratliff 1992a:58–62). Vowel ablaut in classifiers reflecting characteristics of the associated noun has been reported for the Hmongic language A-Hmao (Wang 1972), and meaningful patterns in consonant, vowel, and tone alternations in expressives (ideophones) have been reported for White Hmong (Ratliff 1986b, 1992a:136–163). Such morpheme-internal alternations as these are undoubtedly to be found in other languages of the family; further language-specific work on these topics is eagerly anticipated.

This chapter, however, given the historical focus of the book, will be devoted to four cases of what appear to be traces of ancient morphology. The first two—nominal prefixes (section 4.2) and prenasalization (section 4.3)—are still quite robust in present-day languages, even though their original functions are difficult to recover. The second two (section 4.4)—initial voicing contrasts suggesting grammatical prefixes and derivation by tone change—are only preserved in a few pairs of words in present-day languages. Under the standard theory that differences in major tone category arose from final laryngeal contrasts (see chapter 3), derivation by tone change might be pushed back even further to the reconstruction of old suffixes.

[64] The Hmongic reciprocal was probably borrowed from Chinese 廝 (MC sje 'mutually' > Man. *sī* 'with each other'); see Sagart 1999:70 on its use as a reciprocal in Chinese.

4.2 Nominal prefixes[65]

Nouns in Hmong-Mien are frequently characterized by the presence of initial minor syllables; more occur in some languages and fewer in others. Some of these initial syllables are clearly prefixes today, while others look like they might have been prefixes in the past. Reconstruction of these syllables is especially difficult since they function more like initial syllable word formatives than meaningful prefixes in the usual sense, and there is little consistency in the association of a particular prefix with a particular word or semantic class of words from language to language. This section considers the extent to which these initial syllables/prefixes can be reconstructed.

4.2.1 Hmong-Mien nominal prefixes today

Prefix form and function

In form, Hmong-Mien nominal prefixes are open syllables with single consonant onsets (or zero onsets) and monophthong nuclei. The consonants and vowels which appear in these prefixes represent only a subset of the full set of contrastive phonemes in any language. They are unstressed, and in some languages they may harmonize with the nouns to which they are attached (Chen 1993).

The function of nominal prefixes in Hmong-Mien is weakly classifying. Within individual languages it is usually possible to group nouns into classes like "human", "animal", and "tool", etc., and to show that each class more commonly takes one prefix than another, although in some languages this system has weakened to the point where only one prefix remains as a marker of noun class membership. The function of these prefixes immediately raises the question of the status of this system in comparison with the status of the numeral classifier system, since the two systems both serve the function of noun classification. In chapter 6, evidence is presented to show that the prefix system is the native system of noun classification in the family, and the classifier system has been borrowed from Chinese.

Age of the prefix system and distribution of prefixes within the family

In addition to evidence from phonological and semantic degradation, Chen (1993) has given two further arguments from modern-day usage in support of the claim that prefixes are quite old in the family: (1) prefixes are used more often among older speakers than younger speakers, and (2) prefixed forms occur more often in frozen expressions as opposed to innovative combinations of words. Furthermore, the distribution of prefixes within the family points to the same conclusion (see below). Finally, evidence from independent lines of research suggesting a Proto Hmong-Mien disyllabic template indirectly supports a claim of the antiquity of these prefixes (see section 4.2.4 below).

Within the Hmong-Mien family, there is a correlation between the intensity of contact with Chinese and the health of the prefix system. It is well-known that in both culture and language, the Mienic side of the family shows more Chinese contact effects than the Hmongic side of the family. For example, unlike the Hmong, Mien people are Taoist, and use the Chinese language in rituals and songs and Chinese characters in religious writings

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[65] This section is adapted from Ratliff 2006.

(Lemoine 1982, Purnell 1991, 1998). They use Chinese numerals alongside native numerals (Purnell, forthcoming). It is also common to find a split between Hmongic and Mienic cognate sets, where the Hmongic side has retained the native word, and the Mienic side has replaced the native word with a Chinese borrowing (see chapter 7, section 1).

In line with this difference in intensity of contact with Chinese, the Hmongic languages have retained more native nominal prefixes than the Mienic languages. Impressionistically, it also appears that the Hmongic languages that display the most archaic features generally, like Pa-Hng, are also richer in prefixes (see section 4.2.2 below). On the Mienic side, Mien, Mun, and Biao Min show fewer prefixes than the most conservative Mienic language, Zao Min (northwest Guangdong province), which differs enough from the others to constitute a separate sub-branch. Mao, Meng, and Zheng (1982) note that the regular use of the prefix /ʔa-/ on nouns in Zao Min contrasts with languages of the other two sub-branches wherein only a few nouns optionally bear prefixes. In an early field report, the Zao Min language was described as "isolated" and the "one least influenced by the neighboring Chinese dialects" (Wong 1939:425). There thus appears to be a correlation between isolation and prefix retention.

Yet despite the apparent antiquity of the prefix system, in some languages of the family nominal prefixes are abundantly evident in the present day, and even appear in ethnic autonyms, such as A-Hmao, Qo-Xiong, Pa-Hng, Pu-nu, etc. This is in part due to the fact that class nouns provide an on-going source of new prefixes.

4.2.2 Cross-linguistic prefix variation

Nominal prefixes derive from class nouns as the first member of noun-noun compounds. This process is independent and on-going in different languages of the family. For example, cognates of White Hmong *kab* /ka^{1}/ in the Eastern and Western branches of Hmongic mean 'insect' and are also used as class nouns in insect name compounds (*kab laug sab* /ka^{1} lau^{6} ʂa^{1}/ 'spider', *kab tuas* /ka^{1} tua$^{4/7}$/ 'caterpillar', *kab nqos vias* /ka^{1} ɴqɔ$^{4/7}$ via$^{4/7}$/ 'locust', etc.) but are beginning to generalize, now serving as the first element in compounds denoting shrimp, crabs, and moles. And *tub* /tu^{1}/ 'son/boy' in White Hmong is now used as a class noun in compounds that refer to male humans, whether young or not: for example, *tub-rog* /tu^{1} rɔ^{6}/ 'soldier' (literally,'boy-war').

An older, but still recoverable example of the same historical process can be seen in the common White Hmong class noun or prefix *pob* /pɔ^{1}/, which serves as the first element in compounds that denote lumpy things, such as stones, knots, tree stumps, and earlobes. *Pob* is a loanword from Chinese 包 (Man. *bāo*) 'to wrap; a bundle, lump', and was probably originally borrowed as a noun. Although this word can be used as a classifier as well, which is *not* typical of prefixes, (*ib pob mov* /i^{1} pɔ^{1} mɔ^{3}/ 'one CLF-clumps rice'), it is more typically used as a prefix attached to a noun which requires yet another word as its classifier (*ib lub pob-zeb* /i^{1} lu^{1} pɔ^{1} ʐe^{1}/ 'one CLF-bulky things clump-stone'). See chapter 6, section 6.2.4 on *pob* in connection with a discussion of language contact and the two Hmong-Mien nominal classification systems.

From the variation that is evident in the mapping of particular prefixes to particular nouns across the family, it would seem that what the languages share, and all that can be reconstructed as a likely characteristic of the protolanguage, is a "prefixing predilection," rather than the combination of particular morphemes. As can be seen from a glance at the

forms for ‘tail’, ‘stone’ and ‘nose’ given below, individual cognate nouns across the family may take a variety of different prefixes.

(1) ‘tail’ (Hmong-Mien *tɥeiX (2.1/8) > White Hmong *ko-tw* /ko^{5} tɯ^{5}/)
Yanghao (Hmu) qɑ^{1}-tɑ^{3}
Jiwei (Qo Xiong) pi^{3}-tɤ^{3}
Meizhu (Bunu) ku^{1}-tau^{3}
Baiyun (Pa-Hng) tɛ^{2}-tɛ^{3}

‘stone’ (Hmong-Mien *-ʔrəu (2.55/3) > White Hmong *pob-zeb* /pɔ^{1} ʐe^{1}/)
Yanghao (Hmu) po^{3}-ɣi^{1}
Jiwei (Qo Xiong) qo^{1}-ʐɯ^{1}
Shimen (A-Hmao) a^{1}-və^{1}
Meizhu (Bunu) fa^{3}-ɣe^{1}
Baiyun (Pa-Hng) ʔã$^{[33]}$-jo^{1}

‘nose’ (Hmong-Mien *mbruiH (1.51/8) > White Hmong *qhov-ntswg* /qhɔ^{3} ɳʈʃɯ^{6}/)
Yanghao (Hmu) po^{3}-nɛ^{6}
Jiwei (Qo Xiong) pɑ$^{3/7}$-mpɤ^{6}
Xuyong (Hmong) tsɻ^{5}-ɳdzu^{6}
Shimen (A-Hmao) a^{1}-mpy^{6}
Meizhu (Bunu) pi^{3}-ntsau^{6}

Even at very low levels the variation is no less remarkable, as is seen in the following cognate noun pairs from two dialects of the Hmongic language Pa-Hng. These sets were chosen to demonstrate variation; several other nouns have the same prefix in both dialects (all forms are from Niederer 1997).

(2)	*Baiyun (Guangxi, China)*	*Tan Trinh (North Vietnam)*
thigh	tɤ$^{[33]}$-pe^{1}	ko$^{[31ʔ]}$-pe^{1}
tooth	ʔæ̃$^{[35]}$-mĩ^{3}	tɤ$^{[33]}$-mĩ^{3}
finger	ka$^{[35]}$-wa^{3}	tɤ$^{[33]}$-tɔ̃$^{[33]}$-ŋgwa^{3}
pig	n̥$^{[21ʔ]}$-me^{5}	ta$^{[33]}$-mbe^{5}
fish	n̥$^{[21ʔ]}$-mjo^{4}	ta$^{[33]}$-mbjo^{4}
hawk	ʔn̥$^{[21ʔ]}$-kwɤ^{3}	ta$^{[33]}$-kwɤ^{3}
insect	n̥$^{[21ʔ]}$-kɛ^{1}	ta$^{[33]}$-kɤ^{1}
bedbug	n̥$^{[21ʔ]}$-pɪ^{5}	ta$^{[33]}$-pɪ^{5}
ant	ka$^{[21ʔ]}$-m̥je^{3}	ta$^{[33]}$-ka$^{[31ʔ]}$-phe^{3}
tree	tɛ$^{[33]}$-pja^{1}	ʔa$^{[33]}$-pa^{1}
flower	ʔæ̃$^{[35]}$-pɛ^{2}	tɕo$^{[31ʔ]}$-pɤ^{2}
chisel	tɛ$^{[33]}$-tɕĩ^{4}	pa$^{[31ʔ]}$-tɕĩ^{4}
balance	tɛ$^{[33]}$-ŋ̊ɔ̃^{5}	pa$^{[31ʔ]}$-ŋ̊ɔ^{5}
crossbow	ka$^{[21ʔ]}$-ñ̥ẽ^{3}	pa$^{[33]}$-ñ̥ĩ^{3}

Two observations are in order. First, in the Tan Trinh words for ‘finger’ and ‘ant’ there are both “inner” and “outer” prefixes, which gives witness to the active nature of the prefixation process. Second, certain prefixes can be associated with certain semantic

classes in each of these dialects, but as soon as one rises to the language level, it is difficult to assign classifying functions to individual prefixes. Obviously, the difficulty in assigning a general meaning to these prefixes at the Proto Hmongic and Proto Hmong-Mien level is accordingly much greater.

A partial explanation for the considerable cross-linguistic variation exemplified here is the fact of a certain amount of prefix variation *within* each particular language and dialect, more for some nouns and less for others.[66] The generalization of one prefix over the others would then follow as an independent development in each language, yielding the confusing picture presented above. For example, in White Hmong, the noun *ntsej* 'ear' can occur with the following prefixes, depending on which aspect of the ear is in focus: *pob-ntsej* (lump-ear) 'the outer ear', *qhov-ntsej* (hole-ear) 'the ear canal', *taub-ntsej* (squash-ear) 'the earlobe'.

We may be able to reconstruct aspects of certain individual prefixes. Strecker (1989) has reconstructed a Proto Hmongic *qou^{A} prefix, and it is true that the most frequently encountered prefix has either a voiceless velar or uvular onset (or a glottal stop onset) and the A tone. But it is difficult to associate a core meaning with this prefix, since it is found on nouns that refer to animates, plants, inanimates, and abstractions alike across the Hmongic family. And it is clearly not possible to reconstruct particular prefix-noun combinations. What does seem possible is the reconstruction of a prefix-root template for the class of nouns as a whole.

4.2.3 Prefix pre-emption

In work on the reconstruction, it was not unusual to find one or more forms in a set of cognates which corresponded perfectly in terms of rime and tone, but which had aberrant initials. In the case of nouns, this is most easily explained as a process of "prefix pre-emption" (Matisoff 1997), wherein the vowel of the prefix collapsed and the initial of the prefix displaced the initial consonant of the root. Given the commonplace variation in prefixes evident in the data above, however, it would be foolish to reconstruct one particular prefix at the level of the protolanguage. Examples include the following three words, each of which has only one form with an odd initial:

(3) 'bone' (Hmong-Mien *tshuŋX (3.2/28) > White Hmong *txha* /tsha^{5}/)

Yanghao (Hmu)	shoŋ^{3}	Jinxiu (Mien)	buŋ^{3}
Jiwei (Qo Xiong)	soŋ^{3}	Liangzi (Mun)	tθuŋ^{3}
Xianjin (Hmong)	tshaŋ^{5}	Sunjiang (Biao Min)	sjɔŋ^{3}
Fuyuan (Hmjo)	tshoŋ^{B}		

Although Peiros (1998:158) proposes a Mon-Khmer connection for this word, neither lookalikes in that family nor a straightforward story of phonological development within Hmong-Mien can account for the labial initial for 'bone' in Mien. It seems to be a good example of prefix pre-emption, especially given the widespread use of prefixes with body-part terms.

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[66] I am grateful to David Mortensen for reminding me of this fact.

(4) ‘mane’ (Hmongic *tsɯŋ^{A} 3.1/30 > White Hmong *txoob* /tsɔŋ^{1}/; Mienic *ʔdzɔŋ^{A} 3.4/29)

Yanghao (Hmu)	soŋ^{1}	Jiangdi (Mien)	dzoŋ^{1}
Jiwei (Qo Xiong)	tsoŋ^{3}	Liangzi (Mun)	dɔŋ^{1}
Xianjin (Hmong)	tsoŋ^{1}	Sunjiang (Biao Min)	tsɔŋ^{1}
Fuyuan (Hmjo)	pjoŋ^{A}		

This is clearly a loanword from Chinese **騣** ‘mane’ (MC tsuwng > Man. *zōng*). Given the differences in rime correspondence, it seems to have been borrowed independently into the two branches of the family. There is no evidence of a labial initial in either branch or in the Chinese source, however: the Fuyuan form with a labial initial thus shows evidence of prefix pre-emption.

(5.) ‘eagle/hawk’ (Hmong-Mien *qlaŋX (6.31/24) > White Hmong *dav* /ʔda^{3}/)

Yanghao (Hmu)	l̥aŋ^{3}	Jiangdi (Mien)	tɕaːŋ^{3}
Jiwei (Qo Xiong)	qwei^{3}	Liangzi (Mun)	tlaŋ^{3}
Xianjin (Hmong)	tl̥aŋ^{3}	Dongshan (Biao Min)	klaŋ^{3}
Gaopo (Hmong)	ploŋ^{3}		

The word for ‘eagle/hawk’ is not unique to Hmong-Mien; it is a well-known word shared by almost all of the languages of Southeast Asia, and everywhere the word has a dorsal-liquid cluster. The Gaopo form with a labial initial thus shows evidence of prefix pre-emption.

The complications of one particularly puzzling initial correspondence may also be attributed to the same process. The word for ‘hand’ is the sole member of its initial correspondence “set” in the reconstructions of Wang (1994) and Wang and Mao (1995). These words are uncontroversially cognate because the rime and tone correspondences are perfectly regular. The forms from the nine Hmongic languages he lists, with the addition of Pa-Hng (from Niederer 1997) and Ho Ne (or She, from Wang and Mao 1995) are given below (the cognate Mienic forms are not listed here because they all begin with /p-/):

(6) ‘hand’ (Hmong-Mien *-bɔuX (1.3/3) > White Hmong *tes* /te^{4}/)

Yanghao (Hmu)	pi^{4}	Zhongdi (Mang)	ʂe^{4}
Jiwei (Qo Xiong)	tɯ^{4}	Fuyuan (Hmjo)	wei^{B}
Xianjin (Hmong)	te^{4}	Fengxiang (Hmong)	pi^{4}
Shimen (A-Hmao)	di^{4}	Baiyun (Pa-Hng)	tɛ-pɯ^{4}
Qingyan (Hmong)	tsa^{4}	Duozhu (Ho Ne)	khwa^{4}
Gaopo (Hmong)	kæ^{4}		

On the basis of the Mienic evidence, we can be confident that the original word for ‘hand’ had a labial initial (in this case, because of the low-register tone, a *b-). The Pa-Hng form shows that the absorption of different prefixes by various languages of the Hmongic family is most likely to blame for the difficulty of reconstructing an initial for this word which reflects the phonetic values of the initials in all the daughter languages (Wang first reconstructed *bʐ- and later *bdz- for Proto Hmongic, and *bwdz- for Proto Hmong-Mien, an approach which involves ignoring some initials and simply combining others). Significantly, body-part words are among those nouns in Hmong-Mien which appear with

a prefix most consistently (Chen 1993). But in White Hmong while the isolation form for 'foot', *ko-taw* /ko^{5}-taɯ^{5}/, does have a prefix, the isolation form for 'hand', *tes* /te^{4}/, does not—not because it never did, but because it absorbed its prefix.

Although 'hand' is unique in the complexity of its initial correspondence, 'thorn' (Hmongic *-bo^{B} 1.3/7) is similar to 'hand' in that the set is basically labial, but shows a t- initial in Jiwei and a k- initial in Ho Ne:

(7)	*hand*	*thorn*
Yanghao (Hmu)	pi^{4}	pə^{4}
Jiwei (Qo Xiong)	tɯ^{4}	to^{4}
Xianjin (Hmong)	te^{4}	po^{4}
Shimen (A-Hmao)	di^{4}	bo^{4I}
Qingyan (Hmong)	tsa^{4}	pau^{4}
Gaopo (Hmong)	kæ^{4}	pə^{4}
Zhongdi (Mang)	ʂe^{4}	pɯ^{4}
Fuyuan (Hmjo)	wei^{B}	vu^{B}
Fengxiang (Hmong)	pi^{4}	--
Baiyun (Pa-Hng)	tɛ-pɯ^{4}	--
Duozhu (Ho Ne)	khwa^{4}	khɯ^{4}

Prefix pre-emption can explain how (if not why) these irregular correspondences developed: sporadically, different prefixes were absorbed in different languages. When prefix pre-emption has occurred, we should not expect the resulting set of initials for one etymon to be duplicated exactly in the set for any other etymon.

4.2.4 Nominal prefixes and Proto Hmong-Mien disyllabism

Despite the arguments for the antiquity of the prefix-noun construction, there may still remain a question about how old the prefix-noun structure actually is in the Hmong-Mien family, and whether or not it is appropriate to reconstruct a nominal prefix position for the protolanguage. It could be argued that this is a fairly shallow development, the result of a new turn toward compounding, supported by the fact that prefixes do not appear consistently in all of the languages of the family. But most hypotheses about the reconstruction of a particular construction are informed by a body of evidence that supports a general picture of the typological cast of the language at an earlier stage. Independent lines of evidence all suggest that Proto Hmong-Mien was not as isolating as most Hmong-Mien languages are today. The reconstruction of prefix variation within disyllabic nouns in the family is part of a larger picture of early disyllabism across syntactic categories that is supported by research on a number of different fronts. One pattern that suggests disyllabism is discussed in section 4.4 below: the reconstruction of old prefixes based on tonal doublets. Two other patterns are briefly addressed here: (1) the correspondence of words with stop-liquid clusters to Pa-Hng disyllabic words, and (2) the resemblance of certain words with unusual initial correspondences to disyllabic words in other language families.

The interpretation of stop-liquid consonant clusters

First, as mentioned in the introduction to the reconstruction (chapter 2, section 2.1.2.3) the reconstruction of stop–liquid clusters is difficult in that there appear to be more correspondences than there are protolanguage stop–liquid cluster candidates (Ratliff 1995, Solnit 1996, Neiderer 1999). Solnit presents a good methodological discussion of the different logically possible solutions for the problematic dorsal/liquid cluster correspondences in Hmong-Mien: they include increasing the number of liquids, increasing the number of dorsals, or increasing the word-shape inventory to include disyllabics. The solution chosen here (and in Ratliff 1995, 1999b) is that there were both "tight" and "loose" consonant clusters in the protolanguage, that is, structures both of the shape CCV and C-CV, the second not being clearly distinguishable from a disyllabic structure. This accounts for the sporadic appearance of the first C in the "loose" cluster correspondences, and fits in well with the areal "syllable-and-a-half" template best exemplified by Mon-Khmer and Tibeto-Burman languages. Sagart has proposed a similar picture in his discussion of Old Chinese word-families, where he distinguishes bare roots both from roots with "fused" prefixes and from roots with "loosely attached" prefixes: "I assume that each prefix ... existed in these two shapes, fused and loosely attached, and that the three types of forms existed side by side in Old Chinese, perhaps as stylistic or social variants" (Sagart 1999:15).

In Hmong-Mien, even words which seem to belong to the "tight cluster" (CCV) category can show signs of loosening, which suggests the same type of variation described by Sagart for Chinese may be at work in this family. For example, Niederer (2004:140) has presented the following three disyllabic forms from Pa-Hng, shown here in contrast to monosyllabic forms in other languages of the family:

(8) 'dog' (Hmong-Mien *qluwX (6.31/3) > White Hmong *dev* /ʔde^{3}/)

Jiwei (Qo Xiong)	qwɯ^{3}	Baiyun (Pa-Hng)	ta^{1}-ljɔ̃^{7}
Xianjin (Hmong)	t̥le^{3}	Tan Trinh (Pa-Hng)	ka/ta^{1}-ljɔ̃^{7}
Fuyuan (Hmjo)	qlei^{B}		
Liangzi (Mun)	klu^{3}		

'maggot' (Hmongic *klaŋ^{C} (5.31/24) > White Hmong *kas* /ka^{7}/)

Yanghao (Hmu)	kaŋ^{5}	Baiyun (Pa-Hng)	kɛ^{1}-lɔ̃^{7}
Shimen (A-Hmao)	kaɯ^{7}	Tan Trinh (Pa-Hng)	kɤ^{1}-lɔ̃^{7}

(see cognate /klaŋ^{1}/ 'insect' in Dongshan Biao Min)

'round' (Hmong-Mien *ɢlun 6.33/27)[67]

Yanghao (Hmu)	l̥en^{2}	Baiyun (Pa-Hng)	ka^{1}-lɔ̃^{4}
Xuyong (Hmong)	khun^{2}	Tan Trinh (Pa-Hng)	ka^{1}-lɔ̃^{4}
Dongshan (Biao Min)	klin^{2}		

About these words Niederer (2004:140–141) writes, "The above cited examples…are not complete enough to allow us to speak of regular correspondences. Yet they remain highly suggestive, urging us to look beyond monosyllabism, as the Pa-Hng forms point to ancient disyllabics in many cases". It should be noted that whether the discussion of nominal

[67] In the case of 'round', given the possibility that the root is a loanword from Chinese 輪 'wheel; round' (MC lwin > Man. *lún*), it is hard to know if Pa-Hng shows a loosened cluster or a prefix.

prefixes should be linked to the issue of consonant clusters, be they loose or tight, is not clear. Since all syntactic categories are represented in these correspondence sets, consonant cluster variation may be a reflection of something different, and more general.

Connections to external disyllabics

Finally, there is evidence for early disyllabism in the nature of particular correspondences which can best be understood by comparing these words to structurally and semantically similar words in other language families of the area. For example, there is the well-known example of the Hmong-Mien word for 'bird' *m-nɔk (2.9/29), which bears an uncanny resemblance to Proto Malayo-Polynesian *manuk (ACD). A 'loose' cluster is suggested for Proto Hmong-Mien by the distribution of the initials: the initial in cognates from all languages is a coronal nasal—the root nasal—with the exception of a labial in Pa-Hng /mo^{6}/ (see a discussion of this word in the context of an exchange on Pa-Hng (or Na-e) archaisms and the place of this language in the family in Benedict 1986 and Strecker 1987a,b).

Another example of a connection between an unusual Hmong-Mien correspondence and a word from another family is 'centipede'—*khluw^{D} (5.32/9) in Hmongic and *səp^{D} (2.13/7) in Mienic. The sum of these two reconstructions resembles Mon-Khmer *k-əl-ʔeːp 'centipede' (Diffloth 1994).

Of course, it is not clear whether these borrowed (or possibly inherited) disyllabic words were ever disyllabic within Hmong-Mien. In the case of 'centipede', at first glance it looks like Hmongic borrowed the first syllable while Mienic borrowed the second syllable. But tone 7 in Hmongic, attested by the Yanghao (Hmu) form /khu^{7}/, regularly derives from a syllable with a final -p or -t. The tone correspondence with Mienic, where final -p is preserved, suggests that the whole disyllabic word was borrowed by Proto Hmong-Mien. The survival of elements from both syllables in both of these cases, and in a number of others, leaves open the possibility that the words were originally disyllabic in Hmong-Mien and reduced to monosyllabic forms at a later date.

In conclusion, it seems quite reasonable to think that classifying prefixes served the function of noun classification in the protolanguage much as they do now in certain conservative languages of the family. Cross-linguistic prefix variation, however, makes it impossible to reconstruct particular prefixes and associate them with particular nouns. The variation we see in the modern languages was probably characteristic of the protolanguage as well. It seems most prudent to reconstruct a classifying prefix position for nouns, without specifying its contents, against an evolving picture of ancient disyllabism.

4.3 Prenasalization

Prenasalization, a hallmark feature of the phonological inventories of most Hmongic languages, suggests an element fused to the onset, and thus either (1) a relic of an ancient disyllabic word (see discussion above), or (2) a remnant of old morphology. However, with regard to the first possibility, although it is reasonable to think a prenasalized obstruent might have been formed as a result of the collapse of the first light syllable of a disyllabic word (with the nasal either in the onset or, more likely, in the coda of the first syllable), there is simply no evidence to show that this occurred. Disyllabic forms with a nasal in the onset of the first syllable have been reconstructed here only in the cases where the first nasal replaces the nasal in the onset of the second syllable: *m-nɔk 'bird' (2.9/29),

*n-mɛj ‘to have’ (1.9/11), *n-mɯŋ(X) ‘to go’ (1.9/30). And with regard to the second possibility, prenasalization plays a morphological role only in a few Chinese loanword pairs in Hmong-Mien. In the native component of the lexicon, no family-wide contrasts pointing to an ancient morphological role for prenasalization have yet been found.

The Chinese loanwords that seem to show a morphological role for this nasal element are nonetheless quite interesting. In the two pairs below, the semantic relationship between the members of each pair is quite different, and the two do not seem to signal the presence of the same morpheme:

(9) 下 HM *GaX ‘low/short’ (5-6.3/4) vs.
H *ɴGa^{B} (<*NGaX) ‘to descend’ (5-6.6/4); M *ɣa^{C} ‘to descend’ (5.13/4)
清 HM *tshjin̥əŋ ‘new’ (3.17/18) vs. HM *ntshjin̥əŋ ‘clear’ (3.20/18)

Downer (1973:14–16) also discusses two pairs of Mien words, both pairs of Chinese loanwords, in which he sees a morphological role for prenasalization reflected in the voiced initial of the second member of each pair:

(10) 拆 /tshɛʔ^{7}/ ‘to pull down, pull apart’ vs. /dzɛʔ^{7}/ ‘to be cracked’
開 /khɔi^{1}/ ‘to open (TR)’ (< M *khu̥ɔi^{A}, 5.2/11) vs. /gɔi^{1}/ ‘to open (INTR)’

He writes “Although Miao cognates for these pairs of words do not apparently exist, it seems likely that we must suppose a prefix (pre-nasalization) in these cases, with PY [Proto Yao] *khɔ̄i, *tshék as active verbs, *nkhɔ̄i, *ntshék as intransitive verbs; and that since these are found in words of Chinese origin, we must assume that this prefixation was still an active process at the time of borrowing” (16). He thus attributes the prenasalized form to a native derivation process within Hmong-Mien, although as we will see below, there is no independent evidence to support the reconstruction of a native Hmong-Mien nasal prefix that is preserved as prenasalization. It seems more likely that this morphological contrast was borrowed from Chinese along with the words themselves.

Elsewhere, prenasalization seems to be phonological. For example, in the White Hmong pair

(11) *kaum* [kau^{8}] ‘ten’ vs. *nees nkaum* [nɛŋ$^{4/7}$ ŋkau^{8}] ‘twenty’

the nasal element in *nkaum* is a close juncture carry-over from the nasal coda of the preceding word *nees*. A similar effect can be seen in the White Hmong *xeeb-ntxwv* ‘descendants’ borrowed from Chinese 孫子 Man. *sūnzi* ‘grandson’ (the second morpheme is the Chinese nominalizer). Additional evidence comes from loanword phonology: for example, White Hmong speakers use prenasalized stops when borrowing words from languages with voiced stops (thus White Hmong *npias* ‘beer’ from French *bière* via Lao /bìa/). In some languages, it may thus be appropriate to analyze prenasalized obstruents as simply fully voiced obstruents, or lenis as opposed to fortis obstruents.

The correspondences involving prenasalization in words that can be reconstructed to Proto Hmong-Mien fall into one of two main types. The most common pattern is for prenasalized stop and affricate initials on the Hmongic side to correspond to voiced stop and affricate initials on the Mienic side. For example:

	Yanghao	*Jiwei*	*WHmong*	*Mien*	*Hmong-Mien*
cogongrass	qɛ^{1}	--	ɴqɛŋ^{1}	gaːn^{1}	*NKan (5-6.4/19)
salt	ɕi^{3}	ntɕɯ^{3}	ɳʈʂe^{3}	dau^{3}	*ntsjəuX (3.19/3)
fish	zɛ^{4}	mzɻu^{4}	ɳʈʂe^{4}	bjau^{4}	*mbrəuX (1.51/3)
to dream	pu^{5}	mpei^{5}	mpau^{5}	bei^{5}	*mpeiH (1.4/12)
to fear/be afraid	ɕhi^{1}	ɳʈɕha^{5}	ɳʈʂhai^{5}	ʤa^{5}	*ntshjeH (3.20/10)
name	pi^{5}	mpu^{5}	mpe^{5}	bu^{5}	*mpɔuH (1.4/3)
put on/wear (cap)	tə^{5}	ntu^{5}	ntɔŋ^{5}	doŋ^{5}	*ntɔŋH (2.4/29)

In these sets, representative of many more, no semantically related pairs with and without prenasalization have been found, nor is there any semantic coherence to the prenasalized words. It is also clear from the short list of examples above that words with prenasalization do not fall into any particular word class.

In a second minor pattern, voiceless stop and affricate initials on the Hmongic side correspond to voiced stop and affricate initials on the Mienic side. For example:

	Yanghao	*Jiwei*	*WHmong*	*Mien*	*Hmong-Mien*
deep	to^{1}	to^{1}	tɔ^{1}	do^{1}	*N-tu̯o (2.1/7)
earth	ta^{1}	tɯ^{1}	te^{1}	dau^{1}	*N-təu (2.1/3)
excrement	qa^{3}	qɑ^{3}	qua^{3}	dai^{3}	*N-KəjX (5-6.1/15)
half (of day)	taŋ^{4}	--	ta^{4}	daːm^{2}	*N-dam(X) (2.3/24)
porcupine	ɕen^{6}	ʨi^{6}	tʂau^{6}	dei^{6}	*N-dzjeiH (3.18/12)
wing	ta^{7}	tei^{7}	ti^{7}	daːt^{7}	*N-tat (2.1/4)

No trace of ancient morphology can be read from this pattern either: again, there are no related pairs with and without this loosely-adjoined voicing element, here taken to be a nasal, nor does any semantic or grammatical feature link the words with pre-nasal elements.

4.4 Traces of ancient affixes[68]

Apart from the nominal prefixes, traces of old affixal morphology in Hmong-Mien are not realized as affixes in the modern day, nor are they usually realized in onset consonants. Instead, they are deeply embedded, and are realized as tones on the nucleus of the word.

$$\begin{array}{c} \text{T} \\ \text{free morpheme} \rightarrow \text{prefix} \rightarrow \text{(C)C(C)V(C)} \leftarrow \text{suffix} \leftarrow \text{free morpheme} \end{array}$$

As grammatical elements coalesce, they first cause the outer layer to morph, the consonants of the coda and onset. Since properties of these consonants play a role in tonogenesis and tone split (see chapter 3), these consonant feature contrasts may transfer to the nucleus as tonal contrasts during the process of tone development. The oldest morphological contrasts are therefore to be discovered in the first instance by identifying pairs of words that share both core meaning and segmental phonology, but differ in tone.

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[68] This section contains some material first presented in Ratliff 1986a and 1986c.

By undoing the effects of tonogenesis, one can theoretically take the tonal contrasts back to their segmental origins.

In practice, it is very difficult to reconstruct affixes in this way. To be confident that any particular Proto Hmong-Mien prefix (or suffix) has been identified, three requirements need to be met: (1) a number of word pairs must exemplify the relationship, (2) a consistent form/meaning relationship must hold across these pairs, and (3) evidence from both branches of the family must support the reconstruction. Given these requirements, it is not yet possible to identify a single bound morpheme of the protolanguage with confidence (other than the nominal prefixes discussed in section 4.3 that have been continually refreshed). However, tantalizing traces of early morphology exist. They will be described here, in the hope that more work will yield the kind of evidence—especially in quantity—that will make the reconstruction of one or two ancient bound morphemes possible.

4.4.1 Odd/even tonal pairs within the same tone category

The tones in the doublets presented in this section can be traced back to a single historical tone that split in two upon the neutralization of an original voicing contrast in onset obstruents into an upper register tone from a voiceless onset, and a lower register tone from a voiced onset (see chapter 3). Working backward, it is most reasonable to assume that this voicing contrast in the initial consonant was caused by either the voicing or de-voicing influence of an ancient prefix.

Odd/even tone doublets with different meanings

The first two pairs suggest the existence of either a causative voiceless prefix or a stative voiced prefix—or both:

(12) *təjH ‘to kill’ (2.1/15) vs. *dəjH ‘to die’ (2.3/15)

This doublet shows a striking similarity to the Austronesian pair *pa-aCay ‘to kill’ and *ma-aCay ‘to die’(ACD). In fact, the correspondence between the two reconstructed forms is so strong that it requires a historical explanation, either contact or common inheritance; it cannot be due to chance.[69]

(13) *ʔ-mɛj (> *ʔmu̯ɛ^{A}) ‘to grasp’ (1.7/11) vs. *n-mɛj ‘to have’ (1.9/11)

The relationship between ‘to grasp’, with a voiceless initial, and ‘to have’ with a voiced initial, parallels that of ‘to kill’ and ‘to die’ above. A voiceless causative prefix could account for the former, and a voiced stative prefix for the latter. Unlike other words reconstructed with *m- (onset 1.9), ‘to have’ shows an initial /n-/ in Mun, leading to the reconstruction of a pre-nasal element in this word.[70] These two words appear to share a root with *mɛj-X ‘to buy’ (1.9/11) and *mɛj-H ‘to sell’ (1.9/11); the four constitute a set of verbs of possession. ‘To buy’ and ‘to sell’ would have had suffixes which gave rise to tones B and C respectively, or ‘to sell’ would have been derived from ‘to buy’ by C-tone derivation (see section 4.4.2 below). Since these words are the familiar words for ‘to buy’

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[69] With respect to ‘to kill’ and ‘to die‘ the connection between Austronesian and Hmong-Mien is stronger than that between Austronesian and Tai-Kadai: Proto Tai has *tɑːi ‘to die’ (with a voiceless rather than a voiced initial), and no match for ‘to kill’, whereas Hmong-Mien has both members of the pair, with traces of both prefixes.

[70] ‘To go’ patterns the same way, and is also reconstructed with a pre-initial nasal: *n-mɯŋ(X) (1.9/30).

and ‘to sell’ in Chinese, it has always been reasonably assumed that these were loanwords from Chinese. But the relationship of these words to ‘to take’ and ‘to have’ in Hmong-Mien complicates the picture of a straightforward loan of the single pair ‘to buy’ and ‘to sell’ from Chinese. If one accepts that the four words are built on the same root, we will need more evidence to show which of the following is correct: (1) Hmong-Mien borrowed all four from Chinese (and two were subsequently lost in Chinese), (2) Chinese borrowed only two of the four from Hmong-Mien, or (3) ‘to buy’ and ‘to sell’ are in both language families as a consequence of common inheritance.

The third pair of words illustrates a part-whole relationship: the only example of its type to be found so far:

(14) *cæw^{B} ‘body/trunk’ (4.1/3) vs. *ɲæw^{B} ‘leg/branch’ (4.3/3)

Of course, on the basis of one example, it is not possible to draw any conclusions about the nature of the prefix that caused the voicing change in one or the other member of this pair.

Doublets that involved a voiceless/voiced contrast also existed in Old Chinese (Norman 1988:85). Given the high number of Chinese loanwords in Hmong-Mien, it is therefore not surprising to see two loanword doublets in Hmongic that illustrate the same relationship:

(15) 炙 *ci^{C} ‘to bake/toast’ (4.1/1) vs. *ɲi^{C} ‘to burn/be alight’ (4.3/1)

(16) 著 *trɔ^{C} ‘to put on/wear (shoes)’ (2.46/6) vs. *drɔ^{C} ‘to hit target’ (2.48/6)

The second loanword doublet appears odd until one looks at the range of meanings represented by the Chinese character 著 and their sources: (1) Old Chinese *trak > Middle Chinese trjak ‘to place, put, apply; wear’ > Man. *zhuó*, and (2) Old Chinese *[d]rak > Middle Chinese drjak ‘to touch, be attached’ > Man. *zhuó*. The phonology provides a good match as well: tone C in Hmongic derives either from tone C in the protolanguage, or from a syllable ending in final *-k.

Finally, doublets of the same kind have been found within White Hmong, both involving splits of the A-tone. The first is a native word and the second is borrowed from Chinese:

(17) *hlob* /hl̥ɔ^{1}/ ‘to become big (to grow)’
vs. *loj* /lɔ^{2}/ ‘to be big’ (HM *hljo ‘big’, 2.41.1/7)

(18) 正 *ncab* /nca^{1}/ ‘to straighten’
vs. *ncaj* /nca^{2}/ ‘to be straight’ (H *ɲcia̱ŋ^{A} ‘straight’, 4.4/26)

Both roots are attested widely with upper-register tones; see the reconstructions given above for the meanings ‘big’ and ‘straight’. The words with lower-register tones in White Hmong now have these basic meanings, and the words with upper-register tones now have an active (achievement or causative) sense. It is difficult to know what to make of pairs that appear in only one language: one could say that internal reconstruction points to the same analysis, although one would ideally like to see support from related languages.[71] It is not clear whether these pairs preserve an old contrast lost elsewhere, or represent a local innovation.

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[71] Xianjin Hmong, a close relative of White Hmong, also has /n̥tɕaŋ^{2}/ ‘straight’ with tone 2, but there is no evidence that Xianjin has the causative verb in tone 1 as well.

Odd/even tone doublets with the same meaning

Kun Chang (1972:563) noted that a few words display both upper and lower register tone reflexes, which he also found suggestive of ancient prefixes that either devoiced one member or the pair or voiced the other. In the cases he presents, the original meaning contrasts represented by the reconstructed voicing contrasts can only be tentatively proposed (he does not attempt to do this) since the meanings of the words in all dialects are now the same.[72] But given the pairs 'kill'/'die' and 'to grasp'/'to have' above, two of the four pairs could have involved the same hypothetical voiceless active/causative (or voiced stative) prefix. For what is given here as *(h)naŋX 'to put on/wear (clothes)' (2.8/24), with the "h" in parentheses to indicate that there are both tone 3 and tone 4 reflexes of the same original tone category (see chapter 3), we could reconstruct the following contrast:

(19) *hnaŋX 'to dress' vs. *naŋX 'to wear' < *s-naŋX 'to dress' vs. *naŋX 'to wear'

Similarly, Chang notes that certain East Hmongic dialects have lower register tones for what is here reconstructed as *p̶u̶ŋ^{A} 'to fall' (1.1/30). Just as for 'to dress' (high register, causative) vs. 'to wear' (low register, stative), we might instead reconstruct the following pair of words:

(20) *pu̶ŋ^{A} 'to fell' vs. *bu̶ŋ^{A} 'to fall' < *s-bu̶ŋ^{A} 'to fell' vs. *bu̶ŋ^{A} 'to fall'

In the case of 'to put on/wear,' tones 3 and 4 are fairly equally represented in modern dialects. In the case of 'to fall', however, far more dialects have tone 1, the reflex of the voiceless initial, which runs counter to expectations under this hypothesis. Since the meaning of the word is clearly intransitive today, if this were right we would expect 'to fall' to have more reflexes with tone 2, from the voiced initial.

Another possible pair can be extracted from tone 5 and tone 6 reflexes of Hmong-Mien *(S-)mrụ̂ɔŋH (1.54/29) 'to listen':

(21) M *s-mrụ̂əŋ^{C} 'to listen' vs. H *mrɔŋ^{C} 'to hear'

It should be emphasized that the reconstruction of meanings in examples 8–10 is highly speculative, and is based solely on the upper-register/lower-register tone split in these words, coupled with an analogical extension of the semantic contrast between members of pairs with an attested difference in meaning.

4.4.2 Derivation by tone change

Another pattern of tonal contrasts evidenced by some intriguing pairs of words involves the C-tone (from syllables ending in a final -h < *-s) and either the A-tone or the B-tone. C-tone derivation has been described as a morphological process for Chinese (Downer 1959) and for Tai (Li 1970, Manomaivibool 1980); given the position of Hmong-Mien in the Sinosphere, it is reasonable to think these pairs of words reflect the same process. It is not at all clear, however, whether the C-tone word was derived from a word of another tone through a true tonal derivation process, or whether this took place earlier, before the syllable-final consonants that gave rise to the tones disappeared, in which case these pairs of words would reflect an old *-s suffix.

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[72] The two words not discussed here are nouns: 'field' (White Hmong *loo* 'crops') and 'tongue'. Although a prefix might account for the difference between the tone 5 and 6 reflexes listed for 'field', it is not easy to imagine what it could have been; the single tone 7 form for the tone 8 word 'tongue' Chang reports could simply be an irregularity.

Again, the evidence for this morphological process is slight, and the function of the derivation process is not clear. Three pairs of words suggest that verbs were derived from nouns in this manner (the second member of each pair belongs to the C-tone category, marked here by the capital letter H; see chapter 3):

(22) Hmongic *grəŋ^{A} (< HM *grəun) ‘animal fat/oil’ (5.48/21) vs. *grəunH ‘to be fat’ (5.48/21)

(23) *pjɻəuX ‘fruit’ (1.16/1) vs. Hmongic *pjiC (< HM *pjɻəuH) ‘to bear fruit’ (1.16/1)

(24) *douX ‘fire’ (2.3/13) vs. *douH ‘to explode’ (2.3/13)73

Note that in the case of ‘animal fat/oil’ > ‘to be fat’, the derivative ‘to be fat’ is now more widespread: the noun is attested only in Hmongic languages. In the case of ‘fruit’ > ‘to bear fruit’ the situation is the opposite: the noun is widespread, and the derivative ‘to bear fruit’ is only attested in Hmongic.

A fourth pair suggests that a noun with a narrowed sense could be derived from another noun in the same way (the derivative is attested only in Hmongic):

(25) *klæŋ ‘insect/worm’ (5.31/24) vs. Hmongic *klaŋC (< HM *klæŋH) ‘maggot’ (5.31/24)

A final pair involves verbs that can be reconstructed to Proto Hmongic:

(26) Hmongic *ʔɲəŋA ‘to be at/live (4.7/21) vs. Hmongic *jəŋC ‘to be’ (4.12/21)

This pair is not an obvious one, because in Hmongic ‘to be at/live’ has a voiceless palatal nasal onset and ‘to be’ has a voiced palatal glide onset. However, there is variation between palatal nasal and palatal glide onsets within both sets of forms (see not only the related M *ʔjəm^{A} ‘to be at/live (4.10/21), but also the White Hmong triplet *nyob* ‘to be at/live’, *nyog* ‘to be right/suitable’, *yog* ‘to be/yes’). Additionally, the semantic relationship between these two words is not clear: although both words can be subsumed under our notion of ‘to be’, the C-tone word is not an obvious semantic derivative of the A-tone word.

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[73] Another word may belong to the family represented by the third pair: Hmongic *tow^{D} ‘to ignite/light’ (2.1/13), from a hypothesized Hmong-Mien form *touC (where “C” represents some stop consonant). The causative prefix discussed in section 4.4 could have devoiced the initial *d- of the root. The tone, however, indicates that the word ended in either a *-p or a *-t, which would have to be explained.

5 *Numerals, personal pronouns, and demonstratives*

5.1 Introduction

The reconstruction of closed classes of words—such as numerals, pronouns, and demonstratives—is of interest to historical linguists because these words are usually more resistant to borrowing, and can hence give better quality evidence about distant relationships. To the extent that particular words in these classes are borrowed, however, they may also contribute to a more refined understanding of what should count as 'core vocabulary', if such a universal set of concepts can be identified. In Hmong-Mien, the class of numerals consists primarily of borrowed words, whereas the pronoun and demonstrative classes consist primarily of native words.

In addition to admitting borrowed elements, these three 'closed' classes in Hmong-Mien are slightly 'open' to one other, being conceptually and thus historically related: for example, in several Hmongic languages the numeral 'two' is built into the dual pronoun ('you-two' > 2DU), in some West Hmongic languages the 2SG pronoun is the base of the 'near-hearer' demonstrative ('you' > 'that near you'), and in White Hmong a demonstrative is the base of the 3PL pronoun ('there' > 'those over there').

5.2 Numerals

The following are the oldest reconstructable forms of the numerals 1-10, 100, and 1,000 in Hmong-Mien. Source language (or language group) and proto-forms are given for borrowed words. The Chinese forms are from on-going work by Baxter and Sagart (2009) and the Tibeto-Burman forms are from Matisoff 2003 ([j] has been substituted for [y] in this source to allow for easier comparison).

	HM	*Source form*	*Source*	*Onset/Rime*
one	*ʔɨ	*ʔi[t]	Old Chinese (一)	7.1/2
two	*ʔu̯i	(none)	(none)	7.1/14
three	*pjɔu	(none)	(none)	1.16/3
four	*plei	*-ləy	Tibeto-Burman	1.31/12
five	*pra	*-ŋja	Tibeto-Burman	1.46/4
six	*kruk	*k-ruk	Tibeto-Burman	5.46/9
seven	*ŋ̊ji^{C} (M)	*ni	Tibeto-Burman	5.24/1
	*djuŋH (HM)			2.18/28
eight	*jat	*-rjat	Tibeto-Burman	4.12/4
nine	*N-ɟuə	*gəw	Tibeto-Burman	4.3/16

ten	*gjo̯ɛp	*g(j)ip *[g][i]p	Tibeto-Burman or Old Chinese (十)	5.18/9
hundred	*pæk	pæk	Middle Chinese (百)	1.1/5
thousand	*tshi̯en	tshen	Middle Chinese (千)	3.2/20

Native numerals

It has been known for a long time that most lower numerals in Hmong-Mien were borrowed from Tibeto-Burman (Downer 1971; Benedict 1987a; Dempsey 1995; Peiros 1998; Mortensen 2002), while the higher numerals in Hmong-Mien were borrowed from Chinese. The native core of the system is therefore very small, consisting of only 'two' and 'three', and perhaps 'one'.

> *Two*: *ʔu̯i. This is a stable word in Hmong-Mien, although it presents a unique set of rime reflexes which are presented as a 'correspondence' both here and in Wang 1994 (rime 14), for want of a place to put it. Initial /v-/ in Pa Hng and some Mienic languages appears to be a fortition of *ʔu̯- .
>
> *Three*: *pjɔu. On the Hmongic side of the family 'three' is identical to the 1PL pronoun in many languages (see section 5.3), leading one to hypothesize that these words are cognate, which is especially sensible in a language with dual pronouns ('I', 'we-two', 'we-three or more'). Furthermore, the meaning of the Mienic 1PL pronoun is not strictly 'we', but may mean more generally 'group', and as such can enter into second- and third-person plural compounds (e.g., Mien /mwei^{2}-bwo^{1}/ 'thou-group', which is certainly not 'thou-we'). But the Hmongic reflexes suggest a medial *-j- in 'three', and the voiced initials in Mien and Mun suggest a pre-nasal element in Mienic in 'we'—'three' is reconstructed here as *pjɔu and 'we' as *N-pɔu.[74] Although these words may ultimately be related, it is not possible to demonstrate the relationship at this time.[75]

Tibeto-Burman numerals > Hmong-Mien

As evident from the table above, 'four' (with a pre-initial *p-), 'six', Mienic 'seven', 'eight', and 'ten' are very similar to the reconstructed Tibeto-Burman forms, and pose no particular difficulty.

> *Nine*: *N-ɟuə. 'Nine' is somewhat difficult, though: Benedict (1987a:14) reconstructs Hmong-Mien *gj[ou]^{A}, which he derives from Tibeto-Burman *d-gəw via a 'Donor-Miao-Yao' Tibeto-Burman form *-g(j)u. This seems reasonable, but there are two problems related to the initial /d-/ in Mien and Mun forms for 'nine': its place of articulation (explained if this is a case of prefix pre-emption, see chapter 4, section 2.3), and the fact that Mienic /d-/ is voiced but not matched by prenasalization in Hmongic, which suggests a pre-initial *N- (see chapter 2, section 1). However, there is no direct evidence that the pre-initial that causes exceptional voicing in Mienic is a nasal: a voiced stop would also work. This detail aside, the Hmong-Mien word is certainly the same as the Tibeto-Burman word and its Chinese cognate 九 (OC *(tə.)[k](ʷ)uʔ > MC kjuwX > Man. *jiǔ*).

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[74] Another problem is that the Mun of Liangzi Township, Hekou Yao A. C., Yunnan also shows a higher vowel in 'we' /bu^{1}/ than in 'three' /po^{1}/ (Wang and Mao 1995:113).

[75] Hmong-Mien 'three' also shows a resemblance to the Mon-Khmer word for 'three': *piʔ (Shorto #98).

The two other numerals in the run from 'four' to 'ten'—'five' and the Hmongic forms for 'seven'—are more difficult to explain as Tibeto-Burman borrowings. However, given a certain degree of resemblance, Benedict (1987a:13-14) reasonably sought to link these two to Tibeto-Burman as well, given the likelihood that the Hmong-Mien people borrowed these numerals as a set. His explanations of how the Hmong-Mien words may be linked to Tibeto-Burman through his hypothetical Tibeto-Burman 'Donor-Miao-Yao' language are presented below. Although the larger picture is plausible, the details of these explanations are less persuasive.

Five: *pra. Benedict (1987a:13) writes that Tibeto-Burman *r-ŋa (Matisoff 2003 *ŋa) alternated with *b-ŋa. In the 'Donor-Miao-Yao' Tibeto-Burman language, instead of replacing the *r-, the labial was added to it. The *-r- then pre-empted the root-initial nasal (as it has done in attested cases), giving *b-ra. The prefix then devoiced to *pra. Mortensen (2002:4–5) notes that despite the problems with the initial consonants, the rime correspondence is the same as that between Tibeto-Burman *s-la and Hmong-Mien *hlaH 'moon/month' (see chapter 7).

Seven: Hmong-Mien *djuŋH; Mienic *ŋji^{C}. Benedict (1987a:13-14) writes that the source of both Mienic 'seven' and Hmongic 'seven' was Tibeto-Burman *snis (the reconstructed root *ni from Matisoff 2003 is given in the table above). To get from Tibeto-Burman *snis to his 'Donor Miao-Yao' form *zńis, Benedict appeals to a voicing rule and an areal tendency to palatalization. But to get from this intermediary form *zńis, through his reconstructed Hmong-Mien form *zń[ia]^{C} to something like the Proto Hmong-Mien *djuŋH of the present reconstruction is quite difficult. Benedict posits a secondary nasalization of the final, and then loss of the initial nasal—but we expect Hmong-Mien initial nasals to persist in Hmongic. Furthermore, his rime reconstruction cannot account for the rounded vowels in Hmongic: e.g. Mhu /ɕoŋ^{6}/, Qo Xiong /tɕoŋ^{6}/, Ho Ne /tshuŋ^{6}/, etc. (rime set 28). One other word shows this kind of irregular correspondence: Hmong-Mien *hɲu̯əŋH 'year' (4.8/29) and Hmongic *ɕɔŋ^{C} 'year' (4.13/29, White Hmong *xyoo*), both probably from Tibeto-Burman *s-niŋ 'year' (Mortensen 2002). The most likely explanation for these difficult correspondences is that different forms of the same word were borrowed separately in the two branches of the family, perhaps from two different immediate sources; we should therefore not attempt to reconstruct a single form for Hmong-Mien.

Chinese numerals > Hmong-Mien

One: *ʔi̱. Although Mien has native words for 'two' and 'three', it has clearly borrowed Chinese 一 'one': the form is /jet^{8}/, compare Old Chinese *ʔi[t] > Middle Chinese ʔjit > Mandarin *yī*. The tone 1 forms elsewhere in the family, however, were taken to be native Hmong-Mien by Benedict (1975, 1987a), or rather, native Hmong-Mien as a sub-family of Austro-Tai.

'One' is a special numeral, in that it is often shows connections to word classes and concepts beyond the numeral set. Matisoff (1997:17) writes 'Its high frequency encourages morphophonemic irregularity, and idiosyncratic fusions with other morphemes. (Compare the multiple English allofams [members of the same word family] which all descend somehow from PIE **oino*-: one, an, once, only, alone, anon, onion, eleven…).' It is not necessarily the case that natural semantic developments should lead to the reinterpretation of the old word for 'one' and the need to borrow a new word to take its place (this has not happened in English), but it is possible to imagine that this might have happened at an older stage in Hmong-Mien as it later

happened in Mien, and that for this purpose bilingual speakers might have easily adopted the Chinese word well known to them. 'One' in Hmong-Mien also shows phonological irregularity across the family, unlike the phonologically more stable 'two' and 'three',[76] and the nature of the irregularity also supports the hypothesis that Chinese and Hmong-Mien share this word[77]. The conservative languages Pa-Hng and Qo Xiong (North Hmongic), along with Jiongnai, have forms with tone B instead of the tone A which appears more widely. Recall from chapter 3 that tone B derives from syllables with a final glottal stop in the protolanguage. Given that Pa-Hng and Qo Xiong occasionally conserve features from the back of the syllable, including distinct vowel reflexes for Hmong-Mien closed syllables (see chapter 2, section 1), these B-tone forms may reflect the final *-t of Chinese. If the final glottal stop of tone B syllables derived from an original voiceless stop, we would expect—if any Hmongic languages showed tone B reflexes for a Chinese loanword with a final stop—that they would be precisely these languages.

Ten: *gjuɛp. The source of Hmong-Mien 'ten' is either Tibeto-Burman *g(j)ip or Old Chinese *[g][i]p (> MC dzyip > Man. *shí*). Situated as it is between the lower numerals 'four' through 'nine', which are borrowed from Tibeto-Burman, and the higher numerals, which are from borrowed from Chinese, it is hard to determine which of the two is the source.

Hundred: *pæk. The source of the Chinese borrowing for 'hundred' was Middle Chinese (c. 500 CE) rather than Old Chinese (c. 1500 BCE), given Baxter and Sagart's reconstruction of a medial *-r- for Old Chinese. There is no trace of a medial -r- among the Hmong-Mien reflexes of this borrowed word, and the Hmong-Mien and Middle Chinese rimes correspond well.

Thousand: *tshi̯en. A Middle Chinese source tshen (> Man. *qiān*) poses no difficulty.

In addition to these individual Chinese borrowings which serve as primary numerals in Hmong-Mien, many languages retain a secondary set of numerals 'two' through 'nine' borrowed from Chinese for use in compound forms (either the '10 + 1'-type combinations for eleven through nineteen or the '1 x 10 (+ 1)'-type combinations for twenty and above). In Mien, two full sets of numerals, the native-plus-Tibeto-Burman set and the Chinese set, are used side-by-side in a systematic way (see Purnell 1968, forthcoming), whereas in White Hmong, all that is left of the parallel Chinese system is the word for 'two' which appears in the combinations involving 'twenty': 'ten' is /kau^{8}/ and 'twenty' is /nɛŋ^{4}-ŋkau^{8}/[78] where /nɛŋ^{4}/ derives from Chinese 二 (MC nyijH > Man. *èr*).[79] Of particular

[76] The low back vowel reflex in Qo Xiong /ɑ^{3}/ is not a problem: it is a regular development from the intermediate Proto Hmongic form *ʔɨ in that language.

[77] The possibility also exists that this word—along with other basic vocabulary such as 'tongue' and 'to drink/smoke'—gives evidence of a very deep genetic relationship between Sino-Tibetan and Hmong-Mien (see chapter 6, section 6.2.2).

[78] See chapter 4, section 3 for a discussion of the sources of prenasalization, which in the case of /ŋkau^{8}/ is clearly phonological and not morphological.

[79] The fact that /nɛŋ^{4}/ is a borrowed Chinese word for 'two' is not evident from this form alone: the Hmong word has a final nasal, and the tones do not correspond. But this form corresponds to other 'second set' words for 'two' across the family, and these words in turn are part of larger sets that are clearly Chinese in origin.

interest is the Hmongic language Jiongnai, which uses both sets of numerals, and also exhibits very interesting allomorphy of numerals in compounds (Mao and Li 2001:299).

5.3 Personal pronouns[80]

Recent discussions of Southeast Asian pronoun systems (for example, Compton 1994) have characterized these systems as relatively 'open' compared to pronoun systems in other parts of the world, interacting with kinship terminology in complex ways and admitting borrowings from other languages. Different registers may call for different pronoun options for each person/number combination. Hmong-Mien pronoun systems do not seem to be characterized by this kind of fluidity, perhaps as a reflection of the more egalitarian nature of Hmong-Mien society. The relative stability of personal pronouns in Hmong-Mien makes all of the singular personal pronouns, as well as the first person plural pronoun, eligible for core vocabulary status and useful in reconstruction. The second and third person plural forms and the dual forms typically extend the singular forms in different ways in different languages, although there is a good candidate for an ancient Hmong-Mien second person plural pronoun as well.

The following table shows only the most widely attested (and presumably the oldest) root for each person/number combination. Three of the pronouns—1SG, 2SG and 2PL—show a striking resemblance to Tai-Kadai and Austronesian pronouns, a fact noted by Benedict (1975:202 ff.) in connection with his Austro-Tai hypothesis, which places Hmong-Mien, Tai-Kadai, and Austronesian in one super-family.

Competing roots are noted in the text that follows (the numbers indicate the onset and rime correspondence sets to which each reconstructed pronoun belongs):

	Singular	*Plural*
First	*kɛŋ^{B} (5.1/22) < *ku-	*N-pɔu (1.1/3)
Second	*mu̯ei (1.9/8)	*mi̯əu (1.9/1)
Third	*ni̯æn(X) (2.9/1)	--

First person singular: *kɛŋ^{B}. Three different roots for 'I/me' are found in Hmong-Mien, but Hmongic *kɛŋ^{B} (White Hmong *kuv*) is the oldest of the roots for 'I/me', since it appears on both sides of the family (in West Hmongic and in Biao Min /kəu^{3}/, /kɔ^{3}/). Since it is not possible to place these forms into any existing Hmong-Mien rime set, no Proto Hmong-Mien form is reconstructed. However, at the earliest stage it must have had an initial *k- and a back rounded vowel, since *k- in words before other vowels retracted to q- in Hmongic, and the *k- in this word did not retract (see chapter 2, section 1.2). A Hmong-Mien *ku-X deduced in this fashion resembles the Tai-Kadai 1SG pronoun as reconstructed for Proto Tai *k[əu]^{A} (Li 1977) and Proto Kra *ku^{A}

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[80] This section is based on a paper delivered at the 11th Annual Meeting of the Southeast Asian Linguistics Society, Bangkok (Ratliff 2001b). The sources of specific language forms in this section and the next are Office of Miao-Yao Research Lexicon 1987 (Yanghao, Jiwei, Xuyong, Shimen, Bunu, Mien, Biao Min); Niederer 2001a (Chongpaoyao=Peitungnuo); Niederer 2001b (Pa-Hng, Nau-Klau); Edmondson 2001 (Na-Meo); Wang, ed. 1985 (Yanghao, Jiwei, Xianjin=Dananshan), Heimbach 1979 (White Hmong), Lyman 1974 (Green Mong), Mao, Meng, and Zheng 1982 (Mien, Bunu, Lakkja), Mao and Meng 1986 (She=Ho-Ne); Shintani and Yang 1990 (Hainan Mun), Solnit 1982 (Biao Min), and Ostapirat 2000 (Gelao). Lakkja and Gelao are Tai-Kadai languages.

(Ostapirat 2000). It also resembles Proto Malayo-Polynesian *-ku 'my' (ACD).[81] Interestingly, a second Proto Kra root for 'I/me' based on Gelao forms is *ʔe^{A} (Ostapirat 2000), which bears a resemblance to another Hmong-Mien 1SG root, Proto Mienic *ʔja^{A} (4.10/4).

First person plural: *N-pɔu. See the section above on the numeral 'three' *pjɔu (White Hmong *peb*), which is similar to the first person plural pronoun *N-pɔu (White Hmong *peb*). The original meaning of this pronoun was something like 'group'—a meaning that may provide a bridge to 'three', since it is used in combination with singular pronouns to create plurals in a number of languages (see the sections on 2PL and 3PL below). The function of the pre-initial voicing element is unknown. It is reconstructed to account for Mien and Mun reflexes with the voiced initial /b-/ (see chapter 2, section 1.2.1 on pre-initials). The Biao Min 1PL pronoun /ʈa^{3}/ is different, and resembles Lakkja /ta^{2}/ and Gelao /ta^{1}/.

Second person singular: *mu̯ei. Reflexes of Hmong-Mien *mu̯ei appear in all branches except West Hmongic, and it therefore appears to be the original 2SG pronoun. It bears a resemblance to the second syllable of Proto Austronesian *Simu 'second person pronoun' > Proto Malayo-Polynesian *imu (ACD). Some West Hmongic languages use another root, *gʉ^{A} (5.3/8): Xianjin /kau^{2}/, White Hmong *koj* /kɔ^{2}/, Shimen /tɕy^{6}/, Bunu /kau^{2}/, Nau-klau /kɯ^{2}/.

Second person plural: *mi̯əu. The main root is *mi̯əu, which appears in Hainan Mun as well as in Hmongic (White Hmong *neej*). The similarity between the Hmong-Mien reconstructed 2SG and 2PL forms (*mu̯ei and *mi̯əu) recalls the use of *-mu in AN as a second person pronoun base, independent of number: the words that derive from AN *Simu are variously 2SG and 2PL while AN *kamu is 2PL (ACD). It may be that the two second person Hmong-Mien roots reflect one, number-neutral second person root in Hmong-Mien as well. Shimen and Mien use the 2SG pronoun with a suffix for 'group' to make a 2PL pronoun: Shimen /mi^{6}-tsao^{2}/ and Mien /muei^{2}(~mei^{2})-buo^{1}/.

Third person singular: *ni̯æn(X). Reflexes of Hmong-Mien *ni̯æn(X) (White Hmong *nws*) appear in all languages except Jiwei (North Hmongic), which has /wu^{3}/. This is somewhat surprising, since cross-linguistically 3SG is not a particularly stable pronoun (neither the Swadesh 100-word list nor the Matisoff 200-word list (1978:283–296) includes 3SG, but both include 1SG and 2SG). There are reflexes of *ni̯æn(X) in both tone 2 (in both Hmongic and Mienic) and tone 4 (widespread, but in Hmongic only), so the original tone is unclear. Wang and Mao (1995) propose that tone 2 is basic since it occurs in Hmongic languages that do not have tone sandhi, but 2 > 4 is not a typical tone change (see chapter 2, section 1.4), so 4 cannot be explained as a sandhi tone in other languages.

Third person plural. It is not possible to reconstruct a 3PL pronoun for Hmong-Mien, nor is it possible to reconstruct one for either Hmongic or Mienic separately. The following is the most widely shared root:

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[81] Another Hmongic 1SG pronoun *wɛŋ^{B} (1.12/22) is in the same rime set as *kɛŋ^{B} (5.1/22). The two appear in complementary distribution across Hmongic.

Yanghao (East Hmongic)	mɛ^{2}
Bunu (West Hmongic)	mu^{2}
Nau-klau (West Hmongic)	mbe^{2}
Chang-pao-yao (West Hmongic)	mu^{2}

It is somewhat confusing that in these languages the 2SG, the 2PL, and these 3PL forms all have an m- initial and the second tone. But they are not the same—compare Yanghao /moŋ^{2}/ 'you (sg.)' , /maŋ^{2}/ 'you (pl.)', /mɛ^{2}/ 'they'.[82]

It is more common, however, to see the 3PL expressed by a phrase which includes the 3SG, for example:

Yanghao (East Hmongic)	nen^{2}-to^{4} 's/he-those'
Xianjin (West Hmongic)	ɲi^{4}-mpau^{8} 's/he-many'
Pa-Hng (Hmongic)	nɯ^{4}-mɯ^{4} 's/he'-?'
Ho-ne (Hmongic)	nuŋ^{4}-ne^{2} 's/he-?'
Mien	nen^{2}-bwo^{1} 's/he-group'

In addition, some languages employ opaque phrases: Jiwei /tɕi^{3}-mji^{2}/, Na-Meo /mi^{1}-ʔa^{1}/, /na^{1}-se^{1}/ 'others'. Other languages adapt words with related meanings for 3PL pronouns: Green Hmong *puab* /pua^{1}/ < 'group', White Hmong *lawv* /laɯ^{3}/ < *lawm* /laɯ^{8}/ '(those) over there' (Ratliff 1992a:123-125).

Dual pronouns

Most dual pronouns involve the numeral 'two' itself. It is therefore not possible to reconstruct dual pronouns as separate items, although derivatives of 'two' and phrases involving 'two' in reference to pairs of people have no doubt been used in the family for a long time.

If there is a single form for the first person dual, it is either identical to the word for 'two', or it is a phonologically reduced form of 'two':[83]

Yanghao (East Hmongic)	ʔo^{1} 'two', 'we-two'
Xuyong (West Hmongic)	ʔɑo^{1} 'two' > ʔɑ^{1} 'we-two'
Bunu (West Hmongic)	ʔau^{1} 'two' > ʔa^{1} 'we-two'

The first person dual thus seems to be the most basic dual pronoun. If a phrase is used, it is on the order of Xuyong 'we-two-CLF$_{person}$', Mien 'we/group-two'.

Second and third person duals often have the segments of the corresponding plurals (occasionally reduced) with the tone of the numeral 'two' (tone 1), suggesting that these are blends, wherein each word of an original phrase ('you-two', 'they-two') has contributed an element.

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[82] However, there are instances of second and third person plural mergers in West Hmongic: Xuyong /ne~me^{4}/, Pei-tung-nuo /ma^{1}/. In these two cases, there is not enough information to say which category has been generalized, since the forms do not correspond exactly to the dominant root in either category.

[83] White Hmong *wb* /ʔɯ^{1}/ 'we-two' does not seem to be synchronically related to *ob* /ʔɔ^{1}/ 'two'. But there is variation in the pronunciation of the 1DU in the closely related Green Hmong according to Lyman (1979:29): ʔɯ^{1} ~ ʔi^{1} ~ ʔe^{1}.

Yanghao (East Hmongic)	maŋ^{1} ‘you-two’	maŋ^{2} ‘you (pl.)’
White Hmong (West Hmongic)	ne^{1} ‘you-two’	ne^{2} ‘you (pl.)’
Bunu (West Hmongic)	mi^{1} ‘you-two’	mi^{2} ‘you (pl.)’
Bunu (West Hmongic)	mu^{1} ‘they-two’	mu^{2} ‘they’
Nau-klau (Hmongic)	ma^{1} ‘you-two’	ma^{2} ‘you (pl.)’

It is also quite common for these source phrases to persist intact.

Inclusives/Exclusives

An inclusive/exclusive first person plural contrast has been recorded for the widely separated languages Na-Meo (East Hmongic) and the Mienic languages Mien and Mun:

	inclusive	*exclusive*
Na-Meo (East Hmongic)	mi^{1}-pai	nɔŋ^{3}-pai
Mien (Mienic)	buə^{1}	jiə^{1}-buə^{1}
Hainan Mun (Mienic)	ʔban^{1}	ʔbuu^{1} (= ‘group’)

Given the genetic and geographical separation between Na-Meo and these two Mienic languages, the inclusive/exclusive contrast may be old in the family, now lost in most places, or perhaps not consistently elicited.

Shintani and Yang (1990) also record an odd *third* person plural inclusive/exclusive contrast for Hainan Mun:

inclusive	*exclusive*
ta^{2}-ʔbuu^{1} ‘?-group’	nan^{2}-ʔbuu^{1} ‘s/he-group’

No information on how these are used is provided; they might work as a third person/fourth person contrast, a proximate ‘they’ versus a distal ‘they’, but this is just speculation.

5.4 Demonstratives[84]

Person-based systems

The only demonstrative that can be confidently reconstructed for Hmong-Mien is the proximal demonstrative ‘this’: *ʔneinX (2.7/25, White Hmong *no*). For the distal, Hmongic *ʔɨ^{B} ‘that/the former’ (7.1/2, White Hmong *i*) can be reconstructed, as well as the possibly related Mienic *ʔwe^{B} ‘that’ (1.10/10). Another Hmongic demonstrative, represented by White Hmong *ub* ‘far’, indicates even greater distance from the speaker. It cannot be reconstructed in full, but a reconstructed form would have tone 1 and a glottal initial. The meanings and uses of these forms do not correspond exactly from language to language, so it is difficult to reconstruct a Hmong-Mien demonstrative system and their

[84] This section is based in part on Ratliff 1997.

place in it. These forms may have broader deictic rather than simple demonstrative functions.

Across the Hmong-Mien family, one finds not only expected contrasts in demonstratives based on distance from speaker ('this'/'that-near'/'that-far'), but also a sporadically attested (or only a sporadically recorded) contrast based on proximity to the hearer ('this-near-me'/'that-near-you'/'that-near-neither'/'that-far'), hereafter called the first-, second- and third-person demonstratives and the 'far' demonstrative respectively. Like the dual pronouns described above, it appears that the second person demonstrative is created anew in each language. Although it may be based on the 2SG pronoun, it may be created out of other lexical material as well.

	this-1st	*that-2nd*	*that-3rd*	*that-far*
West Hmongic				
White Hmong	nɔ^{5}	kɔ^{5} (kɔ^{2} 'you')	ndaɯ^{8b}	u^{1}
Green Hmong	nɔ^{3}	kɔ^{3} (kɔ^{2} 'you')	ndaɯ^{8b}	u^{5}
Bunu	nau^{3}	kau^{2} 'that-middle' (kau^{2} 'you')		uŋ^{1}
East Hmongic				
Yanghao	noŋ^{3}	nen^{3} ↘ ↗ moŋ^{2} (moŋ^{2} 'you') (nen^{2} 'he')		ɛ^{1}
Mienic				
Mien	nai^{3}	nai^{6} 'that-near you' (məj^{2} 'you')		uə^{3}

Person-based demonstrative systems in Hmong-Mien

In White Hmong, Green Hmong, and Bunu, the second-person demonstrative is taken directly from the 2SG pronoun. In White and Green Hmong it has taken on the tone of the first-person demonstrative to signal that it belongs to the demonstrative form class.

In Yanghao, there has been an interesting shuffling of forms and meanings and a tonal convergence. The 2SG pronoun serves as the basis of the neutral third-person demonstrative, whereas the 3SG pronoun serves as the basis of the second-person demonstrative. And while the 2SG pronoun and the third-person demonstrative are identical, the second-person demonstrative has shifted to tone 3 to establish a form class with the first-person demonstrative, as in White Hmong and Green Hmong.

Mien uses a different source for its second-person demonstrative: it is not cognate with the Mien 2SG pronoun—it is a tonally altered form of the first-person demonstrative (Court 1985, Mao, Meng and Zheng 1982).

Although it is also not possible to reconstruct the form of a second-person demonstrative for Hmong-Mien, the new generation of forms that serve this purpose in widely separated languages of the family suggests that the contrast itself is old. On the other hand, the evidence does not warrant the reconstruction of other contrasts attested in

the demonstrative systems of individual Hmong-Mien languages to higher levels: Gerner (2009) has recorded demonstrative contrasts in individual Hmongic languages based on altitude (high, equal, low) and orientation (front, back), and Ratliff (1992a:104-112) has provided etymologies for West Hmongic demonstratives based on nouns for geographical features ('mountain', 'plain')[85].

[85] The geographical demonstratives discussed by Ratliff and the altitude demonstratives discussed by Gerner overlap.

6 *Language contact*

6.1 Introduction

For the entire 2,500-year period of their reconstructed history and for long before, the Hmong-Mien languages have been spoken in an area of rich agricultural resources which could support large numbers of people and thus a high degree of linguistic diversity (Bellwood 1996, 2001, 2005). From a time that antedates the reconstruction, Hmong-Mien speakers have been in contact with speakers from each of the other language families of southern China and Southeast Asia: Sino-Tibetan, Tai-Kadai, Austroasiatic, and Austronesian. The ultimate challenge is to find persuasive evidence that will demonstrate that Hmong-Mien is genetically related to one or more of these great families more closely than it is to the others. However, since the purpose of this book is to provide a new reconstruction of Proto Hmong-Mien and a discussion of certain family-internal historical topics, arguments for the superiority of one proposal of distant relationship over another will not be presented here.

It is relevant to note, however, within the context of a chapter on language contact, that a genetic relationship has been proposed between Hmong-Mien and every one of its neighbors at one time or another. Hmong-Mien (Miao-Yao) has been represented as part of the Sino-Tibetan family by most Chinese scholars (for example Wang 1986, Pan 2006). For those who favor a "greater Sino-Tibetan" family, a connection between Hmong-Mien and Tai-Kadai is established through their common lexical and typological ties to Chinese. Forrest (1973 [1948]:93-103), Haudricourt (1966), and Peiros (1998:155-160) raise the possibility of a genetic link to Mon-Khmer (or the higher family Austroasiatic) on the basis of a few shared high-quality lexical items. Benedict (1975) places Hmong-Mien in a family with Tai-Kadai and Austronesian as part of his Austro-Tai hypothesis. Although no one has proposed a close genetic relationship between Hmong-Mien and Tibeto-Burman, those who believe that Hmong-Mien is related to Sino-Tibetan—either directly as a subgroup, or adjoined to Sino-Tibetan as part of Sino-Tibetan-Austronesian (Sagart 2005)—would have to embrace the notion of a very distant genetic relationship between these two families as well.

The lexical links between Hmong-Mien and languages from these various families have been persuasive enough to make different eminent scholars propose quite different family constellations. One might suppose this points to the existence of an ancient and shadowy "Proto East Asian" language family, as was proposed by Starosta (2005). Although such a construct is not unreasonable, it is very difficult to defend, given limited evidence. The nearer goal would be to identify one other language family as the best candidate for either a coordinate or superordinate relationship to Hmong-Mien within the time frame (c. 10,000–12,000 years) to which our methodology limits us. Since that work has not been completed, lexical look-alikes shared by Hmong-Mien and Tai-Kadai, or Austroasiatic, or

Austronesian are presented in the reconstruction as native Hmong-Mien; no position is taken with respect to the question of a contact versus an inheritance account. The special case of Chinese, by far the most important contact language in the Hmong-Mien-speaking area, will be addressed in section 6.2. The last section of this chapter, section 6.3, will summarize the best lexical connections found to date between Hmong-Mien and the other language families of the area.

6.2 Chinese

6.2.1 Phonology

The phonological features of Hmong-Mien that are most likely due to contact with Chinese include both segmental features and prosodic features. The consonant features that appear frequently in Chinese loanwords include aspiration, frication, affrication, and palatalization (see the introduction to the reconstruction, chapter 2, section 1.2, on aspiration and frication). In the tables of reconstructed onsets in chapter 2, the correspondence sets that are composed solely of Chinese borrowings appear in parentheses. These onsets can be grouped as follows:

1) all of the labialized initials: ɲʷ, ŋʷ, kʷj, gʷj, qʷ
2) all of the velar nasals: ŋ, ŋʷ, ŋj
3) many onsets with a palatal glide: mpj, thj, ndj, kʷj, gʷj, ŋj, xj, ɣj, klj, ɢlj
4) some fricatives: ɣ, xj, ɣj, ɦ

Of these groups, only the labialized initials and velar nasals are represented exclusively by Chinese loanwords; native words have also been reconstructed with medial -j- and with fricative onsets.

Proto Hmong-Mien rime correspondence sets composed solely of Chinese borrowings appear in italics in the tables of reconstructed rimes in chapter 2. These rimes are all closed rimes (-i̯ɛp, -u̯at, -æk, -u̯am, -eəm, -u̯ən, -əan, -iəŋ, -iuŋ), but this does not appear to be significant, since closed rimes are common in native words as well. The only Proto Hmongic rime composed solely of Chinese borrowings is *-i̯aŋ (rime set 26).

Prosodic features that can be attributed to Chinese contact include vowel length (chapter 2, section 2.1.3.2), tone, and tone split occasioned by the merger of voiced and voiceless obstruent initials (chapter 3, section 3.1). It is possible that these prosodic features, although characteristic of Chinese, did not originate with Chinese: vowel length and tone, as prosodic features, are especially diffusible (Matisoff 2001, L-Thongkum 1997), and could have originated anywhere in the area, subsequently spreading to neighboring languages (chapter 3, section 3.2.2). They therefore may represent substratum effects upon Chinese rather than superstratum effects of Chinese on other languages of the area; it is impossible to tell. However, once adopted by Chinese, the spread of these features would have been greatly facilitated.

Alternations of n- and l- in Chinese loanwords

In addition to the large-scale effects of Chinese on Hmong-Mien phonology sketched above, the following group of words with both n- and l- onsets in Hmong-Mien (onset 211.1 in Wang and Mao 1995) presents an interesting minor pattern:

H *ʔlo^{B} (2.40/7) 'to break' M *ʔnəu^{B} (2.7/7) 'to break'	拗 'to break' (MC ʔæwX > Man. *ǎo*)
H *ʔlɛŋ^{A} (2.40/22) 'CLF-bowls/houses' M *ʔnɛɔm^{A} (2.7/22) 'CLF-bowls/houses'	庵 'thatched hut' (MC ʔom > Man. *ān*)
H *ʔlɛŋ^{B} (2.40/22) 'short' M *ʔnəŋ^{B} (2.7/22) 'short'	

On the basis of 'to break', we may hypothesize that these three words use different strategies to cover an onset-less word: Hmongic covered with an l- , and Mienic covered with an n- . Equally likely is that the donor dialects of Chinese had developed these initial consonants before the loans were made, and that Hmongic borrowed the words from an "l-covering" Chinese dialect, whereas Mienic borrowed the same words from an "n-covering" dialect. The proposed Chinese source for the all-purpose classifier (here 'CLF-bowls/houses', see section 6.2.4 below) is quite speculative, and no Chinese source has yet been found for 'short'.

There are also words in Mienic only that show an alternation of initial n- and l-. In the first word below, alternation of an original *n- exists in the donor language, which is apparently Cantonese:

M *hnəm^{B}~hləm^{B} (2.8/22) 'to think of'	念 'to think of/love' (MC nemH > Cant. /nɐm^{3}/ (~lɐm^{3}/)

In the next word, 'to use', Old Chinese *l- > y- is reflected variously as /n-/ or /l-/. This word shows a different correspondence pattern from those above, and no Mienic onset can be reconstructed ('to ask for' patterns in the same way, and may also be a loanword, although no source has been identified).[86]

M *[n/l]oŋ^{C} (rime 28) 'to use' M *[n/l]oŋ^{C} (rime 28) 'to ask for'	用 'to use' (OC *mə-loŋ-s > MC yowngH > Man. *yòng*)

[86] There is also low-level variation between /n-/ and /l-/ in the Chiang Rai Mien reflexes of a third word, Hmong-Mien *-ʔrɔŋH 'good' (2.55/29): /loŋ^{5}/ ~ /noŋ^{5}/ (Purnell, p.c. 2008). This onset correspondence does not show /n-/ ~ /l-/ variation across the Mienic sub-family as the loanwords discussed here, but suggests that these two sounds tend to alternate.

6.2.2 Lexicon

Out of the 829 cognate sets in Wang and Mao 1995, approximately 35% represent words of Chinese origin.[87] Most of these words, given their close similarity to Middle Chinese or modern-day Chinese forms, and their cultural nature, are clearly borrowings.[88]

There are also certain cultural words in Proto Hmong-Mien for which Old Chinese provides a better match than Middle Chinese, such as 'iron', 'village', and 'barn/granary'. Then there are a number of basic words—one body part term ('tongue') and a few verbs (including 'to descend; low/short', 'to be far', 'to drink/smoke', 'to sing/cry out', 'to cut open')—that are ancient in both Hmong-Mien and Chinese. This last group of words is of special interest, in that these words do not fit into the usual semantic fields for loanwords, such as commerce, technology, agriculture, animal husbandry, and society. The correlation of Proto Hmong-Mien reconstructions with both Middle Chinese and Old Chinese forms and the presence in the Sino-Hmong-Mien vocabulary of both cultural and basic words suggest three possible historical accounts of the facts: (1) the contact situation was so prolonged and intimate that basic words as well as cultural words were borrowed (see Thomason 2001:63–65 on the borrowability of everything); (2) words in the Middle Chinese set are borrowings and words in the Old Chinese set are shared retentions from a common ancestor; or (3) words in the Middle Chinese set are borrowings and the Old Chinese set represents a mix of borrowed words and shared retentions. Although an important working assumption of this reconstruction is that the Chinese element in the Hmong-Mien lexicon overwhelmingly reflects language contact (see chapter 1, section 1.3), this does not exclude the possibility that a small core of true cognates exists. Much more work on this question remains to be done, and will need to be undertaken with the collaboration of specialists in the history of Chinese.

6.2.3 Syntax

The morphosyntax and syntax of Hmong-Mien languages have been heavily influenced by Chinese. Although the details may differ, all of the gross properties of the Chinese type are apparent in Hmong-Mien languages: in morphology, Hmong-Mien languages are characterized by the lack of inflectional morphology and the heavy use of compounds and reduplication. In syntax, Hmong-Mien languages show SVO word order, paratactic rather than embedded structures (serial verb, serial noun, and serial sentence constructions), use of both a polar question particle and the A-not-A construction, Wh-question words *in situ*,

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[87] This set of 829 words already excludes the most obvious Chinese loanwords (Wang and Mao 1995:19). A recent study of White Hmong (Ratliff 2009a, b), in which only 15% of 1290 entries are identified as Chinese loanwords, might be seen to challenge this picture of Chinese dominance. This is a misleading figure, however. In White Hmong, many meanings are represented by a compound or a phrase rather than by a single word. Given the guidelines of the larger project of which this study was a part, if a compound or phrase were a mix of Chinese and native words (or all Chinese words assembled into a new phrase), it was not counted as a loan.

[88] Recent loans tend to be too consistent in their segmental make-up across languages, but not consistent enough in tone (for example, from Chinese 上 'to start' (Man. *shàng*) > Yanghao sɑŋ^{3} [35], Jiwei ʂɑŋ^{1} [35], Xuyong ʂɑŋ^{8} [13]). It is clear that speakers are bilingual, and know these words and their Chinese pronunciations. The native tone assigned to each word is simply the tone in each borrowing language that comes closest to the Chinese tone phonetically, so that the tones will be of different historical categories, and will not correspond cross-linguistically (see chapter 3, section 3.2.1).

adversative passives, and aspect markers rather than tense markers. Final discourse particles signal speaker attitude.

In some Hmong-Mien languages, Chinese loanwords figure prominently in the set of grammatical function words. Thus in some cases we can say that a particular construction in the grammar of Chinese has been transferred to Hmong-Mien on the back of the word that signals it. The following examples come from White Hmong of Southeast Asia, but can be assumed to be typical of other languages in the family:

tau [tau^{5}] < HM *təuk (2.1/6) verb: 'to get/gain' auxiliary: past (preverbal) modal: ability, possibility (postverbal)	得 (OC *tˁək > MC tok > Man. *dé*) verb: 'to obtain, get'
sib [ʃi^{1}] reciprocal prefix < H *sjɨ$^{A\text{-}D}$ (2.28/2)	廝 Man. *sī* 'with each other'
lawm [lauɯ^{8}] perfective marker	了 Man. *le* perfective marker[89]
tabsis [ta^{1} ʃi$^{4/7}$] 'but'	但是 Man. *dànshì* 'but'
vim(chij) [vi^{8} chi^{2}] 'because'	為此 Man. *wèicǐ* 'for this reason'

6.2.4 The classifier construction

The case of the classifier construction can be examined in some detail in this connection, as an example of grammatical change brought about through contact with Chinese. The fact that it is the only syntactic construction to receive close attention here is not to suggest that it is the only example of grammatical accommodation that could be discussed; interesting work remains to be done with, for example, the effect of Chinese on word order, verbal aspect, and clause linking in various Hmong-Mien languages.

The Hmong-Mien languages typically possess two systems for noun classification, both well-represented in languages of Southeast Asia: numeral classifiers and classifying prefixes. It is not unusual to find cases where representatives of each system occur side-by-side, each apparently classifying the noun in the same way, as in the White Hmong noun phrase: *ib lub pob-zeb*, roughly 'one CLF-bulky things clump-stone'. This redundancy of function in the two grammatical systems is a result of long-term language contact and multilingualism. Evidence will be presented below to show that the classifier construction, although a hallmark feature of all modern Hmong-Mien languages,[90] has been borrowed from Chinese, while the system of classifying prefixes, now only marginally functional in modern languages, is the native one. Given the fact that the White Hmong classifier *lub* in the example above appears across the family—Hmongic *ʔlɛŋ^{A} (2.40/22) and cognate Mienic *ʔnɛɔm^{A} (2.7/22) 'CLF-bowls/houses'—it seems probable that the protolanguage had both a productive prefix system and classifiers in a few phrases which formed the stimulus for the development of a full-fledged classifier system. However, even this oldest classifier may have been borrowed from Chinese (see section 6.2.1 above), along with most of the other most common Hmong-Mien classifiers, as will be shown below.

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[89] This connection was first reported in Fuller 1986.

[90] Nichols (1992:132–133) places Hmong-Mien in the middle of a numeral classifier "hotbed".

Numeral classifiers and classifying prefixes not only have the same general classifying function, but also pick out overlapping semantic classes: for example, for the human/animal/animate class (different languages will sub-divide this class differently) there are both classifiers and prefixes, for inanimates there are both classifiers and prefixes, and classifiers based on shape are used alongside shape-based body-part prefixes in the body part class (for example, White Hmong *ib tus ko-tw* 'one CLF-short lengths handle-tail', or simply 'one tail').[91]

There are, however, important structural differences between the two types of classifying elements. The core structure of the noun phrase in all Hmong-Mien languages is the same, with the exception of the demonstrative, which is phrase-final in Hmongic languages and phrase-initial in Mienic languages:

$$[[\text{NUM} + \text{CLF}]_{\text{QP}} + [(\text{prefix})\text{-NOUN} + \text{ADJ}]_{\text{NP}}]_{\text{NP}}$$

The hierarchical structure of the noun phrase in Hmongic languages, in which the quantifier and the classifier form one constituent (QP = quantifier phrase) and the noun and its modifiers form another (NP = noun phrase) is reflected in those languages that have tone sandhi relationships between certain elements of the noun phrase but not others: the numeral may change the tone of the classifier; the prefix may change the tone of the noun. But the classifier never changes the tone of the prefix; these elements seem not to "see" each other. Similarly, prefixes may display phonological variation in the initial and/or may change to harmonize (in vowel or tone) with the head noun, whereas classifiers do not show this kind of harmony with the head noun.[92]

Further distinctions include the following (see also Chen 1993): (1) Classifiers (and class nouns in [class noun-noun] compounds) are semantically and phonologically more robust than prefixes. It is often easy to identify the source of a classifier for this reason (White Hmong *thoob* 'bucket' > *ib thoob dej* 'one bucketful water'), whereas prefixes are semantically and phonologically lightweight. (2) Classifiers are obligatory with quantified or definite nouns; prefixes are often optional. In languages where prefixes are optional, the use of a (true) prefix appears to be governed by stylistic or prosodic needs in given contexts. (3) Classifiers can be used pronominally to stand in for the full noun phrase; prefixes cannot be used pronominally.

Two paths of grammaticalization

The classifier construction was borrowed from Chinese, probably at first along with the Chinese measure words which would be necessary for both sides to use in trade situations. That this construction was identified with its Chinese origins can be shown by the high number of Chinese words that serve as classifiers in Hmong-Mien (some of which will be presented below). Discourse considerations may also have favored borrowing: for the North Arawak language Resígaro, which has borrowed many classifiers from the unrelated neighboring language Bora, Aikhenvald (2000:387) notes that "[t]he extensive borrowing

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[91] *Ko* is a White Hmong prefix that is also used for feet (*ko-taws*) and bamboo sprouts (*ko-kaus*). The noun *ko* meaning 'handle' (e.g., *ko taus* 'axe handle') appears to be related.

[92] A seeming exception to this generalization is the West Hmongic language A-Hmao of Shimenkan township, Weining Yi, Hui and Miao Autonomous County, Guizhou Province, which has classifiers that can modify vowel and tone to signal whether the head noun is "grand and imposing", ordinary, or diminutive (Wang 1972). This appears to be an independent development.

of classifiers…can be explained by the important role classifiers play in discourse: once the referent is established it is referred to with a classifier, so that classifiers appear to be more frequent in discourse than nouns themselves." Since the establishment of the classifier structure within Hmong-Mien, however, the first path of grammaticalization from noun to classifier has been direct, and has pulled in native words as well.

A second path of grammaticalization derives the prefixes from class nouns as the first member of class noun-noun compounds. This process is independent and on-going. For example, cognates of White Hmong *kab* 'insect' in the Eastern and Western branches of Hmongic are used as class nouns in insect name compounds, but are also beginning to branch out to serve as class nouns in compounds denoting shrimp, crabs and moles ('insect' > 'little animal'). Similarly, the White Hmong *tub* 'son/boy' is used as a class noun in compounds that refer to male humans, whether young or not (such as *tub-rog* 'soldier', but literally 'boy-war'). The fact that these words are phonologically lightweight as well as appropriately general in meaning have conspired to facilitate this change.

But notably, in HmM, there is no evidence that there is a

noun ⇒ class noun ⇒ classifier

continuum, as described by Delancey (1986) for Tai and as claimed for Hmong, Thai and Vietnamese by Bisang (1999) as the usual "Southeast Asian" origin of classifiers. If there were evidence that class nouns developed into classifiers rather than into prefixes, then we could say that classifiers developed internally, and there would be no need to appeal to a contact explanation. But not only is there no evidence for this change, there is evidence in White Hmong for change going in the opposite direction, from classifiers to class nouns, in an "anti-grammaticalization" process (a similar development was described for Chinese by Loke (1997) as "re-grammaticalization").

This classifier > class noun development in White Hmong is a limited phenomenon that occurs when the head noun is "underspecified" semantically and the group classifier *cov* 'CLF-groups' is used (Ratliff 1991):

ib	*phau*	*ntawv*	*cov*	*phau-ntawv*
1	CLF-piles	paper	CLF-groups	book
'book'			'books'	

ib	*lo*	*lus*	*cov*	*lo-lus*
1	CLF-mouthfuls	language	CLF-groups	word
'word'			'words'	

Ntawv 'paper' cannot interpreted as 'book' without the classifier *phau* for 'piles or stacks'. So when it is important to emphasize that many books are being referred to, since there can only be one classifier per noun phrase, the 'group' classifier displaces the 'piles or stacks' classifier. The disambiguating classifier then attaches to the underspecified noun as a class noun. The same shift can be seen in the phrase for 'words' above: the classifier *lo* for 'mouthfuls' is displaced when *cov* is added, and attaches to the underspecified noun *lus* 'language'.

Three more examples of White Hmong classifiers that may also function as class nouns appear below. These examples do not involve underspecified nouns, so it is not possible to trace a pathway of development:

ib	*zaj*	*kwv txhiaj*	*ob*	*zaj*	*zaj-tshoob*
1	CLF-lines	song	2	CLF-lines	wedding song
'a song'			'2 lines of a wedding song'		

ib	*txoj*	*kev*			*txoj-hmoov*
1	CLF-lengths	road			fortune
'a road'					'fortune'

ib	*pob*	*mov*	*ob*	*lub*	*pob-zeb*
1	CLF-clumps	rice	2	CLF-bowls/houses	stone
'a ball of rice'			'2 stones'		

All three of these classifiers are of Chinese origin: two (*zaj* and *txoj*) were borrowed as classifiers (see below) and then shifted "to the right" to become class nouns, whereas the third (*pob*) was probably borrowed as a noun from Chinese 包 (Man. *bāo*) 'to wrap; a bundle, lump' and since has come to be used in three ways—as an independent noun, as a classifier, and as a class noun. It is also now on its way to becoming a prefix. One might say that the classifier function of *pob* derived from the class noun function, but since it is the only hyper-functional noun of its type, and it is a Chinese borrowing, it hardly supports a language-internal account of the grammaticalization of class noun to classifier.

To summarize, in White Hmong some nouns get used as classifiers (*xib* 'arrow', *thoob* 'bucket', *nplooj* 'leaf'), and some nouns get used as class nouns in compounds (*kab* 'insect' and *tub* 'son/boy'), and some class nouns degrade to prefixes (*qhov* 'hole', a nominalizer for 'thing', and *pob* 'clump' for any round or bulky thing), but nouns do not usually become classifiers via class nouns, which argues for the existence of two separate systems of classification, and two separate processes of grammaticalization, rather than one:

noun		class noun					
⇓	↗	⇓	but	*class noun	⇒	classifier	
classifier		prefix					

In addition to this analysis of two functionally-similar constructions in one language that only rarely have anything to do with one another, four types of indirect evidence drawn both from unrelated languages and from languages across the family provide further support for the idea that the classifier construction in Hmong-Mien languages was borrowed from Chinese: (1) the "borrowability" of classifier systems cross-linguistically; (2) the etymology of the most widespread classifiers in Hmong-Mien; (3) the relative chronology of the two systems; and (4) the geographical and genetic distribution of the two systems within the Hmong-Mien family and the correlation of these facts with degree of contact with Chinese.

The "borrowability" of classifier systems cross-linguistically

Numeral classifiers are borrowable, especially between analytic languages in which they are independent words:

> The more lexico-syntactic the noun categorization is, the easier it is to diffuse. That is, the most frequently diffused new patterns involve syntactic constructions with classifiers which have a clear lexical source rather than with more grammaticalized noun class agreement systems. Possessed classifier constructions of the type generic noun plus possessed noun were borrowed from Carib languages into a number of North Arawak languages, e.g. Palikur, Island Carib, and Bahwana … In the South Asian linguistic area numeral classifiers have been shown to have spread from the Indo-Aryan languages of the region to Dravidian languages … Indirect areal diffusion may result in the partial restructuring of classifier systems. This involves introducing new classifier types into a system which already has classifiers. (Aikhenvald 2000:383–384)

A well-known instance in Asia is the borrowing of Chinese classifiers by Japanese. Also, system overlay in general is not unusual, even when it does not seem to serve a clear purpose: "…worrying about where one grammar ends and the next grammar begins is a totally meaningless and futile pursuit. For 'the new grammar is constantly being created on top of the willing and yielding ruins of the old'" (Matisoff 1991:447).

The etymology of individual classifiers

In addition to the most common Hmong-Mien classifier discussed above (Hmongic *ʔlɛŋ^{A} (2.40/22) and cognate Mienic *ʔnɛɔm^{A} (2.7/22) 'CLF-bowls/houses') which may be derived from a Chinese noun meaning 'hut', many of the oldest and most basic classifiers and some of the newest abstract classifiers are clearly Chinese in origin.

Several of the most common classifiers are loanwords which demonstrate regular correspondences and are found across the family (White Hmong classifiers are given both in italicized orthographic form and in phonetic transcription):

1. CLF-tools *rab* /ɻa^{1}/ < H *traŋ^{A}, M *truŋ^{A} — 張 OC traŋ > MC trjang > *zhāng* 'CLF-flat things' (< 'spread'); first used as CLF for 'bow', then 'zither' in Han period c. 200 BCE

2. CLF-quilts *phob* /phɔ^{1}/ < HM *phəan — 片 MC phenH > *piàn* 'one-sided'

3. CLF-lines (writing, speech) — 行 MC hang > *háng* 'CLF-rows'
Yanghao /ɣoŋ^{1}/, Jiwei /ʐoŋ^{2}/, White Hmong *zaj* /ʐa^{2}/, Xuyong /ʐɑŋ^{2}/, Bunu /haŋ^{4}/, Mien /hɔ:ŋ^{2}/

4. CLF-things — 件 MC gjenX > *jiàn* 'CLF-items'
Yanghao /tɕin^{6}/, Jiwei /cɛ^{6}/, Bunu /cin^{6}/, Biao Min /iɛn^{6}/

Another common classifier that is used both for animates (animals and humans) and short objects classified by length seems likely to have had a Chinese origin, given the

semantic similarity of the objects classified in both families by morphemes of similar shape. However, the word ends in a nasal in Hmongic, and has an open syllable in Chinese:

5. CLF-horses also CLF-short lengths (e.g. chalk)	*tus* /tu^{4}/ < H *dɛŋ^{B}	頭 MC duw > *tóu* 'CLF-animals' cf. use of the noun *tóu* in compounds referring to pieces of chalk, pencil stubs, cigarette butts

(Mien /tau^{2}/, Mun /tau^{2}/ are recent loans from *tóu*)

There are also many transparent (recent) Chinese loans, some of which are quite abstract, as evidenced by these White Hmong classifiers:

6. CLF-long things	*txoj* /tsɔ^{2}/	條 Man. *tiáo* 'CLF-long things' (< 'twig')
(independent non-corresponding borrowings occur on both sides of family)		
7. CLF-kinds/sorts	*yam* /ja^{8}/	樣 Man. *yàng* 'appearance, pattern; kind, type'
8. CLF-kinds/sorts	*hom* /hɔ^{8}/	號 Man. *hào* 'name, mark; order, size, number'

Relative chronology

The analysis of a newer, borrowed nominal classifier system layered upon a native nominal classification system of prefixes gains support from independent evidence that prefixes are old in the family. The prefix is the characteristic affix type in the Southeast Asian linguistic area. Not only do prefixes predominate in the languages of the Tibeto-Burman and Mon-Khmer families, they are now being reconstructed for the most analytic languages at the core of the Sinosphere — Chinese and Hmong-Mien. We are able to reconstruct a small bit of Hmong-Mien morphology, as explained in chapter 4; and with the exception of a C-tone derivation process (section 4.4.2), all of the evidence suggests that Proto Hmong-Mien bound morphemes were prefixes. First, there are the nominal prefixes under discussion here (section 4.2), which from the earliest level have left confusing correspondence patterns wherein the consonants from different prefixes have displaced root-initial prefixes in different languages (section 4.2.3). Modern-day complex clusters also suggest the existence of disyllabic—possibly prefixed—words, given their survival in Pa-Hng as disyllabic words (section 4.2.4). Finally, there are pairs of words that suggest that ancient prefixes in the (pre-)protolanguage signaled a causative/stative distinction in verbs (section 4.4.1). Chen (1993) has supplied additional evidence of the antiquity of prefixes in the family: prefixes are used among older speakers more frequently than younger speakers, and prefixed forms are preserved in set phrases but are less frequently innovated.

Classifiers, on the other hand, do not show evidence of great age. The only classifier that can be reconstructed to Proto Hmong-Mien is the classifier for houses and bowls—

'bulky things'—discussed above. This particular classifier may be native, but a Chinese source has also been proposed. Furthermore, the reconstructions of the Hmong-Mien classifiers that are obvious Chinese loanwords correspond to Middle Chinese rather than Old Chinese. This is not surprising, given that classifiers have only developed within the historical period in Chinese (see Erbaugh 1986 and Loke 1997). Their early use in the Shang and Zhou dynasties (1400 BCE–221 BCE) was limited to objects of value only; widespread use of classifiers was not established before the Han dynasty (206 BCE–220 CE). Sagart (1999:107) has hypothesized that the loss of an Old Chinese *k- prefix used to distinguish count and mass nouns may have provided an additional stimulus for the development of the classifier system within Chinese. There is a possibility that all languages in the area, under stimulus from either Tai or Chinese, developed classifiers at roughly the same time.

Geographical and genetic distribution of prefixes

As explained in chapter 4, section 4.2.1, there is a correlation between the degree of contact with Chinese and the preservation of classifying prefixes. In general, Hmongic languages have been more isolated from Chinese than Mienic languages, and Hmongic languages preserve more prefixes than Mienic languages. Within Mienic, the Mien/Mun and Biao Min languages show fewer prefixes than the most conservative Mienic language, Zao Min, which differs enough from the others to constitute a separate sub-branch. Zao Min regularly marks nouns with the prefix /ʔa-/ (Mao, Meng and Zheng 1982), whereas only a few nouns may optionally be prefixed in other Mienic languages. In an early field report, the Zao Min language was described as "isolated" and the "one least influenced by the neighboring Chinese dialects" (Wong 1939:425).

6.3 Lexical connections to other language families

As explained at the beginning of this chapter, although Chinese is the primary contact language, the Hmong-Mien languages show lexical connections to other languages of the area as well. In this final section, lists of the strongest lexical evidence connecting Hmong-Mien to the other language families will be presented, along with brief discussion. These lists could be extended indefinitely, as the comparanda become more and more speculative. The intention here is to exclude all but the best of these comparanda. For these words, an historical account of either contact or common inheritance is required—chance resemblance seems unlikely, given close similarities on all measures.

6.3.1 Tibeto-Burman

A number of Hmong-Mien words belonging to both the basic and cultural components of the lexicon appear to be loanwords from Tibeto-Burman. The most commonly accepted view is that these loans were made at a time when the centers of gravity of these two families were not as widely separated as they are today. Today, the Hmong-Mien center is to the east—along a north-south line from western Hunan province south through eastern Guizhou and the western half of the Guangxi Zhuang Autonomous Region—and in terms of numbers of languages and speakers, the Tibeto-Burman center is to the west—in western China, Tibet, Burma, Bangladesh, Nepal, and Bhutan (Matisoff 2003:3-4). Studies

on Tibeto-Burman loanwords in Hmong-Mien include Benedict 1987a, Ratliff 2001a, and Mortensen 2002. Benedict observed that the most important Tibeto-Burman loanwords fall into well-defined semantic sets, which suggests that they were borrowed as such. He writes, "These loans … reflect an entirely different 'borrowing milieu', so to speak, than the MY/Chinese loans: much less 'diffuse', with loans sparse and rigidly confined to specific categories" (Benedict 1987a:20).

The words in the list below show a high number of voiceless sonorants in Hmong-Mien corresponding to a prefixed *s- in Tibeto-Burman, but this is probably an accidental consequence of the fact that the author once focused on this particular correspondence (Ratliff 2001a). Tibeto-Burman reconstructions are from Matisoff 2003.

Numerals

The numerals 'four', 'five', 'six', 'seven', 'eight', 'nine'—and possibly 'ten'—were borrowed as a set from some Tibeto-Burman source; see chapter 5, section 5.2.

The heavens

	Hmong-Mien	*Tibeto-Burman*
1. sun/day	H *hnɛŋ^{A} (2.8/22)	*s-nəy
	M *hnu̯ɔi^{A} (2.8/11)	
2. moon/month	HM *hlaH (2.41/4)	*s-la
3. night (also 'dark')	H *hməŋH (1.8/21)	*s-muːŋ 'dark'

Affinial kinship terms

4. sister-in-law (also daughter-in-law)	HM *ʔɲam (4.7/24)	*nam 'daughter-in-law'
5. son-in-law	HM *ʔweiX (1.10/12)	*krwəy

Other

6. to slice	HM *hlep (2.41/10)	*s-lep
7. footprint/track	HM *hmjænX (1.23/19)	*s-naŋ 'to follow'[93]
8. horse	H *mjæn^{B} (1.24/19)	*mraŋ

6.3.2 Tai-Kadai

The difference between the effect of Tibeto-Burman on Hmong-Mien and the effect of Tai-Kadai on Hmong-Mien is just the opposite from what we might expect. Today, speakers of Tai-Kadai languages are the closest neighbors of speakers of Hmong-Mien languages throughout the area: in Guizhou province (Zhuang, Kam, Sui), in the Guangxi-Zhuang Autonomous Region (Zhuang, Kam), in Southeast Asia (Lao, Thai), on Hainan Island (Hlai). Nonetheless, most words that these two families share are recent loanwords. Very few basic old words are shared by the two families, and of this small group, half are common to Austronesian as well. The difference in borrowing patterns as they pertain to these two families (Tibeto-Burman and Tai-Kadai in relation to Hmong-Mien) may shed light on how the linguistic map of 2,500 years ago differed from that of the present day.

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[93] Within Tibeto-Burman, see also Jingpho *mənāŋ 'companion' (Matisoff 2003:304), and Lai neʔ-hnaŋ 'footprint' (Kenneth Bik, p.c. 1999).

Studies on the lexical connections between Hmong-Mien and Tai-Kadai include Benedict 1975 (who places Hmong-Mien with Tai-Kadai and Austronesian in his "Austro-Tai" family) and Downer 1978 (on Tai–Mienic lexical connections). Listed below are only a few of the oldest and best links between the two families. No words that show an exclusive link between Mienic and Tai-Kadai languages are included (for example, 'to cover', 'to bury', 'young man'), under the assumption that they are loanwords. Similarly, words shared by Chinese, Hmong-Mien, and Tai-Kadai are assumed to be Chinese loanwords ('to split', 'chicken') and are not included here.

Proto Tai reconstructions are from Li 1977, Proto Kam-Sui reconstructions are from Thurgood 1988, Proto Kra reconstructions are from Ostapirat 2000, and Austronesian (AN) and Malayo-Polynesian (MP) reconstructions are from Blust's Austronesian Comparative Dictionary (ACD), both in this list and the lists to follow.

Hmong-Mien/Tai-Kadai

	Hmong-Mien	*Tai-Kadai*
1. fish	HM *mbrəuX (1.51/3)	Tai *pla^{A1}
		Kam-Sui *mprai^{3}
		Kra *p-la^{A}
2. orphan[94]	HM *mbrəjH (1.51/15)	Tai *bra^{B2}
		Kra *bɣuŋ^{B2}
3. wild dog	H *hmaŋ^{C} (1.8/24)	Tai *hma^{A1} 'dog'
		Kam-Sui *k-hma^{1} 'dog'
		Kra *x-ma^{A} 'dog'
4. monkey[95]	H *ʔlin^{A} (2.40/18)	Tai *liŋ^{A2}

Hmong-Mien/Tai-Kadai/Austronesian

	Hmong-Mien	*Tai-Kadai*	*Austronesian*
5. to die	HM *dəjH (2.3/15)	Tai *tɑːi^{A1}	AN *ma-aCay
6. bird	HM *m-nɔk (2.9/29)	Tai *nlok^{D2S}	MP *manuk
		Kam-Sui *mluk^{8}	
		Kra *ɳok^{D}	
7. 1SG	H *kɛŋ^{B} (5.1/22)	Tai *kia̯u^{A}	MP *-ku 'my'
		Kra *ku^{A}	
8. 2SG	HM *mu̯ei (1.9/8)	Tai *m[aï][ŋ]^{A}	AN *-mu[96]
		Kra *mə$^{A/B}$	

6.3.3 Mon-Khmer

A few important Hmong-Mien words have Mon-Khmer counterparts with similar form and meaning. As mentioned above, these resemblances struck early researchers as being

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[94] In Thai and Lao 'orphan' bears a /kam-/ prefix, which may be related to the prenasalization in Hmong-Mien. This word also means 'bamboo shoot' in Hmong-Mien, but does not have this meaning in Tai-Kadai.

[95] Compare Mienic *ʔbiŋ^{A} 'monkey' (1.4/18), which shares the same rime and tone. Forms in Tai-Kadai do not help explain the different onsets. The b- may reflect the first syllable of an old disyllabic form (also reflected in the *ʔ- > upper register tone in Hmongic).

[96] Austronesian *-mu is a 2nd person suffix with unspecified number (ACD). See section 6.3.4 on Hmong-Mien/Austronesian links in which Tai-Kadai does not participate.

especially significant, and a genetic relationship between the two families has been proposed on the basis of the quality of these matches. However, until quite recently a full reconstruction of Mon-Khmer has not been available,[97] making it difficult to demonstrate either a connection to Proto Mon-Khmer itself (previous studies have cited either subgroup reconstructions or words from individual languages) or regular correspondences between Mon-Khmer and Hmong-Mien. Sidwell's recent publication of the late H. L. Shorto's Proto Mon-Khmer reconstruction (Shorto 2006) has improved this situation greatly.

The following are among the best of the resemblances found to date. The first list contains unique Hmong-Mien/Mon-Khmer comparanda, whereas the second list contains words which are in Austronesian as well, suggesting an "enriched" picture of Austric (Austroasiatic, of which Mon-Khmer is a subfamily, and Austronesian). The Mon-Khmer reconstructions are from Shorto 2006; the numbers refer to his entries.

Hmong-Mien/Mon-Khmer

	Hmong-Mien	*Mon-Khmer*
1. water	*ʔn̥əm (7.1/29)	*ʔ[o]m (#1298)
2. blood[98]	*ntshjamX (3.20/24)	*jhaam (#1430A)
3. to weep[99]	*ʔɲæmX (4.7/20)	*yaam (#1381)
4. tree	*ntjn̥əŋH (2.19/29)	*t_2ʔɔɔŋ (#491)

Hmong-Mien/Mon-Khmer/Austronesian

	Hmong-Mien	*Mon-Khmer*	*Austronesian*
5. full	*pn̥ɛŋX (1.1/22)	*[d]pu[ə]ŋ (#907B)	MP *penuq
6. to shoot	*pənX (1.1/21)	*paŋʔ (#905)	MP *panaq
7. tail[100]	*tn̥eiX (2.1/8)	*[k]ɗuut (#1017B)	MP *buntut
8. to dream	*mpeiH (1.4/12)	*mp[ə]ʔ (#105)	MP *hi(m)pi

Interestingly, there are also some Hmong-Mien insect words that resemble their Mon-Khmer counterparts. These Mon-Khmer insect words appear in a number of other languages of the area as well. One wonders about the nature of the contact situation that would lead to the borrowing of the names of such humble creatures (both Mon-Khmer and "other" forms from Shorto 2006):

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[97] Peiros (1998) did reconstruct certain Mon-Khmer forms represented in the list below, but he indicated the tentative nature of these reconstructions by calling them "pre-reconstructions".

[98] See Ferlus 2009 for discussion of this word in both families and alternative Mon-Khmer reconstructions. He writes that the similarity is strengthened by the correspondence between final -X (> tone B, see chapter 3) in Hmong-Mien and final glottalization in Proto Viet-Muong.

[99] Like Hmong-Mien, several Mon-Khmer languages show a palatal nasal onset in this word 'to weep': Chrau *ɲiːm, Sre *ɲim, Bahnar *ɲəm, Jeh *ɲaːm. Shorto believed this was from the reduplicated form *yaamyaam, where -my- > ɲ-.

[100] Both the Mon-Khmer and Austronesian words refer to the tail (or rump) of a chicken (Khmer /kɔntùːt/ 'rump of fowl'). The Hmong-Mien word is a more general word for 'tail'.

	Hmong-Mien	*Mon-Khmer*	*Other*
5. ant	H *mbrɔ^{D} (1.51/6)	*suuc ‘to sting’(#873B) > Khmer srəmaoc ‘ant’	Tai mót ‘ant’, Malay semut ‘ant’
6. centipede	M *səp^{D} (2.13/7)	*[k]ʔiip (#1226G) > Lawa saʔaip	Lao khep[7]
7. grasshopper	HM *klup (5.31/9)	*kntuəp (#1256aA) > Khmer kɔndoːp	
8. head louse	HM *ntshjeiX (3.20/12)	*ciiʔ (#39) ‘louse’ > Lawa səiʔ ‘louse’, Kuy ɲcɛː ‘head louse’	

6.3.4 Austronesian

The inclusion of Austronesian forms in the sections on Tai-Kadai and Mon-Khmer contact above makes it clear that the Austronesian had contact with the languages of the mainland before it became the dominant language family of insular Southeast Asia. The question of the mainland origins of the Austronesians has fostered much recent work over the last fifteen years, not only by linguists, but also by geneticists and archaeologists (for example, see the papers from the Conference on Asia-Mainland/Austronesian Connections (Honolulu 1993) published in *Oceanic Linguistics* 33.2 and Sagart, et al. 2005).

In addition to the words listed above (‘bird’, ‘full’, ‘to shoot’, etc.), there are some unique lexical connections between Hmong-Mien and Austronesian; the following list contains some of the best of these. Three of the words below—‘to die’, 1SG, and 2SG—are repeated from the Hmong-Mien/Tai-Kadai/Austronesian list in section 6.3.2 above: in Hmong-Mien (but not in Tai-Kadai) the match of ‘to die’ is extended to the morphologically related ‘to kill’ (see chapter 4, section 4.4.1)—and the match of the 1SG and 2SG pronouns is extended to the 2PL pronoun (see chapter 5, section 5.3).

Hmong-Mien/Austronesian

	Hmong-Mien	*Austronesian*
1. to die	HM *dəjH (2.3/15)	AN *ma-aCay
2. to kill	HM *təjH (2.1/15)	AN *pa-aCay
3. 1SG	H *kɛŋ^{B} (5.1/22)	MP *-ku
4. 2SG	HM *mu̯ei (1.9/8)	AN *-mu ‘2nd person’
5. 2PL	HM *mi̯əu (1.9/1)	AN *-mu ‘2nd person’
6. soft	HM *mlu̯ɛjH (1.39/11)	MP *ma-lumu
7. bite	HM *dəp (2.3/7)	MP *ketep
8. insect/worm/ maggot	HM *klæŋ (5.31/24) H *klaŋ^{C} (5.31/24)	AN *qulej ‘maggot’
9. body louse	HM *tɛmX (2.1/22)	MP *tumah ‘clothes louse’

7 *The ancient Hmong-Mien world*

7.1 Introduction

The approach to the study of the ancient Hmong-Mien world taken in this short chapter is a preliminary and rather superficial catalog of *non-basic* vocabulary appearing in Wang and Mao 1995 that appears to be both *old* and *native*, with the goal of sketching a few features of the environment and of daily life at the time the proto-language was spoken. Each one of these criteria needs to be further explained, however, and the numerous problems with attempting such a sketch need to be acknowledged.

First, for this project, *non-basic* vocabulary is of greatest interest, because this is the vocabulary that reveals with some specificity the surroundings, practices, and beliefs of a group of people. Basic words like 'water' serve best when the goal is to elucidate distant genetic relationships, since by definition words with basic meanings are presumed to exist in all languages, therefore ensuring that comparanda can be found. A word like 'puttees' (leg wrappings), on the other hand, may not find a match in a candidate sister language group given different habits of dress, but the fact that it is old in Hmong-Mien sheds considerable light on one particular cultural detail of the ancient world. Some basic words are included here, however, if they are members of a culturally significant set (numbers, color terms, etc.).

The second criteria, that the word be *old*, is satisfied in the first instance if the word appears on both sides of the family. This is an uncontroversial way of establishing the oldest layer of the lexicon, especially when there are no potentially confusing issues like diglossia in standard and local varieties of the same language, as is common in larger language groups spoken by people in organized nation-states, or other types of known intra-family borrowing.

More controversially, however, Hmongic words are treated here as *old* if their semantic counterparts in Mienic are obvious Chinese borrowings. This seems to be justified by the frequency with which the same meaning is represented by a native word in Hmongic and a Chinese word in Mienic. For example:

	Hmongic	*Mienic*		
face	*bow^{B}	*hmiən^{A}	<	面 *miàn*
heart	*prow^{B}	*sim^{A}	<	心 *xīn*
pus	*bu̯ei^{C}	*nɔŋ^{C}	<	膿 *nóng*
fog/cloud	*hu^{A}	*mow^{C}	<	霧 *wù* (Cant. /mou^{6}/)
white	*qlow^{A}	*bæk^{D}	<	白 *bái*
red	*ʔlin^{A}	*sek^{D}	<	赤 *chì*
axe	*tu̯ei^{C}	*pou^{B}	<	斧 *fǔ*

bowl	*de^{B}	*ʔwən^{B}	<	碗 *wǎn*
trough	*qroŋ^{A}	*dzu^{A}	<	槽 *cáo*
thick	*tæ^{A}	*ɦɔu^{B}	<	厚 *hòu*

Although other explanations are possible, the fact that so many native words in Hmongic have synonyms in Mienic which are relatively recent Chinese loans leaves open the possibility that these Hmongic words may be more ancient than they appear, having been replaced by Chinese words in Mienic after the separation of the two groups. There is other evidence of relatively greater contact between the Chinese and speakers of Mienic languages: for example, unlike speakers of Hmongic languages, the Mien use Chinese in rituals, songs, and religious writings (Lemoine 1982, Purnell 1991, 1998). The Mien also use Chinese numerals alongside native numerals (Purnell 1968, forthcoming).

The third criterion—that the word be *native*—is both difficult to justify and difficult to determine. First, in terms of sketching the cultural context of the ancient world, one could say with good reason that this criterion is not very important: for example, we know that the Chinese words 'gold', 'silver', 'copper' and 'iron' were in the Hmong-Mien protolanguage over two thousand years ago, and that these metals were thus an important part of the ancient Hmong-Mien world. But words with clear connections to Chinese have not been included here, because it is of interest to know what terms for the environment, cultural traits, and artifacts were particular to the Hmong-Mien group. If Chinese and Hmong-Mien are not genetically related, a question which remains open (see discussion in chapter 6), these isolated words may be more likely to suggest aspects of the 'pre-protolanguage' world, the world before contact with Chinese. Identifying Chinese borrowings is occasionally difficult, however, and sinologists will no doubt be able to identify a Chinese source for some of the presumably native Hmong-Mien words listed below. Furthermore, some words with Chinese connections (such as 'rice/grain head') are deliberately included here because there is evidence to suggest that Chinese borrowed them from Hmong-Mien rather than the other way around. Finally, since the genetic relationships among the other families of the region have not yet been worked out, it is always possible that a word common to both Hmong-Mien and another family of the region (such as 'wild dog', shared by Hmong-Mien and Tai-Kadai) reflects a genetic relationship (and thus native status) rather than a borrowing relationship. Pending further research, such words are included here.

This chapter is intended to provide an outline of semantic fields which merit further focused study. More detailed work on each one would ideally include the oldest layer of Chinese borrowings in Hmong-Mien, and would add many more words to those few which continue to be used in comparative studies.

7.2 Homeland[101]

Since the publication of folk tales which tell of an ancient migration from a cold land in the north where animal furs were worn and the sun shone for only half the year (see especially Savina 1924), curiosity about the origins of the Hmong-Mien people has been steadily expressed by both the people themselves and by outsiders interested in this group. However, no linguistic evidence has been discovered to date to suggest that the Hmong-

[101] Sections 7.2, 7.3, and 7.4 are updated versions of material first presented in Ratliff 2004.

Mien people have ever lived in any place other than southern China. As Sagart (1995:341) writes:

> Converging evidence from history, linguistics and human genetics suggests that the rice-growing speakers of Proto-Hmong-Mien should be counted among the distant descendants of the early domesticators of rice in the Yangzi basin, rather than of the early millet farmers in the Huang He basin … Chinese historical records mentioning them as the *Man* reliably place them in the mid-Yangzi basin in Han times; the rice-growing tradition of the Hmong-Mien people, evident in the reconstructed vocabulary … goes in the same direction; finally, recent work by human geneticists has brought evidence for two great centers of development of populations in present-day China: one of these centers is the Huang He basin, and the other, the Yangzi basin. Their data show Hmong-Mien speakers to relate massively to the second center.

In support of this picture of the homeland of Proto Hmong-Mien speakers, there are ancient words for three animals and three plants explicitly linked to the provinces south of the Yangzi River. These independent evocations of the Yangzi represent a striking convergence, and add to the evidence that places the Hmong-Mien people in southern China at the time when Proto Hmong-Mien was spoken, which is as far back as the linguistic evidence can take us.[102]

The three animals are the pangolin (*manis pentadactyla* or *manis javanica*), the 'painted eyebrow' thrush, *huàméi niǎo* 畫眉鳥 (*garrulax canorus canorus*), and the river deer (*hydropotes inermis*). One is reconstructed to Proto Hmong-Mien: *rɔiH 'pangolin', (2.57/6, White Hmong *zaug*). The other two are reconstructed to Proto Hmongic: *cɔŋ^{A} 'painted eyebrow thrush' (4.1/29, White Hmong *coob*), and *ŋgu̯ei^{B} 'river deer' (5.6/12).[103] In China, the pangolin is found in the southern Yangzi River basin (*Wildlife of China*: 69). The dictionary *Cí hǎi* 辭海 records that the painted eyebrow thrush is a non-migratory bird, common in the south Yangzi River basin, and that the river deer is found in the middle and southern Yangzi River valley, as well as on reed beaches and grasslands on the southeast coast.

The three plants are cogongrass, or thatch grass (*imperata cylindrica*), Allium, also known as the Chinese onion or rakkyo (*allium chinense*), and the medicinal plant *houttuynia cordata*, in Chinese *yú xīng cǎo* 魚腥草. One is reconstructed to Proto Hmong-Mien: *NKan 'cogongrass' (5-6.4/19, White Hmong *nqeeb*). The other two are reconstructed to Proto Hmongic: *ɢlən^{B} 'Allium' (6.33/21, White Hmong *dos* 'small onion, leek'), and *truw^{D} '*houttuynia cordata*' (2.46/9, White Hmong *raus* in *tshuaj kab raus*). The *Zhōngguó Cǎodì Zīyuán Tújì* 中國 草地 資源 圖記 [Atlas of Grassland Resources of China] (1996) shows that the tropical cogongrass used for thatching roofs gradually disappears as one moves north from the 33rd to the 34th latitude, which places it in southern China. Allium has both medicinal purposes and may be eaten as a vegetable. It is cultivated in Guangxi, Hunan, Guizhou, Sichuan, and Guangdong (*Cí hǎi* 辭 海). *Yú xīng cǎo* is a plant with medicinal uses: the leaves and roots may also be eaten (*Cí hǎi* 辭海; Anderson 1993:213). It grows in provinces south of the Yangzi River.

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[102] Of course, if the Hmong people were from a northern region before the period recoverable by linguistic research, terms for northern animals and plants would have either been lost or reassigned to southern species, so this does not disprove a theory of an ancient migration from the north.

[103] This word does not exist in White Hmong (it should have the form *nkaus*), but compare *kauv* 'barking deer'.

7.3 Hunting

All of the old words related to hunting either appear to be native or bear a resemblance to words in other Southeast Asian languages rather than exclusively to Chinese. This suggests, unsurprisingly, that hunting was once important to the now primarily agricultural Hmong-Mien people.[104]

Hmong-Mien 'crossbow' (Hmongic *hnæn^{B} 2.8/19, White Hmong *hneev*; Mienic *hnək^{D} 2.8/7) is a famous pan-Southeast Asian root: cf. Mon-Khmer *snaʔ 'crossbow' (Shorto #97); Proto Tai *hnaa B1 'crossbow' (Li 1977); and Chinese 弩 'crossbow' (OC *[n]ˤaʔ > MC nuX > Man. *nǔ*). Hmong-Mien *pənX 'to shoot' (1.1/21, White Hmong *pov* 'to throw') is also a widely distributed root: cf. Mon-Khmer *paɲʔ 'to shoot' (Shorto #905), and Malayo-Polynesian *panah 'to shoot; a firearm' (Dempwolff 1938).

Some languages retain the original meaning of the Hmongic word *ndro^{C} 'to track' (2.51/7, White Hmong *nrog*), but in Southeast Asian dialects of Hmong a semantic development from 'to track' > 'to follow' > 'to accompany' > 'with' has occurred. A noun *hmjænX 'footprint/track' (1.23/19, White Hmong (*h*)*neev*) can also be reconstructed to Proto Hmong-Mien.

The word *NGej 'meat/wild game' is reconstructed to Proto Hmong-Mien and appears to be native (5-6.6/10, White Hmong *nqaij*). Although it is impossible to know which animals were hunted, Proto Hmong-Mien words for wild animals include *qrep 'bear' (6.46/10, White Hmong *dais*) and 'monkey' (Hmongic *ʔlin^{A} 2.40/18, White Hmong *liab*; Mienic *ʔbiŋ^{A} 1.4/18), while Proto Hmongic wild animals include *pljɨ^{D} 'wildcat' (1.31.1/2, White Hmong *plis*) and *hmaŋ^{C} 'wild dog' (1.8/24, White Hmong *hma*).

7.4 Agriculture

Rice must figure prominently in any picture of the ancient Hmong-Mien world. Unlike the terms for a number of non-rice crops (corn, soybeans, buckwheat, various types of potatoes and beans), Hmong-Mien terms for rice are less likely to show similarities to forms with similar meanings in neighboring families. Quite remarkable is the poor correlation with rice terms in Tai-Kadai or Austronesian, the languages of major rice growing peoples (Hartmann 1998, Blench 2005). Although some words associated with wet-rice cultivation—such as 'seedling' and 'sickle'—have been borrowed from Chinese, the key terms 'rice plant/paddy', 'husked rice', and 'cooked rice' do not show strong evidence of having been borrowed.[105] Furthermore, a deep influence of Hmong-Mien upon Chinese may be evident in the word 'rice/grain head'. This pattern is understandable if the prehistoric millet-growing Chinese learned how to grow rice from their southern Hmong-Mien neighbors (Te-Tzu Chang 1983:70).

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[104] To this set could be added a list of old words that might be related to "gathering", such as 'mushroom', 'flower', 'fruit', 'grape', 'plum', 'persimmon', 'egg', 'shell', 'lay eggs', 'nest', 'beeswax', 'root', 'green/raw', and words for various insects—but since words with these meanings are common to many cultures, they are not especially revealing.

[105] Baxter (quoted in Haudricourt and Strecker 1991:339) and Sagart (1995:337) have both entertained a possible connection between Chinese 稻 'rice; paddy' (OC *[l]ˤuʔ > MC dawX > Man. *dào*) and Hmong-Mien *mbləu 'rice plant'. Although more skeptical now, they still see it as a possibility (p.c., 2008). They also see a possible connection between Hmong-Mien *hnrəaŋH 'cooked rice' and Chinese 饟 'bring food to workers in the field' > 'food brought to workers in the field' (OC *n̥aŋ(ʔ)-s > MC syangH > Man. *xiǎng*).

The three words for which no convincing outside connections have been found are Hmong-Mien *mbləu 'rice plant/paddy' (1.36/3, White Hmong *nplej*), Hmong-Mien *hnrəaŋH 'cooked rice' (2.53/21, White Hmong *hno*), and Hmongic *ntsuw^{C} 'husked rice' (3.4/9)[106]. A third native word which may have originally been related to rice agriculture, but which now has a more general meaning, is Hmongic *ʔrin^{A} 'to dry (rice) in sun' (2.55/18, White Hmong *ziab*). The word whose presence in Chinese may be attributable to contact with southern rice-growers is Hmong-Mien *hnɔn 'grain head' > 'bag/pocket' (2.8/24, White Hmong *hnab* 'head of grain; bag/pocket'). The word is widespread in Hmong-Mien with the meaning 'grain head', but appears with its metaphorically extended meaning 'bag/pocket' only in Hmongic. Its counterpart in Chinese 囊 'sack/bag' (OC *nˁaŋ > MC nang > Man. *náng*) has only the derivative meaning. The contact situation was more complex than this, however: Tibeto-Burman also has *s-nam 'ear of grain' (Matisoff 2003), which seems to be the same word.

7.5 Reckoning and measuring

As discussed in chapter 5, very few native numerals or quantity words can be reconstructed for Hmong-Mien: the core members are *ʔu̯i 'two' (7.1/14, White Hmong *ob*), *pjɔu 'three' (1.16/3, White Hmong *peb*), and Hmongic *ntɔ^{C} 'many/much' (2.4/6, White Hmong *ntau*). Both 'one' and the higher numerals are Chinese, and Hmong-Mien borrowed the numerals 'four' through 'nine' from some Tibeto-Burman language ('ten' was certainly a borrowing, although it is difficult to determine whether the source was Chinese or Tibeto-Burman). Although it is possible that these borrowings replaced native words for the numerals 'four' through 'ten', it is certainly possible to imagine a world in which 'two', 'three', and 'many/much' would suffice for the needs of daily life.

Old terms of measure include Hmongic *ɢraŋ^{A} 'span, (double) arm' (6.48/24, White Hmong *daj*) and *qro^{C} 'span, (thumb-to-middle) finger' (6.46/7, White Hmong *dos*). Using the body as a reference in measuring is characteristic of many languages of Southeast Asia: see, for example, L-Thongkum 2002 (415-418) for a long list of measurement terms of this type which can be reconstructed for proto-Katuic with very precise semantics.

7.6 Material culture

Words for house and parts of the house and grounds are old in Hmong-Mien: Hmong-Mien *prəuX 'house' (1.46/3, White Hmong *tsev*), *gru̯eŋ 'door/gate' (5.48/29, White Hmong *rooj*); Hmongic *nthaŋ^{A} 'attic' (2.5/24, White Hmong *nthab*), *qroŋ^{A} 'trough' (6.46/28, White Hmong *dab*).

The Hmong-Mien word for 'fan', *mbljæp (1.36.1/5, White Hmong *ntxuam*) does not look like Chinese; it is provisionally considered to be an old native word. The Hmong-Mien word for 'bamboo strip' *ɲcəuk (4.4/6, White Hmong *ncau*), used for tying things together, is also quite old, however, this may be a loanword from Chinese 竹 'bamboo' (OC *truk > MC trjuwk > Man. *zhú*). Four tools can also be reconstructed to Proto Hmongic: *mblow^{D} 'whip' (1.36/13, White Hmong *nplawm*), *tu̯ei^{C} 'axe' (2.1/12, White

[106] Not attested in White Hmong. Another word for 'husked rice' is Hmongic *tshɛŋ^{B} (3.2/22, White Hmong *txhuv*). This probably meant 'millet' originally, since the word has that meaning in Xianjin and Shimen (West Hmongic).

Hmong *taus*), *thoŋ^{B} ‘bellows’ (2.2/28)[107], and *tsæ^{C} ‘billhook (brush knife)’ (3.1/5, White Hmong *txuas*).

In the domain of clothes and clothes-making, the following words can be reconstructed to the Hmong-Mien level: *ntət ‘to weave’ (2.4/7, White Hmong *ntos*), *ntei ‘cloth’ (2.4/12, White Hmong *ntaub*) and *nduH ‘ramie/hemp’ (2.6/16, White Hmong *ntuag*)[108]. The word ‘shuttle’ can only be reconstructed with confidence to the Hmongic level—*ɴGəŋ^{B} (5-6.6/21, White Hmong *nqos*)—although the Mienic forms for ‘shuttle’ are probably related (*ɴglow^{B}, 6.36/16). No particular clothing items can be reconstructed to Proto Hmong-Mien, but four may be reconstructed to Proto Hmongic, and thus following discussion above may represent items in use at the time Proto Hmong-Mien was spoken: *tin^{A} ‘skirt’ (2.1/18, White Hmong *tiab*), *nthrɔŋ^{A} ‘puttees’ (2.50/29, White Hmong *nrhoob*), *bɔ^{C} ‘bracelet’ (1.3/6, Green Mong *paug*), *mphle^{A} ‘finger ring’ (1.35/10, White Hmong *nplhaib*).

Two other words of material culture are semantically isolated. Further study may reveal either that they are old borrowings, or that their original meanings were not as ‘modern’ as they appear today: Hmong-Mien *N-kjaj ‘medicine’ (5.16/15),[109] and Hmongic *ntow^{B} ‘paper’ (2.4/13, White Hmong *ntawv*).

7.7 Non-material culture

The only color term that dates back to Hmong-Mien is ‘black’, and perhaps ‘green/blue’—‘white’ and ‘red’ can only be reconstructed for Hmongic. Since the Mienic languages use the Chinese words 白 (Man. *bái*) and 赤 (Man. *chì*) for ‘white’ and ‘red’, it is probably the case that these three color terms are equally old, and two have simply been replaced by loanwords in Mienic. Typological research on color term sets (Berlin and Kay 1969, Kay and McDaniel 1978, Baxter 1983) shows that if a language has only four colors, a likely set will be ‘black’, ‘white’, ‘red’, and ‘green/blue’[110]—so it is probable that the Chinese loanword ‘yellow’—黃 (OC *N-kʷˁaŋ > MC hwang > Man. *huáng)* > Hmongic *ɢʷaŋ^{A} (5-6’.3/24, White Hmong *daj*)—and later a separate word for ‘blue’, etc. were additions to this basic set, rather than replacements. The word for ‘black’ is difficult to reconstruct at the Hmong-Mien level because of rime and tone mismatches between forms in the two sub-families, although they no doubt reflect the same root: Hmongic *qrɛŋ^{A} (6.46/22, White Hmong *dub*) and Mienic *qrɨɛk^{D} (6.46/1). ‘Green/blue’ presents even greater difficulties in onset and rime correspondence, but nonetheless Wang and Mao (1995:57) put Hmongic *mpru^{A} (1.49/16, White Hmong *ntsuab*) and Mienic *ʔmeŋ^{A} (1.7/29) together. ‘White’ is Hmongic *qlow^{A} (6.31/13, White Hmong *dawb*), and ‘red’ is Hmongic *ʔlin^{A} (2.40/18, White Hmong *liab*).

The old and stable family word for ‘physical affliction’ encompasses the three notions of pain, illness, and injury that are often represented by separate words in other languages: Hmong-Mien *ʔmun ‘illness/pain’ (1.7/27, White Hmong *mob*).

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[107] This word does not exist in White Hmong (it should have the form *thav*).

[108] Additionally, although not important for our purpose here, are the Hmong-Mien native words *(h)naŋX ‘to put on/wear (clothes)’ (2.8/24, White Hmong *hnav*) and *ntɔŋH ‘to put on/wear (cap)’ (2.4/29, White Hmong *ntoo*).

[109] This word does not exist in White Hmong (it should have the form *kuab*).

[110] The other possible four-term set is white-dark (black/green/blue)-red-yellow (Baxter 1983:4–5).

Words in the semantic field of belief can be reconstructed for both Hmongic and Mienic separately: Hmongic *qraŋ^{A} 'spirit/ghost' (6.46/24, White Hmong *dab*), Mienic *hmjæn^{B} 'spirit/ghost' (1.23/19)[111], and Hmongic *blja^{A} 'soul' (1.33.1/4, White Hmong *plig*). 'Sun/day' (Hmongic *hnɛŋ^{A} [2.8/22 White Hmong *hnub*] and Mienic *hnu̱ɔi^{A} [2.8/11]) and 'moon/month' (Hmong-Mien *hlaH [2.41/4, White Hmong *hli*]) are ancient, but clearly not native: they were borrowed from Tibeto-Burman *s-nəy and *s-la as a pair (Benedict 1987a, Mortensen 2002). Benedict reasonably hypothesized that they were associated with sun and moon cults, and were borrowed because of the nature of the cultural contact between the two groups. Of the words for musical instruments, only the word 'drum' is native and ancient: Hmong-Mien *ndruX (2.51/16, White Hmong *nruas*). It best fits into this category because of the common use of musical instruments in religious ceremonies.

[111] It is possible that two of these words are loanwords: for Hmongic 'soul' (< Tibeto-Burman *b-la), see Benedict 1987a and Mortensen 2002; for Mienic 'spirit/ghost' (< Old Tibetan *sman or Kam-Sui *hmaaŋ) see Ratliff 2001a.

Index of proto forms by English

OC=Old Chinese (Baxter and Sagart 2009); MC=Middle Chinese (Baxter 2000); Mandarin; O=onset category; R=rime category; English gloss; Reconstr=Reconstruction; L=level: (1) Hmong-Mien, (2) Hmongic, (3) Mienic; WO=Wang and Mao 1995 onset category; WR=Wang and Mao 1995 rime category;[112] Chap=chapter and section where word is discussed.

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				1.12	22	1SG (I/me)	*wɛŋ^{B}	2	12	215	5.3
				5.1	22	1SG (I/me)	*kɛŋ^{B}	2	541	268	5.3, 6.3.2, 6.3.4
				4.10	4	1SG (I/me)	*ʔja^{A}	3	442	130	5.3
				1.1	3	1PL (we/us)	*N-pɔu	1	61	244	5.2, 5.3
				1.9	8	2SG (you)	*mu̯ei	1	21.1	242	5.3, 6.3.2, 6.3.4
				5.3	8	2SG (you)	*gʷ^{A}	2	xx	xx	5.3
				1.9	1	2PL (you-all)	*mi̯əu	1	xx	xx	5.3, 6.3.4
				2.9	1	3SG (he/she/it)	*ni̯æn(X)	1	213.1	81	2.1.4, 5.3
				3.3	13	able	*dzow^{A}	2	159	263	
風	*prəm-s *prəm	pjuwngH pjuwng	*fèng* *fēng*	1.1	28	air	*poŋ^{C}	2	1	178	
				4.3	18	alive	*ɟin^{A}	2	xx	xx	
				6.33	21	Allium	*ɢləŋ^{B}	2	651	138	7.2
韭	*[k](r)uʔ	kjuwX	*jiǔ*	4.3	A	Allium	*ɟiu^{B}	3	435	3	
				5.48	21	animal fat/oil	*grəŋ^{A}	2	279	214	4.4
				1.8	10	animal fat/oil	*hmej^{A}	3	8.1	37	
				2.1	3	answer	*tau	1	205	95	
				1.5	5	ant	*mphæ^{B}	2	5	168	4.2
				1.51	6	ant	*mbrɔ^{D}	2	78	241	6.3.3
				4.5	1	ant	*ɟhi̯əu^{B}	3	185	210	
				3.16	7	armpit	*tsjo$^{C/D}$	2	313	258	

[112] Words that have "xx" under the Wang and Mao 1995 onset and rime category columns (WO and WR) come either from Wang 1994 or the author's notes.

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.56	22	artemisia	*hrɛŋ^{B}	2	581	100	
慚	*[dz]^{ʕ}am	dzam	*cán*	3.3	24	ashamed	*dzaŋ^{A}	2	111	158	
				3.17	12	ashes	*tshjɯ̯əiX	1	326	207	
				2.9	22	ask	*nɛŋ^{C}	2	225	61	
				2.9	11	ask	*nɯ̯ai^{C}	3	225	61	
				xx	28	ask for	*[n/l]oŋ^{C}	3	213.3	216	6.2.1
要	*ʔew-s	ʔjiewH	*yào*	4.10	16	ask for/want	*ʔju^{B}	2	442	191	
				5.21	29	asleep	*ŋgjɔm^{A}	3	474	192	
				2.5	24	attic	*nthaŋ^{A}	2	209	121	2.1.2.2, 7.6
				2.1	12	axe	*tɯ̯ei^{C}	2	205	39	7.1, 7.6
斧	*p(r)aʔ	pjuX	*fǔ*	1.1	13	axe	*pou^{B}	3	1	263	7.1
				6.3	9	back (of body)	*ɢuw^{D}	2	615	204	
				2.3	19	back (of body)	*dan^{B}	3	207	80	
				5-6.1	24	back (vs. front)	*N-Kaŋ	1	613	45	2.1.2.2
腐	*[b](r)oʔ	bjuX	*fǔ*	1.3	15	bad/spoiled	*bɯ̯a^{B}	2	3	151	
袋	*-l^{ʕ}ək-s	dojH	*dài*	2.3	1	bag	*di^{C}	3	207	1	
炙	*tAk	tsyek	*zhì*	4.1	1	bake/toast	*ci^{C}	2	xx	xx	4.4
秤	*t^{h}əŋ-s	tsyhingH	*chèng*	2.20	29	balance	*nthjɯ̯əŋH	1	376	102	4.2
				2.41	7	bamboo	*hləwX	1	215	206	
				2.48	13	bamboo	*drow^{D}	2	255	263	
				5-6.2	29	bamboo bowl	*khɔk^{D}	3	542	205	
				5.1	9	bamboo hat	*kuw^{D}	2	541	224	2.1.2.2
笠	*(kə.)rəp	lip	*lì*	2.57	7	bamboo hat	*rəp^{D}	3	605	106	
				5-6.3	19	bamboo pipes	*ɢæn^{A}	2	xx	xx	
				1.51	15	bamboo shoot /orphan	*mbrəjH	1	78	94	6.3.2
竹	*truk	trjuwk	*zhú*	4.4	6	bamboo strip	*ɲcəuk	1	352	241	7.6
				4.1	21	bark, to	*cuŋ^{C}	3	433	218	
廩	*(pə.)r[ə]mʔ	limX	*lǐn*	2.57	22	barn/granary	*rɛmX	1	605	174	3.2, 6.2.2
				1.4	9	bat (animal)	*ʔbuj^{A}	3	16	243	
				4.12	21	be	*jəŋ^{C}	2	444	214	4.4
是	*[d]eʔ	dzyeX	*shì*	2.18	10	be	*djej^{B}	3	351	37	
				4.7	21	be at/live	*ʔɲəŋ^{A}	2	403	229	4.4
				4.10	21	be at/live	*ʔjəm^{A}	3	403	229	4.4
荅	*[t]^{ʕ}[ə]p	top	*dá*	2.3	9	bean	*dup	1	207	271	7.4
腐	*[b](r)oʔ	bjuX	*fǔ*	7.13	8	bean curd	*hɯ̵^{B}	2	xx	xx	
				6.46	10	bear	*qrep	1	673	124	7.3
				1.16	1	bear fruit	*pji^{C}	2	xx	xx	4.4

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
髯	*nam	nyem	*rán*	4.9	24	beard	*ɲaŋ^{C}	2	405	45	
髟	*s[ʕ]ram	sræm	*shān*	2.13	29	beard	*sɯ̯am^{A}	3	203	211	
				2.4	9	beat (someone)	*ntuw^{D}	2	208	110	
緻	*[d]ri[t]-s	drijH	*zhì*	3.3	10	beautiful	*dzej^{C}	3	174	37	
處	*t.q^{h}aʔ-s	tsyhoH	*chù*	4.2	13	bed/place	*chouH	1	350	263	
				1.16	1	bedbug	*pji	1	25	1	4.2
				1.9	8	bee	*mɯ̯ei^{B}	3	21.1	37	
				4.1	24	beeswax	*N-ci̯æŋ	1	457	139	
橐	*t^{hʕ}ak	thak	*tuó*	2.2	28	bellows	*thoŋ^{B}	2	206	178	7.6
籥	*[r]^{ʕ}a	lu	*lú*	2.42	13	bellows	*lou^{A}	3	216	263	
				4.2	12	belly	*chɯ̯ei^{A}	2	434	208	
				2.41.1	7	big	*hljo	1	287	225	4.4
				3.1	5	billhook	*tsæ^{C}	2	157	149	7.6
				2.9	29	bird	*m-nɔk	1	213.2	205	2.1.2.1, 2.1.4, 4.2.4, 6.3.2
				2.3	7	bite	*dəp	1	207	106	6.3.4
				7.1	18	bitter	*ʔim	1	709	4	
				6.46	22	black	*qrɛŋ^{A}	2	673	252	7.7
				6.46	1	black	*qri̯ɛk^{D}	3	673	110	7.7
				3.18	5	bland/tasteless	*dzjæ^{C}	2	315	171	
			/tsjäm/[113]	3.1	24	bland/tasteless	*tsam^{B}	3	109	154	
				1.34	3	blind	*ʔbləu^{B}	3	16	244	
				3.20	24	blood	*ntshjamX	1	341	97	6.3.3
				1.47	16	blow, to	*phru^{A}	2	74	191	
				5.21	21	boat/ship	*ŋgjəŋ^{A}	2	474	214	
				3.4	24	boat/ship	*ʔdzaŋ^{B}	3	160	101	
				4.1	3	body/trunk	*cæw^{B}	2	xx	xx	4.4
沸	*-p[u][t]-s	pjɨjH	*fèi*	1.4	12	boil (INTR)	*mpɯ̯æiH	1	16	39	
				2.2	7	boil (TR)	*tho^{A}	2	xx	xx	
				7.13	12	boil (TR)	*hɯ̯ei^{C}	2	731	39	
煮	*taʔ	tsyoX	*zhǔ*	2.16	13	boil (TR)	*tjou^{B}	3	349	263	
				3.2	28	bone	*tshuŋX	1	146	180	4.2.3
假	*Cə.k^{ʕ}raʔ	kæX	*jiǎ*	5-6.1	4	borrow	*KaX	1	613	92	
				2.3	10	bowl	*de^{B}	2	207	73	7.1
碗		ʔwanX	*wǎn*	1.10	21	bowl	*ʔwən^{B}	3	10	157	7.1
				1.3	6	bracelet	*bɔ^{C}	2	3	187	7.6
				5.18	21	bracelet	*gjəm^{A}	3	472	229	

[113] Early Min (Norman 1988:232)

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
辮	*-[b]^{ʕ}e[n]ʔ	benX	*biàn*	1.21	18	braid/a braid	*mbjinX	1	54	7	4.4
拗	*q^{ʕ}riwʔ	ʔæwX	*ǎo*	2.40	7	break	*ʔlo^{B}	2	211.2	206	6.2.1
拗	*q^{ʕ}riwʔ	ʔæwX	*ǎo*	2.7	7	break	*ʔnəu^{B}	3	211.2	206	6.2.1
				2.49	21	breast/chest	*ntrəŋ^{A}	2	xx	xx	
				4.13	24	breed/propagate	*ɕaŋ^{C}	2	443	121	
橋	*[g](r)aw	gjew	*qiáo*	4.3	16	bridge	*ɟow	1	435	172	
梯	*l̥[ə]j	thej	*tī*	2.41	5	bridge	*hlæ^{A}	2	215	168	
黃	*N-k^{wʕ}aŋ	hwang	*huáng*	5-6’.4	24	bright	*ʔg^{w}i̯əŋ^{A}	3	640	121	
黃	*N-k^{wʕ}aŋ	hwang	*huáng*	5-6’.3	24	bright/light	*G^{w}aŋ^{A}	2	663	121	
				1.9	3	brother	*məu^{B}	3	21.1	77	
桶		thuwngX	*tǒng*	2.2	29	bucket	*thoŋ(X)	1	206	142	3.2, 6.2.4
蕎		gjew	*qiáo*	4.3	3	buckwheat	*ɟæu	1	435	259	7.4
				1.1	3	burn	*pɔu^{B}	3	13	77	
灼	*[t]ewk	tsyak	*zhuó*	2.18	1	burn	*djiɛk^{D}	3	183	148	
燎	*[r]awʔ	ljewX	*liǎo*	2.41.1	13	burn (mountain)	*hljow^{B}	2	287	263	
				1.17	3	burn (TR)	*phjæw^{B}	2	50	244	
				5.46	12	burn (TR)	*kru̯ei^{B}	2	277	39	
炙	*tAk	tsyek	*zhì*	4.3	1	burn/be alight	*ɟi^{C}	2	183	148	4.4
斂	*[r][a]m-s	ljemH	*liàn*	2.42.1	21	bury	*ljəŋ^{B}	2	288	214	
				1.31	9	bury	*plop^{D}	3	73	271	6.3.2
鬥	*t^{ʕ}ok-s	tuwH	*dòu*	2.49	9	butt (of bulls)	*ntruw^{C}	2	256	243	
				1.34	2	butterfly	*mpleuH	1	52	35	
買	*m.r^{ʕ}ajʔ	mɛɨX	*mǎi*	1.9	11	buy	*mɛjX	1	9.1	93	2.1.3.1, 4.4
奉	*p^{h}(r)oŋʔ	phjowngX	*fèng*	1.2	22	carry in 2 hands	*phu̯ɛŋ^{B}	2	14	252	
				4.8	4	carry on back	*hŋa^{C}	3	403	130	
擔	*mə-t^{ʕ}am	tam	*dān*	2.4	24	carry on shoulder	*ntam	1	208	97	
				4.1	3	carry on shoulder	*cæw^{C}	2	xx	xx	
				1.9	29	carrying pole	*mu̯əŋ^{B}	3	21.1	85	
圈	*m-q(^{h})(r)aʔ	ngjoX	*yǔ*	5.36	16	cattle pen	*ŋgluə	1	546	191	
斤	*[k]ər	kjɨn	*jīn*	5’.16	20	catty	*k^{w}jan	1	481	23	2.1.2.2
中	*truŋ	trjuwng	*zhōng*	2.49	28	center/middle	*ntroŋ	1	256	178	
				5.32	9	centipede	*khluw^{D}	2	578	153	4.2.4
				2.13	7	centipede	*səp^{D}	3	167	106	4.2.4, 6.3.3
				1.5	1	chaff/husk	*mphi̯ɛk	1	40	148	2.1.2.2
				1.17	5	chaff/husk	*S-phjæ^{C}	2	59	149	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
炭	*[tʰ]ˁa[n]-s	thanH	*tàn*	2.2	19	charcoal	*thanH	1	206	99	3.2
				1.32	xx	cheek/face	*phl-^{C}	2	xx	xx	
				1.10	4	cherry	*ʔwa^{A}	2	xx	xx	
嚼	*[dz]ewk	dzjak	*jué*	4.1	15	chew	*cu̯a^{C}	2	433	94	
雞	*kˁe	kej	*jī*	5-6.1	10	chicken	*Kəi	1	613	261	2.1.2.2, 6.3.2
			/kiãi^{3}/[114]	5’.16	12	child	*kʷjei^{B}	3	481	39	
				3.18	10	chin/lower jaw	*dzje^{D}	2	xx	xx	
鑿	*[dz]ˁawk	dzak	*záo*	3.3	6	chisel	*dzəuk	1	111	241	4.2
				3.19	20	choke	*ntsjeŋH	1	436	44	
				2.4	7	chop	*ntəwX	1	208	206	
箸	*[d]rak-s	drjoH	*zhù*	2.48	13	chopsticks	*drouH	1	255	263	3.2
拍	*mə-pʰˁrak	phæk	*pāi*	1.6	5	clap	*mbæ^{A}	2	6	168	
拍	*mə-pʰˁrak	phæk	*pāi*	1.5	5	clap	*bhæk^{D}	3	28	72	
				4.7	5	claw/talon	*ʔɲau^{B}	3	403	152	
				7.13	22	clay pot /earthen jar	*hɛŋ^{A}	2	719	47	
				3.5	2	clean	*ntshɨ^{A}	2	161	35	
淨	*N-[dz]eŋ-s	dzjengH	*jìng*	3.6	21	clean	*ndzəŋ^{C}	3	114	140	
清	*N-s-r̥eŋ	tshjeng	*qīng*	3.20	18	clear	*ntshjiə̯ŋ	1	317	159	4.3
隻	*tek	tsyek	*zhī*	3.1	1	CLF-birds	*tsi̯ɛk^{D}	3	157	148	
				2.40	22	CLF-bowls/houses	*ʔleŋ^{A}	2	211.2	173	6.2.1, 6.2.4
				2.7	22	CLF-bowls /houses	*ʔnɛɔm^{A}	3	211.2	173	6.2.1, 6.2.4
				2.40	1	CLF-fields	*ʔli̯əu^{C}	3	238	210	
				2.3	22	CLF-horses	*dɛŋ^{B}	2	207	100	6.2.4
				2.40	7	CLF-mouthfuls	*ʔlo^{C}	2	214	225	6.2.4
				2.42	19	CLF-people	*lan	1	216	118	
片	*pʰˁe[n]-s	phenH	*piàn*	1.2	21	CLF-quilts	*phəan	1	2	194	6.2.4
				4.2	28	CLF-rooms	*choŋ^{B}	2	xx	xx	
句	*[k](r)o-s	kjuH	*jù*	5.16	13	CLF-sentences	*kjou^{C}	3	397	263	
張	*traŋ	trjang	*zhāng*	2.46	24	CLF-tools	*traŋ^{A}	2	265	250	6.2.4
張	*traŋ	trjang	*zhāng*	2.46	28	CLF-tools	*truŋ^{A}	3	265	250	6.2.4
				4.4	3	climb	*ɲcæw^{C}	2	436	96	
				2.4	12	cloth	*ntei	1	232	208	7.6
				2.55	9	clothes	*ʔruj^{A}	3	580	260	
				7.1	29	cloud/haze	*ʔɔŋ^{C}	2	709	248	

[114] Pucheng Min (Norman 1988:243)

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				5-6.4	19	cogongrass	*NKan	1	616	99	4.3, 7.2
				2.7	27	cold	*ʔnu̯ɔmH	1	211.1	98	
				5.16	22	cold (day)	*kju̯ɛŋ^{B}	3	481	252	
				2.57	5	comb	*ræ^{C}	2	582	149	
				2.3	15	come	*daj	1	207	150	2.1.3.1
				2.42	7	come back	*ləwX	1	216	206	
				2.55	10	conceal	*ʔre^{D}	2	580	48	
				2.28	20	cooked/ripe	*sjen^{B}	2	323	24	
熟	*[d]uk	dzyuwk	*shú*	2.18	B	cooked/ripe	*dju̯ok^{D}	3	363	258	
				1.27	18	cooking pot/pan	*wjin^{B}	2	36	7	
				4.5	7	cooking smoke	*ɲchi̯ouH	1	437	134	
				3.3	18	cool (water)	*dzin^{B}	2	159	83	
銅	*-l^{ʕ}oŋ	duwng	*tóng*	2.3	29	copper	*dɔŋ	1	207	142	3.2, 7.1
				2.8	29	cough	*hnɔp	1	212.1	254	
				7.13	18	cover (with tile)	*hi̯əm$^{B/C}$	3	720	135	6.3.2
				1.10	7	cover self	*ʔwo^{B}	2	10	206	
				1.6	7	cover, to	*mbo^{C}	2	6	225	
				5.1	21	cover, to	*kom^{B}	3	553	193	6.3.2
				4.12	7	cow/ox	*jo^{B}	2	xx	xx	
匠	*S.[b]aŋ-s	dzjangH	*jiàng*	3.3	26	craftsman	*dzi̯ɔŋH	1	111	65	
				5.21	28	crawl	*ŋgjoŋ^{C}	2	474	216	
				4.7	22	crawl	*ʔɲɛɔŋ^{A}	3	403	215	
				1.36.1	29	crazy	*mbljɔŋ^{A}	2	xx	xx	
冠	*[k]^{ʕ}on	kwan	*guān*	1.10	1	crest/comb	*ʔwi̯æn	1	10	81	
曲	*k^{h}(r)ok	khjowk	*qū*	5.5	9	crooked	*ŋkhuw^{D}	2	545	224	
				4.1	18	crop (of bird) /gizzard	*ciŋ^{B}	3	400	8	
				1.16	18	crop of bird	*pjin^{B}	2	49	43	
				5-6.1	29	crops	*qɔŋ^{A}	2	xx	xx	
過	*[k]^{wʕ}aj-s	kwaH	*guò*	5-6'.1	15	cross (river)	*K^{w}ajH	1	661	112	
				2.8	19	crossbow	*hnæn^{B}	2	212.1	129	2.1.4, 4.2, 7.3
				2.8	7	crossbow	*hnək^{D}	3	212.1	129	2.1.4, 7.3
烏		ʔu	*wū*	7.1	16	crow (bird)	*ʔu^{A}	2	xx	xx	
歌	*[k]^{ʕ}aj	ka	*gē*	5-6.1	15	crow, to	*KajH	1	625	150	
				6.3	8	cuckoo	*ɢʉ^{B}	2	xx	xx	
瓜	*k^{wʕ}ra	kwæ	*guā*	5-6'.1	4	cucumber	*K^{w}a	1	661	92	2.1.2.2

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				5.31	5	cut	*klæp	1	577	144	
割	*mə-k^{ʕ}at	kat	*gē*	5-6.1	4	cut	*kat^{D}	3	553	88	
破	*p^{hʕ}aj-s	phaH	*pò*	1.2	15	cut open	*phajH	1	2	150	6.2.2
				1.46	9	dark	*pruw^{D}	2	73	110	
				1.20	10	daughter/girl	*mphje^{D}	2	53	48	2.1.2.2
媳		sik	*sī*	4.13	1	daughter/girl	*ɕi̯ɐk^{D}	3	359	148	
婦	*Cə.[b]əʔ	bjuwX	*fù*	1.6	22	daughter-in-law /bride	*mbu̯ɐŋ^{B}	3	18	252	
聾	*[r]^{ʕ}oŋ	luwng	*lóng*	2.42	28	deaf	*loŋ^{A}	2	216	179	
				2.4	21	deaf	*ʔduŋ^{A}	3	244	218	
				2.1	7	deep	*N-tu̯o	1	205	225	4.3
獐	*taŋ	tsyang	*zhāng*	4.1	28	deer	*cuŋ^{A}	3	397	249	
下	*[g]^{ʕ}raʔ	hæX	*xià*	5-6.6	4	descend	*^{NG}a^{B}	2	618	130	4.3, 6.2.2
下	*mə-[g]^{ʕ}raʔ-s	hæH	*xià*	5.13	4	descend	*ɣa^{C}	3	402	130	4.3, 6.2.2
露	*[r]^{ʕ}ak-s	luH	*lù*	2.42	8	dew	*lʁ^{C}	2	xx	xx	
				2.3	15	die	*dəjH	1	207	151	4.4, 6.3.2, 6.3.4
抉	*q^{wʕ}et	ʔwet	*jué*	1.10	10	dig	*ʔwet^{D}	3	10	50	
				5-6.6	15	diligent	*NGəjH	1	630	151	
嫌	*N-k^{ʕ}em	hem	*xián*	5.13	20	dislike	*ɣi̯em^{A}	3	402	40	
				3.5	19	disperse	*dzhan^{C}	3	161	99	
				4.12	6	dissolve	*jəuk^{D}	3	444	241	
煬	*laŋ	yang	*yáng*	4.12	24	dissolve/melt	*jaŋ^{A}	2	456	66	
煬	*laŋ	yang	*yáng*	4.12	28	dissolve/melt	*juŋ^{A}	3	456	66	
				5.1	28	ditch	*koŋ^{A}	2	541	26	
				7.1	15	do/work	*ʔəjH	1	709	151	
狗	*-[k]^{ʕ}(r)oʔ	kuwX	*gǒu*	6.31	3	dog	*qluwX	1	649	115	4.2.4
				5.48	29	door/gate	*gru̯eŋ	1	279	46	7.6
龍	*mə-roŋ	ljowng	*lóng*	2.57	28	dragon	*-roŋ	1	582	216	
龍	*mə-roŋ	ljowng	*lóng*	5.31.1	28	dragon	*kljuŋ^{A}	3	601	249	
				1.4	12	dream	*mpeiH	1	4	208	4.3, 6.3.3
欲	*q^{hʕ}[ə]p	xop	*hē*	7.13	9	drink/smoke	*hup	1	719	271	6.2.2
漏	*[r]^{ʕ}o-s	luwH	*lòu*	5.51	7	drip	*ŋgro^{C}	2	282	206	
				2.19	9	drip	*ʔdjɐp^{D}	3	424	163	
				3.19	18	drive in (nail)	*ntsjin^{C}	2	316	5	
				2.51	16	drum	*ndruX	1	258	111	7.7
				3.1	2	dry (clothes)	*tsek^{D}	3	157	17	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.55	18	dry (rice) in sun	*ʔrin^{A}	2	580	119	7.4
				5-6.5	5	dry/thirsty	*NKhæj	1	617	169	
熇	*[k^{h}]^{ʕ}awʔ	khawX	*gǎo*	5-6.2	5	dry/withered	*KhæwX	1	614	114	2.1.2.2
鴨		ʔæp	*yā*	7.1	7	duck	*ʔap	1	709	105	
				6.3	15	duck	*ɢu̯a^{C}	2	627	151	
染	*n[a]mʔ	nyemX	*rǎn*	4.9	27	dye, to	*ɲum^{C}	3	405	136	6.3.2
				6.31	24	eagle/hawk	*qlaŋX	1	649	120	4.2.3
				1.51	3	ear	*mbræu	1	78	113	
早	*Nə.[ts]^{ʕ}uʔ	tsawX	*zǎo*	3.4	7	early	*ntsi̯ouX	1	184	134	
				2.1	3	earth	*N-təu	1	205	96	4.3
				4.1	28	earthworm	*N-cuŋ	1	160, 433	250, 180	
				2.9	27	eat	*nuŋ^{A}	2	237	62	2.1.4
				4.9	27	eat	*ɲən^{C}	3	237	62	2.1.4
				5-6.1	3	egg	*qæw^{C}	2	685	96	
				5.31	3	egg	*kləu^{C}	3	685	96	
茄		gja	*qié*	4.3	4	eggplant	*ɟa	1	435	130	
				4.12	4	eight	*jat	1	444	127	5.2, 6.3.1, 7.5
				2.3	4	elder brother	*da	1	207	130	
媼	*ʔ^{ʕ}uʔ	ʔawX	*ǎo*	7.1	3	elder sister /wife	*ʔəuX	1	709	96	
				3.5	8	elephant	*ntsh~~ɯ~~^{C}	2	161	242	
象	*s-[d]aŋʔ	zjangX	*xiàng*	5.30	26	elephant	*ɣji̯oŋ^{B}	3	195	65	
伏	*[b]ək-s	bjuwH	*fú*	1.3	16	embrace	*buəH	1	15	172	
				1.18	9	enter	*bju̯ɛk	1	27	224	
立	*(kə.)rəp	lip	*lì*	2.57	1	erect, to	*ri̯ɛp^{D}	3	605	162	
脫	*l^{ʕ}ot	dwat	*tuō*	5-6'.3	4	escape	*ɢ^{w}a^{D}	2	663	203	
				5-6.1	15	excrement	*N-KəjX	1	613	151	2.1.2.2, 4.3
				2.3	13	explode	*douH	1	207	263	4.4
目	*[m][u]k	mjuwk	*mù*	1.9	11	eye	*mu̯ɛjH	1	21.1	75	
				1.3	13	face	*bow^{B}	2	3	263	7.1
面	*[m]e[n]-s	mjienH	*miàn*	1.8	C	face	*hmien^{A}	3	32.1	6	7.1
崩	*Cə.p^{ʕ}əŋ	pong	*bēng*	1.1	30	fall	*p~~ɯ~~ŋ^{A}	2	1	9	4.4
頹		dwoj	*tuí*	2.3	9	fall (of rain)	*duj^{A}	3	207	243	
				6.3	12	fall (over)	*ɢu̯ei^{C}	2	615	39	
				1.36.1	5	fan	*mbljæp	1	78	86	7.6
迂	*q^{w}(r)a	ʔju	*yū*	6'.1	3	far	*q^{w}uw	1	661	115	6.2.2
				5.48	21	fat, to be	*grəunH	1	279	214	4.4

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
父	*[b](r)aʔ	bjuX	*fǔ*	1.16	4	father/male	*pjaX	1	61	92	
				3.20	10	fear/be afraid	*ntshjeH	1	341	73	4.3
				1.1	22	feed	*pɛŋ^{A}	2	xx	xx	
				1.9	18	female	*min^{D}	2	33.2	13	
				1.3	7	female /woman	*bo^{A}	2	xx	xx	
				2.56	16	fern	*-hru^{A}	2	581	191	
蕨	*-kot	kjwot	*jué*	5'.16	7	fern	*k^{w}jət^{D}	3	481	146	
				3.18	13	few/lack	*dzjok	1	315	186	
田	*lˁiŋ	den	*tián*	2.42.1	18	field	*ljiŋ	1	312	8	
				1.9	21	fine (flour)	*mənX/H	1	21.1	176	
				2.4	4	finger	*nta^{B}	2	208	203	2.1.4
				2.4	13	finger	*ʔdok^{D}	3	208	203	2.1.4
				1.35	10	finger ring	*mphle^{A}	2	xx	xx	2.1.2.2, 7.6
				4.3	29	finish	*ɟɔŋ^{B}	2	399	123	
				2.3	13	fire	*douX	1	207	263	4.4
				3.3	24	firewood	*dzaŋ^{A}	3	111	101	
				2.48	16	firm/durable	*dru^{A}	2	xx	xx	
				2.13	20	first day of month	*seŋ	1	167	44	
				1.51	3	fish	*mbrəuX	1	78	96	4.2.2, 4.3, 6.3.2
				1.46	4	five	*pra	1	73	92	5.2, 6.3.1, 7.5
				1.8	23	flea	*hmiəŋ	1	20	269	
				2.4	2	flip with finger	*ntik	1	208	15	
				2.4	24	float	*ntaŋ^{A}	2	xx	xx	
浮	*m.b(r)u	bjuw	*fú*	1.6	1	float	*mbi̯əu^{A}	3	30	210	
				1.31	12	flour	*plu̯ei^{B}	2	85	208	
				6.36	8	flow	*ɴGl~~ʉ~~^{B}	2	654	242	
流	*[r]u	ljuw	*liú*	2.57	1	flow	*ri̯əu^{C}	3	605	210	
				1.3	24	flower	*bi̯aŋ	1	39	121	2.1.2.2, 4.2
筒	*lˁoŋ	duwng	*tóng*	2.48	28	flute/tube	*droŋ^{A}	2	255	178	
蠓	*mˁoŋʔ	muwngX	*měng*	1.9	21	fly (N.)	*məuŋX	1	9.1	218	
				4.10	24	fly, to	*ʔjaŋ^{C}	2	442	121	
				2.4	15	fly, to	*ʔdəi^{C}	3	208	151	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
霧	*m(r)o-s	mjuH	/mou^{6}/[115]	1.9	16	fog	*mow^{C}	3	9.1	172	
				7.13	16	fog/cloud	*hu^{A}	2	719	191	7.1
				5.33.1	10	fool/humor (children)	*glje(X)	1	603	73	
				2.1	13	foot	*tow^{C}	2	205	263	
				1.23	19	footprint/track	*hmjænX	1	32.2	247	6.3.1, 7.3
				1.33	xx	forehead	*bl-^{A}	1	87	197	
				4.8	20	forehead	*hŋen^{A}	2	404	24	
				2.55	29	forest	*-ʔrəŋ^{B}	2	580	102	2.1.2.2
				2.8	27	forget	*hnuŋ^{B}	2	236	58	
				4.8	13	forget	*hŋou^{B}	3	236	58	
				1.31	12	four	*plei	1	85	208	5.2, 6.3.1, 7.5
				2.4	24	fragrant	*ntaŋ	1	208	158	6.3.2
				5-6.1	24	frog	*KæŋX	1	625	63	2.1.2.2
				6.36	18	front surface	*ɴGlin^{A}	2	654	64	
				2.1	3	frost	*tæw^{C}	2	205	96	
				1.16	1	fruit	*pjiə̯uX	1	49	210	4.4
攪	*k^{ʕ}ruʔ	kæwX	*jiǎo*	5.31	2	fry	*kleu	1	541	35	
炒		tsrhæwX	*chǎo*	4.2	5	fry	*chau^{B}	3	350	171	
				1.1	22	full	*puɛŋX	1	61	252	6.3.3
				3.16	1	gall bladder	*tsjiə̯u	1	313	210	
園	*[ɢ]^{w}an	hjwon	*yuán*	1.12	24	garden	*waŋ^{A}	2	12	45	
園	*[ɢ]^{w}an	hjwon	*yuán*	1.11	27	garden	*hwun^{A}	3	11	231	
葫	*[g]^{ʕ}a	hu	*hú*	5-6.3	4	garlic	*ɢa^{A}	2	615	92	
				5'.18	4	get up	*g^{w}jaX	1	507	130	
得	*t^{ʕ}ək	tok	*dé*	2.1	6	get/gain	*təuk	1	205	241	6.2.3
				5-6.2	18	ginger	*qhin^{B}	2	638	83	
薑	*kaŋ	kjang	*jiāng*	5.17	21	ginger	*khjuŋ^{A}	3	167	218	
秫	*m.lut	zywit	*shú*	1.36	9	glutinous/sticky	*mblut	1	90.1	239	
				5.1	13	gnaw	*kow^{D}	2	541	273	2.1.2.2
				1.9	30	go	*n-mɯŋ(X)	1	9.2	9	2.1.2.1, 2.1.4, 4.3, 4.4
金	*[k](r)[ə]m	kim	*jīn*	5.16	23	gold	*kjeəm	1	469	265	3.2, 7.1
				2.55	29	good	*-ʔrəŋH	1	580	142	2.1.2.2

[115] Cantonese

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				5.2	3	good/tasty	*khu^{B}	3	542	115	
				2.1	9	gourd	*tuw^{A}	2	205	260	
囊	*n^{ʕ}aŋ	nang	*náng*	2.8	24	grain head/bag	*hnɔn	1	212.1, 236	121, 45	7.4
				5-6.1	18	grape	*qin^{B}	2	613	119	
				1.7	11	grasp	*ʔmu̱ɛ^{A}	2	7	75	4.4
				1.23	4	grass	*hmja^{B}	3	44	130	2.1.2.2
				5.31	9	grasshopper	*klup	1	517	271	6.3.3
蝗	*[G]^{wʕ}aŋ	hwang	*huáng*	5.3	30	grasshopper	*gu̱ŋ^{A}	2	543	233	
				3.4	24	grave/tomb	*ntsaŋ^{C}	2	160	66	
				3.1	13	grave/tomb	*tsou^{B}	3	109	263	
				1.49	16	green/blue	*mpru^{A}	2	76	57	7.7
				1.7	29	green/blue	*ʔmeŋ^{A}	3	76	57	7.7
				1.4	3	grey	*ʔbɔu^{B}	3	16	77	
				2.57	7	grind (grain)	*ro^{D}	2	582	222	
				1.51	24	groan/moan	*mbraŋ^{A}	2	78	250	
種	*toŋʔ-s	tsyowngH	*zhòng*	2.16	22	grow	*n-tju̱ɛŋH	1	169	252	
				4.3	1	grow (TR)	*ɟi^{B}	2	435	210	
客	*k^{hʕ}rak	khæk	*kè*	5-6.2	5	guest	*Khæk	1	xx	xx	2.1.4
				1.31.1	12	hair	*pljei	1	97	208	
				1.17	10	half	*phje^{C}	2	xx	xx	
				2.3	24	half (of day)	*N-dam(X)	1	207	97	4.3
里	*(mə.)rəʔ	liX	*lǐ*	2.42.1	2	half kilometer	*ljɨX	1	288	35	
				1.3	3	hand/arm	*-bɔuX	1	63	77	2.1.2.1, 4.2.3
硬		ngængH	*yìng*	5.24	20	hard/solid	*ŋjeŋ^{C}	3	573	44	
伏	*[b]ək-s	bjuwH	*fú*	1.3	16	hatch	*buəH	1	15	191	
				1.9	11	have	*n-mɛj	1	9.2	93	2.1.2.1, 2.1.3.1, 4.3, 4.4
缺	*[k]^{whʕ}et	khwet	*quē*	5-6'.4	10	have a gap	*NK^{w}et	1	664	91	
				1.36.1	5	have food with rice	*mbljæ^{C}	2	xx	xx	
				1.47	12	head	*S-phreiX	1	11, 97	208	
				2.8	21	hear	*hnəumX	1	212.1	193	
				1.31.1	13	heart	*pljow^{B}	2	97	263	7.1
心	*səm	sim	*xīn*	2.13	18	heart	*sim^{A}	3	167	5	7.1
				2.23	25	heavy	*hnjeinX	1	404	26	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
			/pɛːŋ[5]/[116]	1.1	18	hide oneself	*piŋ[C]	3	1	8	
				2.56	18	high/tall	*-hriə̯ŋ	1	581	159	2.1.3.1
著	*[d]rak	drjak	*zhuó*	2.48	6	hit target	*drɔ[C]	2	255	187	4.4
				1.8	30	Hmong	*hmɯŋ[A]	2	8.2	9	
				1.4	5	hold in mouth	*mpæ[B]	2	4	168	
含	*-[g]ˤ[ə]m	hom	*hán*	5.19	29	hold in mouth	*ʔgjɔm[A]	3	568	192	
抱		bawX	*bào?*	1.3	13	hold with 2 hands	*bou[A]	3	3	263	
				2.1	5	hold/grasp hand	*tæ[B]	2	xx	xx	
孔	*[k]^{hˤ}oŋʔ	khuwngX	*kǒng*	5-6.2	21	hole	*qhəŋ[B]	2	614	218	6.2.4
堀	*k.t^{hˤ}ut	khwot	*kū*	5.2	13	hole	*khot[D]	3	554	256	
				2.55	4	honey	*ʔra[A]	2	xx	xx	
蹄	*[d]ˤe	dej	*tí*	2.3	10	hoof	*dej	1	207	37	
蹏	*tˤek	tek	*dí*	2.46	12	hoof/claw/nail	*truə̯i[C]	2	253	208	
鉤	*mə-qˤ(r)o	kuw	*gōu*	5-6.4	3	hook	*ɴqæw[C]	2	616	115	
				2.2	2	hoop	*thɨ[C]	2	206	35	
角	*k.rˤok	kæwk	*jiǎo*	5.31	22	horn	*klɛɔŋ	1	577	215	
馬	*mˤraʔ	mæX	*mǎ*	1.24	19	horse	*mjæn[B]	2	33.2	247	6.3.1
				5.32	22	hot (water)	*k(h)lɛɔm	1	517, 542	245, 100	
				1.46	3	house	*prəuX	1	73	96	7.6
				2.46	9	*houttuynia cordata*	*truw[D]	2	253	224	7.2
百	*pˤrak	pæk	*bǎi*	1.1	5	hundred	*pæk	1	1	72	2.1.4, 3.2, 5.2
				3.17	10	hungry	*tshje	1	314	73	
父	*[b](r)aʔ	bjuX	*fù*	1.1	7	husband	*N-poX	1	1	225	
擣	*tˤuʔ	tawX	*dǎo*	2.1	16	husk/pound rice	*tuX	1	205	111	
				6.46	12	ice	*qrə̯ei[D]	2	697	167	
				2.1	13	ignite/light	*tow[D]	2	xx	xx	4.4
				1.7	27	illness/pain	*ʔmun	1	7	195	7.7
				2.6	24	in front	*ndaŋ[C]	3	210.1	101	
藍	*Cə.[r]ˤam	lam	*lán*	5.36	24	indigo	*ŋglam	1	522	154	
				5.31	24	insect/worm	*klæŋ	1	517	63	4.2, 4.4, 6.2.4, 6.3.4
插	*mə-[ts^{h}]<r>op	tsrhɛp	*chā*	2.47	10	insert	*threp	1	137, 254	87	

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	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.51	21	interior	*ndrəŋ^{C}	2	xx	xx	
				4.8	23	intestines	*ɦɲeuŋX	1	404	153	
腸	*lraŋ	drjang	*cháng*	6.33.1	24	intestines	*ɢljaŋ^{A}	3	675	120	
鐵	*l̥^{ʕ}ik	thet	*tiě*	2.41	9	iron	*hluw^{C}	2	311	224	3.2, 6.2.2, 7.1
鐵	*l̥^{ʕ}ik	thet	*tiě*	2.56	9	iron	*hrɛk^{D}	3	311	224	3.2, 6.2.2, 7.1
				5.17	9	itch(y)/ scratch(y)	*khjut	1	470	70	
				3.1	5	join	*tsæ^{D}	2	xx	xx	
				2.1	15	kill	*təjH	1	205	151	4.4, 6.3.4
				4.3	12	knee	*ɟu̯əiH	1	447	39	
別	*N-pret	bjet	*bié*	1.1	12	know	*pei	1	1	39	
識	*s-tək	syik	*shí*	3.1	1	know/recognize	*tsi̯ɛk^{D}	3	181	148	
漆	*[ts^{h}]i[t]	tshit	*qī*	2.17	10	lacquer	*thjet	1	134	51	3.2
				7.13	10	ladle, to	*he^{D}	2	719	68	
斟	*t.[q][ə]m	tsyim	*zhēn*	2.4	22	ladle, to	*ʔdəm^{B}	3	208	174	
地	*[l]^{ʕ}ej-s	dijH	*dì*	2.3	10	land, non-irrigated	*dej^{C}	3	207	37	
				2.42	1	late	*li^{C}	2	216	81	
遲	*lrəj	drij	*chí*	2.18	12	late	*djæi^{A}	3	351	132	
				5.46	7	laugh	*krət	1	277	222	
				3.5	16	launder	*ntshuH	1	161	111	
				2.6	3	lay eggs	*ndəuH	1	210.1	96	
懶	*[r]^{ʕ}anʔ	lanX	*lǎn*	5.36	19	lazy	*ŋglæn^{B}	2	546	247	
累	*[r]^{ʕ}uj-s	lwojH	*lèi*	2.42	8	lazy	*lu̯ei^{C}	3	228	39	
				4.1	28	lead, to	*coŋ^{A}	2	433	216	
牽	*[k]^{hʕ}i[n]	khen	*qiān*	5-6.2	C	lead, to	*khien^{A}	3	542	6	
				1.36	29	leaf	*mbloŋ^{A}	2	90.1	192	6.2.4
				2.9	29	leaf	*nɔm^{A}	3	90.1	192	
				5.51	4	lean (on stick)	*ŋgra^{C}	2	282	92	
				4.3	3	leg/branch	*ɟæw^{B}	2	xx	xx	4.4
				3.16	21	let go	*tsjəŋ^{C}	2	313	218	
放	*paŋ-s	pjangH	*fàng*	1.1	21	let go	*puŋ^{C}	3	1	218	
				2.3	18	level	*din^{A}	2	xx	xx	
平	*breŋ	bjæng	*píng*	1.3	29	level	*beŋ^{A}	3	3	46	
				4.12	10	lick	*-jep	1	444	87	
				5.16	20	lift	*kjeŋ	1	397	44	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
拎			/nɪŋ[1]/[117]	2.8	30	lift	*hnɨŋ^{C}	3	212.1	9	
				2.28	2	light(weight)	*-sjɻeu	1	59	35	
				2.42.1	10	lightning flash	*ljeˬ^{D}	2	288	91	
				2.42.1	7	lightning flash	*ljəpˬ^{D}	3	498	106	
				5.31	5	liquid/soup	*klæwX	1	xx	xx	
酒	*[s.q]uʔ	tsjuwX	*jiǔ*	4.1	13	liquor	*cow^{B}	2	433	263	
酒	*[s.q]uʔ	tsjuwX	*jiǔ*	2.1	A	liquor	*tiu^{B}	3	205	3	
				1.54	29	listen	*(S-)mrɻɔŋH	1	21.2	85	4.4
				2.56	18	liver	*-hriɻən	1	581	119	2.1.3.1
				2.4	3	long	*ntauX	1	208	76	6.3.4
				2.42	3	long (time)	*ləu	1	216	96	
				2.55	7	look after	*ʔro^{B}	2	xx	xx	
望	*maŋ-s	mjangH	*wàng*	1.9	24	look at	*maŋH	1	9.1	158	
				1.4	9	loud/sound	*ʔbuj^{A}	3	16	243	
				2.1	22	louse, body	*tɛmX	1	205	174	6.3.4
				3.20	12	louse, head	*ntshjeiX	1	317	208	6.3.3
愛	*[q]^{ʕ}əp-s	ʔojH	*ài*	7.1	11	love, to	*ʔɻɔi^{C}	3	709	188	
				5-6.4	21	low/bellow	*ɴqəŋ^{B}	2	xx	xx	
下	*[g]^{ʕ}raʔ	hæX	*xià*	5-6.3	4	low/short	*GaX	1	615	130	4.3, 6.2.2
底	*t^{ʕ}ijʔ	tejX	*dǐ*	2.4	1	lower level	*ʔdi^{B}	3	232	18	
				1.49	8	lung	*mprɯ^{C}	2	76	242	
				5.31	24	maggot	*klaŋ^{C}	2	517	63	4.2.4, 4.4, 6.3.4
				2.40.1	9	male	*ʔljuw^{B}	2	286	260	
				4.3	24	male (human)	*ɟɻianŋH	1	435	121	
				3.16	8	malodorous	*tsjɻeiH	1	121	242	
騣		tsuwng	*zōng*	3.1	30	mane	*tsɯŋ^{A}	2	157	233	4.2.3
騣		tsuwng	*zōng*	3.4	29	mane	*ʔdzɔŋ^{A}	3	157	233	4.2.3
				2.4	6	many/much	*ntɔ^{C}	2	208	232	7.5
髓	*s-lojʔ	sjweX	*suǐ*	2.41	8	marrow/brains	*hlɯ^{A}	2	xx	xx	
				6.1	15	marry (a woman)	*qɻa^{C}	2	xx	xx	
量	*[r]aŋ	ljang	*liáng*	2.42.1	22	measure (rice)	*ljɛŋ^{A}	2	288	252	2.1.2.2
				2.56	5	measure (rice)	*hrau^{A}	3	581	171	
升	*s-təŋ	sying	*shēng*	2.28	18	measure for grain	*sjin^{A}	2	323	64	
				5-6.6	10	meat	*NGej	1	630	37	7.3

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	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				7.1	4	meat	*ʔa^{B}	3	709	187	
				5.16	15	medicine	*N-kjaj	1	472	112	7.6
				4.3	15	meet	*ɟu̯a^{C}	2	xx	xx	
				2.28	22	midday meal	*sjɛŋ^{C}	2	xx	xx	
粢	*[ts]ij	tsij	*zī*	2.16	15	millet	*tjəi^{A}	3	349	94	
				1.1	5	molar tooth	*pæ	1	1	149	
錢	*N-ts[a][n]	dzjen	*qián*	3.3	20	money	*dzi̯en	1	111	24	
				2.40	18	monkey	*ʔlin^{A}	2	214	43	6.3.2, 7.1, 7.3
				1.4	18	monkey	*ʔbiŋ^{A}	3	28	8	6.3.2, 7.3
				2.41	4	moon/month	*hlaH	1	215	92	2.1.2.1, 6.3.1, 7.7
臼	*[g](r)[u]ʔ	gjuwX	*jiù*	4.3	7	mortar /treadmill	*ɟo^{B}	2	435	225	
				4.10	29	mosquito	*ʔjɔŋ^{B}	2	442	248	
慈	*[N-ts]ə	dzi	*cí*	2.21	1	mother/aunt	*ndji^{B}	3	378	18	
				2.9	23	mother's brother	*neuŋX	1	213.1	153	
				1.3	3	mountain	*bæw^{B}	2	3	244	
				5.33	20	mountain (range)	*gli̯em^{A}	3	579	40	
				7.1	5	mountain pass	*ʔæ(C)	1	709	54	
峽	*N-k^{ʕ}<r>ep	hɛp	*xiá*	6.33	13	mountain pass	*ɢlow^{D}	2	651	273	
				2.9	24	mouse/rat	*naŋ^{B}	2	213.1	177	
				2.9	3	mouse/rat	*nau^{B}	3	213.1	177	
嘴	*[ts]ojʔ	tsjweX	*zuǐ*	4.6	9	mouth/beak	*ɲɟuj	1	354	243	
泥	*n^{ʕ}[ə]j(ʔ)	nej	*ní*	2.8	1	mud	*hni^{A}	3	212.1	1	
				5.4	7	muddy	*ŋko^{D}	2	544	222	
菇	*mə.k^{ʕ}a	ku	*gū*	5.19	3	mushroom	*ŋkjæu	1	472	259	
				1.33	18	mussel/clam	*blin^{C}	2	xx	xx	
				1.4	3	name	*mpɔuH	1	64	77	4.3
狹	*N-k^{ʕ}<r>ep	hɛp	*xiá*	5-6.6	10	narrow	*ɴɢe^{D}	2	618	48	
狹	*N-k^{ʕ}<r>ep	hɛp	*xiá*	7.13	10	narrow	*hep^{D}	3	618	48	
				2.4	13	navel	*ntəut	1	208	255	2.1.2.1
				2.55	3	near	*-ʔræw^{C}	2	580	259	
				2.13	7	near	*səɬ^{D}	3	155	89	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
頸	*keŋʔ	kjiengX	*jǐng?*	6.31	24	neck	*qlaŋ	1	649	120	
頸	*keŋʔ	kjiengX	*jǐng*	6.1	28	neck	*qoŋ^{B}	2	613	216	
箴	*t.q[ə]m	tsyim	*zhēn*	5.16	29	needle	*kjɔŋ^{A}	2	469	142	
箴	*t.q[ə]m	tsyim	*zhēn*	2.13	18	needle	*sim^{A}	3	167	5	
				2.57	3	nest	*-rəuX	1	605	96	
清	*N-s-r̥eŋ	tshjeng	*qīng*	3.17	18	new	*tshjiə̯ŋ	1	314	83	4.3
				1.8	21	night	*hməŋH	1	20	140	2.1.2.1, 2.1.2.2, 6.3.1
				4.3	16	nine	*N-ɟuə	1	447	191	5.2, 6.3.1, 7.5
				1.48	1	noose/trap	*bri^{B}	2	xx	xx	
鼻	*m-[b]i[t]-s	bjijH	*bí*	1.51	8	nose	*mbruiH	1	78	226	2.1.2.2, 4.2.2
故	*kˤa(ʔ)-s	kuH	*gù*	6.1	7	old	*qu̯oH	1	613	206	
				2.42	12	old	*lu̯ei^{B}	2	xx	xx	
				2.28	16	on top of	*sju^{A}	2	xx	xx	
一	*ʔi[t]	ʔjit	*yī*	7.1	2	one	*ʔi̶t̶	1	709	35	5.2, 7.5
				5-6.3	21	oneself	*gən^{A}	3	543	157	
開	*N-[k]^{h}ˤəj	khoj	*kāi*	5.2	11	open	*khu̯oi^{A}	3	554	188	4.3
				1.1	13	open (door)	*pow^{D}	2	1	256	
				2.5	15	open out/undo	*nthu̯a^{B}	2	209	151	
				3.20	15	otter	*ntshju̯a^{A}	2	317	94	
				1.31	28	owl	*ploŋ^{D}	2	xx	xx	
裹	*[k]ˤo[j]ʔ	kwaX	*guǒ*	5-6.2	8	pack/wrap	*qhu̶^{B}	2	614	242	
				5.21	13	pair	*ŋgjow^{D}	2	474	186	
雙	*[s]ˤroŋ	sræwng	*shuāng*	2.13	28	pair	*suŋ^{A}	3	179	218	
				2.57	20	pair	*reŋ^{C}	3	582	44	
				2.57	6	pangolin	*rɔiH	1	605	131	7.2
				2.4	13	paper	*ntow^{B}	2	208	263	7.6, 6.2.4
紙	*[k.t]eʔ	tsyeX	*zhǐ*	2.16	10	paper	*tjej^{B}	3	349	37	
桃	*lˤaw	daw	*táo*	6.33	5	peach	*ɢlæw	1	651	171	
梨	*[r][ə][j]	lij	*lí*	2.57	15	pear	*rəj	1	582	94	
擫	*[g]ot	gjwot	*jué*	4.4	13	peck/dig	*ɲcow^{D}	2	352	273	
擫	*[g]ot	gjwot	*jué*	4.4	13	peck/dig	*ɲcow^{D}	2	436	273	
脫	*l̥ˤot	thwat	*tuō*	2.4	9	peel off /escape	*ʔdut^{D}	3	208	239	
				4.2	10	peel/shave	*che^{D}	2	xx	xx	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.8	24	perilla	*hnaŋ^{B}	2	xx	xx	
				1.9	18	persimmon	*min^{B}	2	33.2	7	
柿		dzyiX	*shì*	2.18	15	persimmon	*djəi^{B}	3	351	94	
民	*mi[ŋ]	mjin	*mín*	2.9	19	person	*næn^{A}	2	45	247	
民	*mi[ŋ]	mjin	*mín*	1.24	19	person/Mien	*mjæn^{A}	3	45	247	2.1.2.2
				2.41	20	petal	*hlem^{C}	3	215	59	
				3.16	13	pheasant	*tsjow^{D}	2	313	273	
				5.2	13	pick up	*khow^{D}	2	xx	xx	
夾	*k^{ʕ}<r>ep	kɛp	*jiā*	4.4	7	pick up	*ʔɟəp^{D}	3	436	106	
				2.1	10	pick up /clamp	*te^{D}	2	205	87	
				1.4	5	pig	*mpæ^{C}	2	4	168	4.2, 7.1
豚	*[d]^{ʕ}u[n]	dwon	*tún*	2.3	28	pig	*duŋ^{B}	3	243	180	7.1
鳩	*[k](r)u	kjuw	*jiū*	6.4	16	pigeon	*ɴqu^{A}	2	616	191	
鴿	*[k][ə]p	kop	*gē*	5-6.1	29	pigeon	*kɔp^{D}	3	541	219	
				4.6	3	pillar	*ɲɟæu	1	438	259	
枕	*[t.q][ə]mʔ	tsyimX	*zhěn*	4.4	29	pillow	*ɲcu̯əmH	1	364	246	
				2.51	28	plain (level ground)	*ndroŋ^{B}	2	xx	xx	
				4.3	21	plant, to	*ɟəŋ^{C}	2	xx	xx	
				3.6	5	play	*N-dzæwH	1	198	114	
				1.47	7	play (flute)	*phro^{B}	2	74	212	
				1.32	29	play (flute)	*phlu̯əm^{B}	3	74	212	
李	*[r]əʔ	liX	*lǐ*	2.41	18	plum	*hli̯əŋX	1	239	159	
				5.2	13	plum	*khow^{A}	2	542	263	
楊	*laŋ	yang	*yáng*	4.12	26	poplar tree	*ji̯aŋ^{A}	2	xx	xx	
				3.18	12	porcupine	*N-dzjeiH	1	318	208	4.3
粥	*t-quk	tsyuwk	*zhōu*	2.16	B	porridge	*tju̯ok^{D}	3	169	258	
				4.7	18	POSSESSIVE	*ʔɲi̯əŋ^{A}	3	403	159	
				1.46	4	pour	*pra^{C}	2	xx	xx	
				2.40.1	12	pour	*ʔlju̯ei^{A}	2	286	39	
價	*mə.q^{ʕ}<r>aʔ -s	kæH	*jià*	5-6.4	4	price	*ɴqa^{C}	2	616	92	2.1.2.2
抽	*l̥u	trhjuw	*chōu*	2.47	7	pull out	*thro^{C}	2	254	206	
				5.31	19	pullet/hen	*klan^{C}	3	577	99	
				1.3	12	pus	*bu̯ei^{C}	2	3	39	7.1
膿	*[n]^{ʕ}uŋ	nowng	*nóng*	2.9	29	pus	*nɔŋ^{C}	3	213.1	142	7.1
				1.2	8	push earth aside	*phɯ^{A}	2	2	242	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.4	29	put on/wear (cap)	*ntɔŋH	1	208	142	4.3, 7.6
				2.8	24	put on/wear (clothes)	*(h)naŋX	1	212.1	158	4.4, 7.6
				2.3	22	put on/wear (jewelry)	*dəŋ^{A}	3	207	102	
踏		thop	*tà*	2.3	7	put on/wear (shoes)	*dap	1	207	105	
著	*trak	trjak	*zhuó*	2.46	6	put on/wear (shoes)	*trɔ^{C}	2	253	232	4.4
				2.50	29	puttees	*nthrɔŋ^{A}	2	257	123	2.1.2.2, 7.6
捷	*[dz][a]p	dzjep	*jié*	4.1	9	quick	*cu̯ɛp	1	191	163	
				2.56	10	quick	*hre^{C}	2	581	37	
				2.13	22	quilt	*su̯ɛŋ^{C}	3	179	252	
				2.40.1	16	rabbit	*ʔlju^{B}	2	286	172	
陋	*[r]^{ʕ}o-s	luwH	*lòu*	6.36	16	ragged /shabby	*ɴGlu^{C}	2	654	191	
				2.9	28	rain	*m-noŋ^{C}	2	213.2	178	2.1.2.1
				1.36	28	rain	*mbluŋ^{C}	3	90.1	180	
養	*[ɢ](r)aŋʔ-s	yangH	*yàng*	4.12	22	raise (chickens)	*jɛŋ^{C}	2	444	252	
養	*[ɢ](r)aŋʔ	yangX	*yǎng*	4.12	28	raise (chickens)	*juŋ^{B}	3	456	180	
耙	*[b]^{ʕ}ra	bæ	*pá*	1.3	4	rake, to	*ba^{A}	3	3	149	
				2.6	16	ramie/hemp	*nduH	1	210.2	111	7.6
				1.48	15	rat	*bru̯a^{C}	2	xx	xx	
				4.9	29	raw/unripe	*ɲu̯emX	2	405	41	
造	*(mə-) ts^{hʕ}uʔ-s	tshawH	*zào*	3.3	7	reach /arrive at	*dzo^{C}	2	159	206	
接	*[ts]ap	tsjep	*jiē*	3.1	10	receive /borrow	*tsep	1	109, 157	68	
收	*s-kiw	syuw	*shōu*	2.28	9	receive /gather in	*sjuw^{A}	2	xx	xx	
廝	*se	sje	*sī*	2.28	2	RECIPROCAL	*sjɨ$^{A\text{-}D}$	2	xx	xx	4.1, 6.2.3
				2.40	18	red	*ʔlin^{A}	2	214	43	7.1, 7.7
赤	*[t-q^{h}](r)Ak	tsyhek	*chì*	2.13	2	red	*sek^{D}	3	167	17	7.1, 7.7
				4.4	7	remember	*ɲcɔ^{C}	2	436	225	
				5.16	24	remember	*kji̯əŋ^{C}	3	469	121	
補	*(mə)-p^{ʕ}aʔ	puX	*bǔ*	1.19	4	repair/mend	*mpjaX	1	40	130	
				1.3	12	repay	*bu̯ei^{A}	2	3	208	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				6.31	5	repay	*qlau^{B}	3	649	152	
				2.8	22	resemble	*hnəŋ^{B}	3	212.1	102	
				2.28	7	rest, to	*sjo^{C}	2	323	225	
				2.46	21	return	*trəŋ^{B}	2	253	218	
				1.9	16	return home	*mu^{B}	3	9.1	225	
				2.1	24	rib	*tamX	1	205	154	
粔	*[g](r)aʔ	gjoX	*jù*	5.19	16	rice cake	*ŋkjuəX	1	508	191	
				1.36	3	rice plant/paddy	*mbləu	1	90.1	96	7.4
甑	*s-təŋ-s	tsingH	*zèng*	3.16	22	rice steamer	*tsjɛŋH	1	313	104	3.2
饟	*n̥aŋ(ʔ)-s	syangH	*xiǎng*	2.53	21	rice, cooked	*hnrəaŋH	1	260	101	7.4
				3.4	9	rice, husked	*ntsuw^{C}	2	160	260	7.4
米	*[m]^{ʕ}ijʔ	mejX	*mǐ*	1.8	12	rice, husked	*hmei^{B}	3	8.1	170	
				3.2	22	rice/millet, husked	*tshɛŋ^{B}	2	158	252	7.4
騎	*[g](r)aj	gje	*qí*	4.3	10	ride	*ɟej	1	435	37	
				6.33	3	river	*ɢlæw^{A}	2	651	95	7.2
				2.6	15	river	*ndai^{A}	3	210.1	74	
				5.6	12	river deer	*ŋgu̯ei^{B}	2	546	39	7.2
				5.31	3	road/way	*kləuX	1	517	96	
				7.13	5	rob	*hæ^{D}	2	xx	xx	
				1.4	29	rock	*ʔbeŋ^{C}	3	4	46	
				6.31	21	roll down	*qləŋ^{B}	2	xx	xx	
				4.3	28	root	*ɟoŋ^{A}	2	435	178	
				3.6	28	root	*ndzuŋ^{A}	3	162	249	
				2.41	5	rope	*hlæ^{C}	2	215	149	
				2.42	8	rot	*lʁ^{A}	2	216	242	
粗	*s.[r̥]^{ʕ}a	tshu	*cū*	3.5	4	rough /coarse	*ntsha^{A}	2	xx	xx	
				6.33	27	round	*ɢlun	1	651	231	4.2.4
				3.19	3	salt	*ntsjəuX	1	316	96	4.3
				6.46	13	salty	*qrow^{C}	2	697	263	
鹺	*[dz]^{ʕ}aj	dza	*cuó*	3.6	15	salty	*ndzai^{A}	3	162	74	
				2.13	6	sandals, straw	*səuk^{D}	3	179	241	
繩	*m.ləŋ	zying	*shéng*	2.41.1	24	sash/cord /rope	*hljaŋ	1	215	101	
湯	*l̥^{ʕ}aŋ	thang	*tāng*	2.41	24	scald	*hlaŋ^{A}	2	215	45	
噴	*p^{hʕ}ur-s	phwonH	*pèn*	1.5	29	scatter /sprinkle	*mphu̯ənH	1	5, 17	142, 248	
				5.34.1	2	scissors	*ʔglji̯eu^{B}	3	532	2	
				5-6.1	10	scold/curse	*qe^{C}	2	613	40	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				7.13	20	scold/curse	*hi̯em^{C}	3	613	40	
				1.3	7	see	*bu̯ət	1	15	108	
				2.53	29	seed	*hnru̯em	1	259	60	
秧	*ʔaŋ	ʔjang	*yāng*	4.10	22	seedling	*ʔjɛŋ^{A}	2	454	160	3.2, 7.4
秧	*ʔaŋ	ʔjang	*yāng*	4.10	24	seedling	*ʔjaŋ^{A}	3	454	160	7.4
				5.51	10	seek shelter	*ŋgre^{D}	2	282	220	
賣	*m.rˁajʔ-s	mɛiH	*mài*	1.9	11	sell	*mɛjH	1	9.1	93	2.1.3.1, 4.4
送	*[s]ˁoŋ-s	suwngH	*sòng*	2.13	28	send /deliver	*suŋH	1	155	180	
				2.18	28	seven	*djuŋH	1	339	180	5.2, 6.3.1, 7.5
				5.24	1	seven	*ŋji^{C}	3	573	18	5.2, 6.3.1, 7.5
聯		ljen	/ly:n$^{2/118}$	2.42.1	22	sew	*lju̯ɛn^{A}	3	558	100	
				5.34	18	shallow	*ŋkli̯əŋX	1	604	83	
				4.9	20	shallow	*ɲen^{B}	2	405	64	
				2.57	15	sharp	*-rajH	1	605	151	
叕	*[ts^{h}]rək	tsrhik	*cè*	3.19	3	sharp	*ntsjæw^{C}	2	xx	xx	
				7.13	7	sharpen /grind	*ho^{B}	2	551	225	
剉	*[ts^{h}]ˁoj-s	tshwaH	*cuò*	2.20	3	sharpen /grind	*dhjæu^{C}	3	376	259	
				1.36	8	shed leaves/drop	*mblu̯ei^{C}	3	90.3	170	
羊	*ɢ(r)aŋ	yang	*yáng*	4.12	28	sheep/goat	*juŋ	1	456	179	3.2
				1.32	12	shell /covering	*phlei	1	86	208	2.1.2.2
履	*kro-s	kjuH	*jù*	5.17	6	shoes	*khjɔ^{C}	2	470	187	
				1.1	21	shoot	*pənX	1	13	176	6.3.3, 7.3
				2.40	22	short	*ʔlɛŋ^{B}	2	211.2	104	6.2.1
				2.7	22	short	*ʔnəŋ^{B}	3	211.2	104	6.2.1
				1.3	8	shoulder	*bʉ^{C}	2	3	242	
縮	*[s]ruk	srjuwk	*suō*	4.11	9	shrink	*hjuk	1	551	203	
				2.13	13	shut (door)	*sow^{D}	2	167	273	
				5-6.6	21	shuttle	*ɴɢəŋ^{B}	2	618	138	7.6
				6.36	16	shuttle	*ɴɢlow^{B}	3	654	172	7.6

[118] Cantonese

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				4.7	12	shy	*ʔɲæi$^{A/B}$	3	403	132	
鎌	*[r]em	ljem	*lián*	2.42.1	18	sickle	*ljim	1	312	5	2.1.2.2, 7.4
				3.17	6	sieve, to	*tshjɔ^{C}	2	xx	xx	
銀	*[ŋ]rə[n]	ngin	*yín*	4’.9	18	silver	*ɲ^{w}i̯ən	1	417	137	3.2, 7.1
				2.28	12	sinew	*sju̯ei^{B}	2	323	208	
筋	*(Cə.)[k]ə[n]	kjɨn	*jīn*	5’.16	19	sinew	*k^{w}jan^{A}	3	481	99	
號	*[g]aw	haw	*háo*	5-6.3	5	sing/cry out	*Gæw	1	615	152	6.2.2
				2.3	21	sink	*dəŋ^{A}	2	207	176	
				4.7	24	sister-in-law	*ʔɲam	1	403	97	6.3.1
坐	*[dz]^{ʕ}o[j]ʔ	dzwaX	*zuò*	3.3	8	sit	*dzu̯ei^{B}	3	123	39	
				5.46	9	six	*kruk	1	277	204	2.1.4, 5.2, 6.3.1, 7.5
				2.1	13	skin	*N-top	1	205	237	2.1.2.1
				2.1	18	skirt	*tin^{A}	2	205	43	7.6
裙	*[g]ur	gjun	*qún*	5.18	27	skirt	*gjun^{A}	3	411	195	
				1.12	22	sky/heaven	*wɛŋ	1	12	104	
				2.6	22	sky/heaven	*ndɛuŋ	1	210.1	268	
				6.6	22	sky/heaven	*ɴGɛuŋ	1	630	268	
				5-6.3	10	slant /slanting	*ɢe^{A}	2	xx	xx	
				1.1	8	sleep /lie down	*pu̯eiH	1	13	242	
				2.41	10	slice	*hlep	1	215	91	2.1.2.1, 6.3.1
細	*[s]^{ʕ}[i][j]-s	sejH	*xì*	2.13	12	small/fine	*sæi^{C}	3	11	132	
幼	*[ʔ](r)iw-s	ʔjiwH	*yòu*	4.10	9	small /young	*ʔjuw^{C}	2	442	243	
				1.36	18	smooth /glossy	*mbli̯əŋH	1	90.2	83	
滑	*Nə-g^{ʕ}rut	hwɛt	*huá*	6.6	9	smooth /slippery	*ɴGu̯at	1	630	183	
蝸	*[k]^{wʕ}raj	kwæ	*wō*	6.3	8	snail	*ɢʁ^{A}	2	639	242	
蝸	*[k]^{wʕ}raj	kwæ	*wō*	5.31	8	snail	*klu̯ei$^{A/B}$	3	637	242	
蝸	*[k]^{wʕ}raj	kwæ	*wō*	5-6’.31	10	snail	*k^{w}lej^{A}	3	589	37	
				2.7	24	snake	*ʔnaŋ	1	211.1	158	
				2.1	22	snap	*tɛŋH	1	205	104	
				1.23	18	sniff at	*hmji̯əmH	1	32.2	135	2.1.2.1
				5.21	19	snore	*ŋgjan^{A}	3	474	99	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
漬	*[dz]ek-s	dzjeH	*zì*	3.3	12	soak	*dzeiH	1	111	39	
				3.19	3	soak	*ntsjæw^{C}	2	316	259	
				2.3	7	soak	*do^{A}	3	207	225	
醒	*[s]^{ʕ}eŋʔ	sengX	*xǐng*	2.13	18	sober up	*siŋ^{B}	3	143	8	
				1.39	11	soft	*mlu̯ɛjH	1	93	75	6.3.4
				2.1	22	son/boy	*tu̯ɛn	1	217	100	4.2, 6.2.4
				1.10	12	son-in-law	*ʔweiX	1	10	39	6.3.1
				5.5	13	soot	*ŋkhow^{A}	2	xx	xx	
瘡	*[ts^{h}]raŋ	tsrhjang	*chuāng*	3.2	24	sore/boil /blister	*tshaŋ	1	158	120	
				5'.16	10	sore/boil /blister	*k^{w}jej^{A}	3	171	37	
				3.19	16	sorghum	*ntsju^{C}	2	xx	xx	
				1.33.1	4	soul/spirit	*blja^{A}	2	99	92	7.7
聲	*[l̥]eŋ	syeng	*shēng*	2.13	18	sound	*siŋ^{A}	3	167	8	
				2.56	16	sound/noise	*-hru^{A}	2	581	191	
酸	*[s]^{ʕ}o[r]	swan	*suān*	2.13	9	sour	*suj	1	119	260	
				1.46	3	to sow	*præw^{A}	2	73	113	
				1.1	12	soybean	*N-peiX	1	1	39	
				6.48	24	span, arm	*ɢraŋ^{A}	2	699	121	7.5
			/njam/[119]	4.12	29	span, arm	*ju̯am^{A}	3	444	211	
				6.46	7	span, finger	*qro^{C}	2	697	206	7.5
				1.51	4	spicy	*mbrat	1	78	107	
				4.10	24	spill	*(ʔ)jam^{C}	3	442	78	
車	*[t.q^{h}](r)A	tsyhæ	*chē*	3.17	15	spinning wheel	*tshju̯a^{A}	2	xx	xx	
				6.46	24	spirit/ghost	*qraŋ^{A}	2	697	45	7.7
				1.23	19	spirit/ghost	*hmjæn^{B}	3	44	42	2.1.2.2, 7.7
劈	*(m-)p^{hʕ}ek	phek	*pī*	1.2	2	split/chop	*phek	1	50	34	6.3.2
				4.5	16	sprinkle /spill	*ɲchu^{B}	2	437	191	
				4.8	11	squeeze	*hŋai^{C}	3	403	55	
				2.40	2	squeeze /pinch	*ʔlɨ^{C}	2	214	35	
				2.28	13	stand /get up	*sjouX	1	323	263	
				5-6.1	22	star	*qɛŋ^{A}	2	613	100	
				4.9	20	steal	*ɲemH	1	405	59	
				3.2	3	steel	*tshæw^{A}	2	158	77	

[119] Hakka (Downer 1973:19)

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				3.5	28	steep	*ntshoŋ^{A}	2	161	178	
				5.18	9	steep	*gjuj^{B}	3	411	260	
				2.48	7	step	*dro^{A}	2	255	206	
蹋	*l^{ʕ}ap	dap	*tà*	2.3	5	step on /tread	*dæ^{D}	2	xx	xx	
				1.46	4	stick	*praX	1	73	92	
				1.31	24	stomach	*plaŋ^{A}	2	85	45	
				2.13	1	stomach	*si^{A}	3	167	1	
				2.55	3	stone	*-ʔrəu	1	580	96	2.1.2.2, 4.2.2, 6.2.2
凳		tongH	*dèng*	2.1	22	stool/bench	*təŋ^{C}	3	205	102	
				3.19	13	stop up /plug	*ntsjot	1	316	256	
竈	*[ts]^{ʕ}uk-s	tsawH	*zào*	3.1	7	stove	*N-tsoH	1	157	225	3.2
正	*teŋ-s	tsyengH	*zhèng*	4.4	26	straight	*ɲci̯aŋ^{A}	2	436	161	4.4
力	*kə.rək	lik	*lì*	2.57	7	strength	*-rək	1	605	206	2.1.4, 3.2
力	*kə.rək	lik	*lì*	5.32	7	strength	*khlək^{D}	3	578	167	2.1.4
				4.13	28	stretch	*ɕoŋ	1	443	216	
摘	*(mə-)t(^{ʕ})rek	trɛk	*zhāi*	2.51	12	strip leaves	*ndru̯ei^{C}	2	258	208	
撫	*[p^{h}](r)aʔ	phjuX	*fǔ*	1.32	8	stroke	*phlɯ^{C}	2	xx	xx	
撫	*[p^{h}](r)aʔ	phjuX	*fǔ*	1.32	27	stroke	*phlun^{A}	3	xx	xx	
				3.21	13	stumble	*ndzjow^{D}	2	xx	xx	
				3.4	10	suck	*ntse^{D}	2	xx	xx	
				2.8	22	sun/day	*hnɛŋ^{A}	2	224	188	2.1.2.1, 6.3.1, 7.7
				2.8	11	sun/day	*hnu̯ɔi^{A}	3	224	188	2.1.2.1, 6.3.1, 7.7
				5-6.6	21	swallow, to	*ɴGəŋ^{B}	2	618	214	
				6.4	13	swallow, to	*ɴqow^{C}	2	616	263	
				2.7	7	swallow, to	*ʔnək^{D}	3	211.1	129	
				4.2	3	sweep	*chæw^{A}	2	434	259	
拂	*p^{h}ut	phjut	*fú*	1.2	7	sweep	*phu̯ət^{D}	3	14	108	
				4.4	3	sweep	*ʔɟæu^{C}	3	400	259	
甘	*[k]^{ʕ}am	kam	*gān*	5-6.1	24	sweet	*Kam	1	613, 625	45, 154	2.1.2.2
				2.6	15	sweet potato	*ndu̯əj	1	222	189	
				7.1	21	swell	*ʔəumH	1	709	193	
				4.6	6	sword	*ɲɟəuk^{D}	3	354	241	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.6	24	sword, long	*ndaŋ^{A}	2	210.1	120	
				2.6	3	table	*ndɔu^{A}	3	210.1	123	
				2.48	29	table/bench	*drɔŋ^{A}	2	255	85	
兩		ljangX	*liăng*	2.42	26	tael (40 grams)	*l̥iaŋ^{B}	2	300	161	
兩		ljangX	*liăng*	2.42.1	26	tael (40 grams)	*ljɨ̥oŋ^{B}	3	300	161	2.1.2.2
				2.1	8	tail	*tu̥eiX	1	217	242	4.2.2, 6.3.3
捉	*[ts](ˁ)rok	tsræwk	*zhuō*	2.16	29	take	*tjɔk^{D}	3	349	205	
芋	*[ɢ]^{w}(r)a-s	hjuH	*yù*	1.12	13	taro	*wouH	1	12	263	
味	*m[ə][t]-s	mjɨjH	*wèi*	1.8	12	taste/try	*hmeiH	1	xx	xx	
				5.18	1	tea	*gji^{B}	2	471	81	
茶		dræ	*chá*	4.3	4	tea	*ɟa^{A}	3	399	149	
				6.46	15	tear, to	*qru̥a^{C}	2	697	94	
報	*(mə-) pˁuk-s	pawH	*bào*	1.4	7	tell	*ʔbo^{C}	3	16	225	
廟	*[m](r)aw-s	mjewH	*miào*	1.9	A	temple	*miu^{C}	3	33.1	3	
十	*[g][i]p	dzyip	*shí*	5.18	9	ten	*gju̥ɛp	1	471	163	3.2, 4.3, 5.2, 6.3.1, 7.5
萬	*ma[n]-s	mjonH	*wàn*	1.12	26	ten thousand	*wi̥aŋ^{C}	2	xx	xx	
				2.55	21	tender	*ʔrəunH	1	580	214	
				1.10	10	that	*ʔwe^{B}	3	10	73	5.4
				7.1	2	that /the former	*ʔɨ^{B}	2	xx	xx	5.4
				2.1	5	thick	*tæ^{A}	2	205	168	7.1
厚	*-[g]ˁ(r)oʔ	huwX	*hòu*	7.15	3	thick	*ɦɔu^{B}	3	720	115	7.1
				5.21	29	thick (liquid)	*ŋgjɔŋ^{C}	2	474	123	
				5-6.3	7	thick (porridge)	*gət^{D}	3	543	108	
				1.9	4	thick/dense	*mak^{D}	3	9.1	184	2.1.2.2
				1.1	5	thigh	*pæ^{A}	2	1	168	4.2
				2.18	9	thigh	*djuj^{A}	3	351	243	
				2.28	29	thin	*sjɔŋ^{A}	2	323	142	
姌	*n[a]mʔ	nyemX	*rǎn*	4.9	20	thin	*ɲen^{B}	2	405	24	
薄	*Cə-[b]ˁak	bak	*bó*	1.3	1	thin	*bi̥ɛk^{D}	3	39	148	
				5.33	12	thin	*glæi^{C}	3	579	132	
				3.6	12	thin (person)	*ndzu̥ei^{C}	2	162	132	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
念		nemH	/nɐm^{3}/[120]	2.8	22	think of	*hnəm^{B} ~*hləm^{B}	3	212.2	174	6.2.1
渴	*Nə-q^{hʕ}at	khat	*kě*	5-6.5	4	thirsty	*NKhat	1	617	221	
				2.7	25	this	*ʔneinX	1	211.1	36	5.4
				1.3	7	thorn	*-bo^{B}	2	3	225	4.2.3
				4.4	18	thorn	*ʔɟim^{B}	3	436	5	
千	*s-ŋ^{ʕ}i[n]	tshen	*qiān*	3.2	20	thousand	*tshi̯en	1	134	24	3.2, 5.2
				1.2	7	thread	*S-pho^{B}	2	59	206	
				2.13	9	thread	*suj^{C}	3	179	243	
穿	*t^{h}o[n]	tsyhwen	*chuān*	4.2	21	thread, to	*chu̯en	1	446	194	
				1.16	3	three	*pjɔu	1	61	77	5.2, 5.3, 7.5
被	*m-p(r)ajʔ	bjeX	*bèi*	1.4	15	throw on (clothes)	*mpu̯a^{C}	2	4	94	
				4.1	29	thrush (*huà méi niǎo*)	*cɔŋ^{A}	2	433	85	7.2
				1.4	16	thunder	*mpuə	1	16	191	
				1.2	7	thunder	*S-pho^{A}	2	59	206	
				5-6.2	10	tie/cross (legs)	*qhe^{A}	2	614	261	
祖	*[ts]^{ʕ}aʔ	tsuX	*zǔ*	3.16	7	tiger	*tsjo^{B}	2	313	206	
				5.36.1	19	tiger	*ŋgljæn^{A}	3	510	175	
緊	*Ki[n]ʔ	kjinX	*jǐn*	5.16	27	tight	*kjən^{B}	3	469	62	
瓦	*[ŋ]^{wʕ}ra[j]ʔ	ngwæX	*wǎ*	5’.9	5	tile	*ŋ^{w}æX	1	561	149	2.1.2.2, 3.2
碓		twojH	*duì*	2.1	11	tilt-hammer /pestle	*tu̯ɔi^{C}	3	217	188	
				3.2	5	tin	*tshæ^{D}	2	xx	xx	
舌	*m.lat	zyet	*shé*	1.36	10	tongue	*mblet	1	90.1	51	4.4, 6.2.2
				1.23	18	tooth	*hmjinX	1	32.2	7	4.2
				2.3	16	tortoise	*duH	1	207	115	
				2.51	7	track, to	*ndro^{C}	2	258	206	7.3
				4.1	16	trap/ensnare	*cu^{A}	2	xx	xx	
樹	*m-toʔ-s	dzyuH	*shù*	2.19	29	tree	*ntju̯əŋH	1	424	102	6.3.3
				1.47	16	tree	*S-phru^{A}	2	11	191	4.2
				4.12	22	tree of heaven	*jɛŋ^{A}	2	xx	xx	
				6.46	28	trough	*qroŋ^{A}	2	697	180	7.1, 7.6

[120] Cantonese

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
槽	*[dz]ˤu	dzaw	*cáo*	3.3	16	trough	*dzu^{A}	3	111	115	7.1
				5.49	7	turbid	*ŋkro^{B} /ŋgro^{B}	2	280	206	
				5.36	13	turbid	*ŋglok^{D}	3	522	203	
				1.35.1	10	twin	*mplje^{A}	2	xx	xx	
				1.2	15	twist/rub	*S-phu̯a^{A}	2	59	164	
				4.13	5	twist/rub	*ɕæt^{D}	3	59	164	
				7.1	14	two	*ʔu̯i	1	709	20	5.2, 7.5
				4.12	3	uncle	*jæuX	1	444	259	
				2.57	4	urine	*-raX	1	84	130	
用	*mə-loŋ-s	yowngH	*yòng*	xx	28	use	*[n/l]oŋ^{C}	3	213.3	216	6.2.1
				2.42.1	15	used to	*lju̯a^{C}	2	288	151	
				2.55	12	vegetable	*ʔræi	1	580	132	
直	*N-t<r>ək	drik	*zhí*	3.21	3	vertical /upright	*ndzjæw^{C}	2	xx	xx	
里	*(mə.)rəʔ	liX	*lǐ*	2.57	21	village	*rəŋX	1	605	140	6.2.2
蔓	*ma[n]-s	mjonH	*wàn*	1.8	25	vine	*hmein	1	8.2	170	
				6.31	15	waist	*qlajX	1	649	150	2.1.3.1
				2.3	21	wait	*dəŋ^{B}	2	207	214	
				2.16	3	wait	*tjɔu^{B}	3	361	244	
				3.18	4	wake	*dzja^{D}	2	315	92	
				4.12	29	walk	*jəŋ^{A}	3	444	102	
				6.31	13	walnut	*qlow^{C}	2	xx	xx	
暑	*s-taʔ	syoX	*shǔ*	2.28	7	warm	*sji̯ouX	1	347	134	
				2.4	3	warm self by fire	*ntauH	1	208	76	
澡	*mə.[ts]ˤawʔ	tsawX	*zǎo*	3.4	5	wash (hands)	*ntsæwX	1	160	114	
				7.1	29	water	*ʔu̯əm	1	10, 709	212, 246	6.3.3
牛	*[ŋ]ʷə	ngjuw	*niú*	5.9	23	water buffalo /cow	*ŋiuŋ	1	549	196	
淋	*[r][ə]m	lim	*lín*	2.57	21	water, to	*rəm^{A}	3	605	229	
				4.6	27	water, to	*ɲɟun^{A}	3	354	231	
				2.4	7	weave	*ntət	1	208	222	7.6
織	*tək	tsyik	*zhī*	3.1	1	weave	*tsi̯ɛk^{D}	3	181	110	
				7.13	18	weave/plait	*hin^{A}	2	719	7	
				2.49	18	wedged in	*ntrin^{C}	2	xx	xx	
				2.5	16	weed/hoe	*nthu^{C}	2	xx	xx	
				4.7	20	weep	*ʔɲæmX	1	403	79	6.3.3
				2.4	22	wet	*ntu̯ɛn	1	220	100	
				3.16	2	what	*tsjɨ^{B}	2	xx	xx	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				1.9	27	wheat	*muŋ^{C}	2	xx	xx	
				2.3	8	which	*dʉ^{C}	2	207	242	
				2.41	15	which	*[hl]ai^{C}	3	719	74	
				1.36	13	whip	*mblow^{D}	2	90.1	273	7.6
鞭	*pe[n]	pjien	*biān*	1.1	18	whip	*pin^{A}	3	1	6	
				6.31	13	white	*qlow^{A}	2	649	263	7.1, 7.7
白	*bˁrak	bæk	*bái*	1.3	5	white	*bæk^{D}	3	3	72	7.1, 7.7
				4.12	2	whorl at top of head	*jɨ^{B}	2	xx	xx	
廣	*kʷˁaŋʔ	kwangX	*guǎng*	5-6’.1	24	wide	*K^{w}i̯aŋX	1	661	121	
				1.24	29	wife of mother’s brother	*mjəŋ^{A}	3	45	102	2.1.2.2
				1.10	3	wife /elder sister	*ʔwæw^{B}	2	10	259	
				1.8	24	wild dog	*hmaŋ^{C}	2	xx	xx	6.3.2, 7.3
貍	*[m]ə.rə	li	*lí*	1.31.1	2	wildcat	*pljɨ^{D}	2	97	15	7.3
				4.1	5	wind	*N-cæwH	1	457	171	
				2.1	4	wing	*N-tat	1	205	107	4.3
眨	*mə-tsˁr[a]p	tsrɛp	*zhǎ*	3.19	10	wink	*ntsjep	1	340	220	
				1.46	29	winnow	*prɔŋ^{B}	2	73	248	
				4.8	27	winnow	*hŋum^{C}	3	403	136	
				1.10	24	winnowing fan	*ʔwaŋ^{A}	2	10	121	
扇	*[l̥][a][n]-s	syenH	*shàn*	4.13	24	winnowing fan	*ɕi̯əŋ^{A}	3	191	121	
				2.28	21	wipe	*sjəŋ^{C}	2	323	218	
刷	*[s][r][o]t	srwæt	*shuā*	2.13	13	wipe	*sot^{D}	3	179	256	
				1.16	4	wooden basin	*pjat^{D}	3	37	127	2.1.2.2
字	*Cə-[dz]ə-s	dziH	*zì*	3.6	24	word /character	*ndzaŋ^{C}	3	162	101	
				1.46	7	wring	*pro^{C}	2	73	206	
鏤	*[r]ˁo-s	luwH	*lòu*	2.56	12	write	*hru̯ei^{C}	2	581	208	
寫	*s-qʰAʔ	sjæX	*xiě*	5.28	4	write	*xja^{B}	3	143	130	
年	*[n]ˁi[n]	nen	*nián*	4.8	29	year	*hŋu̯əŋH	1	404	102	5.2
年	*[n]ˁi[n]	nen	*nián*	4.13	29	year	*ɕɔŋ^{C}	2	443	102	5.2
黃	*N-kʷˁaŋ	hwang	*huáng*	5-6’.3	24	yellow	*ɢʷaŋ^{A}	2	687	121	7.7
皇	*[ɢ]ʷˁaŋ	hwang	*huáng*	1.12	24	yellow	*wi̯əŋ^{A}	3	687	121	7.7
				2.41.1	5	young	*hljæ^{D}	2	287	168	

	OC	MC	Man	O	R	English	Reconstr	L	WO	WR	Chap
				2.51	12	young man	*ndrɯ̯ei^{C}	2	258	39	
				1.21	5	young man	*mbjau^{A}	3	30	171	6.3.2
				5.1	8	younger brother	*kɯ̯eiX	1	541	242	2.1.2.2

Index of proto forms by White Hmong

WHm=White Hmong; O1=onset category; O2=onset subcategory; Rime=rime category; English; Recon=reconstructed form; Lev=level: Hmong-Mien (1), Hmongic (2), Mienic (3)

WHm	English	Reconstr	L	Onset	Rime	Chapter
cab	earthworm	*N-cuŋ	1	4.1	28	
cab	lead, to	*coŋ^{A}	2	4.1	28	
cag	root	*ɟoŋ^{A}	2	4.3	28	
caij	ride	*ɟej	1	4.3	10	
caug	knee	*ɟu̯əiH	1	4.3	12	
cawv	liquor	*cow^{B}	2	4.1	13	
cej	buckwheat	*ɟæu	1	4.3	3	7.4
ces, ceg	leg/branch	*ɟæw^{B}	2	4.3	3	4.4
cev	body/trunk	*cæw^{B}	2	4.1	3	4.4
ci	bake/toast	*ci^{C}	2	4.1	1	4.4
cig	burn/be alight	*ɟi^{C}	2	4.3	1	4.4
ciab	beeswax	*N-ci̯æŋ	1	4.1	24	
ciaj	alive	*ɟin^{A}	2	4.3	18	
cog	plant, to	*ɟəŋ^{C}	2	4.3	21	
cos	mortar/treadmill	*ɟo^{B}	2	4.3	7	
coob	thrush (*huà méi niǎo*)	*cɔŋ^{A}	2	4.1	29	7.2
cua	chew	*cu̯a^{C}	2	4.1	15	
cua	wind	*N-cæwH	1	4.1	5	
cuab	trap/ensnare	*cu^{A}	2	4.1	16	
cuag	meet	*ɟu̯a^{C}	2	4.3	15	
cuaj	nine	*N-ɟuə	1	4.3	16	5.2, 6.3.1, 7.5
chav	CLF-rooms	*choŋ^{B}	2	4.2	28	
chais	peel/shave	*che^{D}	2	4.2	10	
chaub	belly	*chu̯ei^{A}	2	4.2	12	
chaw	bed/place	*chouH	1	4.2	13	
cheb	sweep	*chæw^{A}	2	4.2	3	
chob	thread, to	*chu̯en	1	4.2	21	
choj	bridge	*ɟow	1	4.3	16	
dab	neck	*qlaŋ	1	6.31	24	
dab	spirit/ghost	*qraŋ^{A}	2	6.46	24	7.7
dab	trough	*qroŋ^{A}	2	6.46	28	7.1, 7.6
daj	span, arm	*ɢraŋ^{A}	2	6.48	24	7.5

WHm	English	Reconstr	L	Onset	Rime	Chapter
daj	yellow	*ɢ^{w}aŋ^{A}	2	5-6'.3	24	7.7
dav	eagle/hawk	*qlaŋX	1	6.31	24	4.2.3
dav	wide	*K^{w}i̯aŋX	1	5-6'.1	24	
dais	bear	*qrɐp	1	6.46	10	7.3
daus	ice	*qru̯ei^{D}	2	6.46	12	
daw	salty	*qrow^{C}	2	6.46	13	
dawb	white	*qlow^{A}	2	6.31	13	7.1, 7.7
dawm	mountain pass	*ɢlow^{D}	2	6.33	13	
deb	far	*q^{w}uw	1	6'.1	3	6.2.2
dej	river	*ɢlæw^{A}	2	6.33	3	7.2
dev	dog	*qluwX	1	6.31	3	4.2.4
dib	cucumber	*K^{w}a	1	5-6'.1	4	2.1.2.2
dim	escape	*ɢ^{w}a^{D}	2	5-6'.3	4	
dos	Allium	*ɢləŋ^{B}	2	6.33	21	7.2
dos	span, finger	*qro^{C}	2	6.46	7	7.5
dov	roll down	*qləŋ^{B}	2	6.31	21	
dub	black	*qrɛŋ^{A}	2	6.46	22	7.7
dua	tear, to	*qru̯a^{C}	2	6.46	15	
duaj	peach	*ɢlæw	1	6.33	5	
duav	waist	*qlajX	1	6.31	15	2.1.3.1
dhau	cross (river)	*K^{w}ajH	1	5-6'.1	15	
hais	ladle, to	*he^{D}	2	7.13	10	
hau	boil (TR)	*hu̯ei^{C}	2	7.13	12	
hau	head	*S-phreiX	1	1.47	12	
haus	drink/smoke	*hup	1	7.13	9	6.2.2
hiab	weave/plait	*hin^{A}	2	7.13	18	
hov	sharpen/grind	*ho^{B}	2	7.13	7	
hub	clay pot/earthen jar	*hɛŋ^{A}	2	7.13	22	
huab	fog/cloud	*hu^{A}	2	7.13	16	7.1
hlab	sash/cord/rope	*hljaŋ	1	2.41.1	24	
hlab	scald	*hlaŋ^{A}	2	2.41	24	
hlais	slice	*hlɐp	1	2.41	10	2.1.2.1, 6.3.1
hlau	iron	*hluw^{C}	2	2.41	9	3.2, 6.2.2, 7.1
hlawv	burn (mountain)	*hljow^{B}	2	2.41.1	13	
hli	moon/month	*hlaH	1	2.41	4	2.1.2.1, 6.3.1, 7.7
hlob	big	*hljo	1	2.41.1	7	4.4
hlov	bamboo	*hləwX	1	2.41	7	
hlua	rope	*hlæ^{C}	2	2.41	5	
hluas	young	*hljæ^{D}	2	2.41.1	5	
hlwb	marrow/brains	*hl$\sout{\text{u}}$^{A}	2	2.41	8	
hma	wild dog	*hmaŋ^{C}	2	1.8	24	6.3.2, 7.3

WHm	English	Reconstr	L	Onset	Rime	Chapter
hmab	vine	*hmein	1	1.8	25	
hmo	night	*hməŋH	1	1.8	21	2.1.2.1, 2.1.2.2, 6.3.1
hmob	flea	*hmiəŋ	1	1.8	23	
hmoob	Hmong	*hm~~ɯ~~ŋ^{A}	2	1.8	30	
hnab	grain head/bag	*hnɔn	1	2.8	24	7.4
hnav	perilla	*hnaŋ^{B}	2	2.8	24	
hnav	put on/wear (clothes)	*(h)naŋX	1	2.8	24	4.4, 7.6
hneev	crossbow	*hnæn^{B}	2	2.8	19	2.1.4, 4.2, 7.3
hneev	footprint/track	*hmjænX	1	1.23	19	6.3.1, 7.3
hnia	sniff at	*hmjɻ̩əmH	1	1.23	18	2.1.2.1
hniav	tooth	*hmjinX	1	1.23	18	4.2
hno	rice, cooked	*hnrəaŋH	1	2.53	21	7.4
hnov	forget	*hnuŋ^{B}	2	2.8	27	
hnov	hear	*hnəumX	1	2.8	21	
hnoos	cough	*hnɔp	1	2.8	29	
hnub	sun/day	*hnɛŋ^{A}	2	2.8	22	2.1.2.1, 6.3.1, 7.7
hnyav	heavy	*hnjeinX	1	2.23	25	
hnyuv	intestines	*hɲeuŋX	1	4.8	23	
i	that/the former	*ʔi~~ɨ~~^{B}	2	7.1	2	5.4
ib	crest/comb	*ʔwɻ̩æn	1	1.10	1	
ib	one	*ʔi~~ɨ~~	1	7.1	2	5.2, 7.5
iab	bitter	*ʔim	1	7.1	18	
kab	insect/worm	*klæŋ	1	5.31	24	4.2, 4.4, 6.2.4, 6.3.4
kaj	bright/light	*ɢ^{w}aŋ^{A}	2	5-6’.3	24	
kas	maggot	*klaŋ^{C}	2	5.31	24	4.2.4, 4.4, 6.3.4
kaum	ten	*gjᵾɛp	1	5.18	9	3.2, 4.3, 5.2, 6.3.1, 7.5
kaus	bamboo hat	*kuw^{D}	2	5.1	9	2.1.2.2
kaws	gnaw	*kow^{D}	2	5.1	13	2.1.2.2
kev	road/way	*kləuX	1	5.31	3	
-ki	child	*k^{w}jei^{B}	3	5’.16	12	
kib	fry	*kleu	1	5.31	2	
koj	2SG (you)	*g~~ɯ~~^{A}	2	5.3	8	5.3
koob	needle	*kjɔŋ^{A}	2	5.16	29	
kooj	grasshopper	*g~~ɯ~~ŋ^{A}	2	5.3	30	
kub	gold	*kjeəm	1	5.16	23	3.2, 7.1
kub	horn	*klɛɔŋ	1	5.31	22	
kub	hot (water)	*k(h)lɛɔm	1	5.32	22	
kuv	1SG (I/me)	*kɛŋ^{B}	2	5.1	22	5.3, 6.3.2, 6.3.4

WHm	English	Reconstr	L	Onset	Rime	Chapter
kua	liquid/soup	*klæwX	1	5.31	5	
kwv	younger brother	*kʰ̬eiX	1	5.1	8	2.1.2.2
khau	shoes	*khjɔ^{C}	2	5.17	6	
khaus	itch(y)/ scratch(y)	*khjʰ̬ɐt	1	5.17	9	
khawb	plum	*khow^{A}	2	5.2	13	
khaws	pick up	*khow^{D}	2	5.2	13	
lag	deaf	*loŋ^{A}	2	2.42	28	
las	tael (40 grams)	*lʲaŋ^{B}	2	2.42	26	
laim	lightning flash	*lje^{D}	2	2.42.1	10	
lau	male	*ʔljuw^{B}	2	2.40.1	9	
laub	pour	*ʔljʰ̬ei^{A}	2	2.40.1	12	
laus	old	*lʰ̬ei^{B}	2	2.42	12	
leej	CLF-people	*lan	1	2.42	19	
li	squeeze/pinch	*ʔl~~i~~^{C}	2	2.40	2	
lig	late	*li^{C}	2	2.42	1	
liab	monkey	*ʔlin^{A}	2	2.40	18	6.3.2, 7.1, 7.3
liab	red	*ʔlin^{A}	2	2.40	18	7.1, 7.7
liag	sickle	*ljim	1	2.42.1	18	2.1.2.2, 7.4
liaj	field	*ljiŋ	1	2.42.1	18	
lo	CLF-mouthfuls	*ʔlo^{C}	2	2.40	7	6.2.4
los	bury	*ljəŋ^{B}	2	2.42.1	21	
los	come back	*ləwX	1	2.42	7	
lov	break	*ʔlo^{B}	2	2.40	7	6.2.1
lub	CLF-bowls/houses	*ʔlɛŋ^{A}	2	2.40	22	6.2.1, 6.2.4
luj	measure (rice)	*ljɛŋ^{A}	2	2.42.1	22	2.1.2.2
luv	short	*ʔlɛŋ^{B}	2	2.40	22	6.2.1
luav	rabbit	*ʔlju^{B}	2	2.40.1	16	
lwg	dew	*l~~ɯ~~^{C}	2	2.42	8	
lwj	rot	*l~~ɯ~~^{A}	2	2.42	8	
mob	illness/pain	*ʔmun	1	1.7	27	7.7
mog	wheat	*muŋ^{C}	2	1.9	27	
mos	fine (flour)	*mənX/H	1	1.9	21	
mos	fly (N.)	*məuŋX	1	1.9	21	
mus	go	*n-m~~ɯ~~ŋ(X)	1	1.9	30	2.1.2.1, 2.1.4, 4.3, 4.4
muab	grasp	*ʔmʰ̬ɛ^{A}	2	1.7	11	4.4
muag	eye	*mʰ̬ɛjH	1	1.9	11	
muag	sell	*mɛjH	1	1.9	11	2.1.3.1, 4.4
muag	soft	*mlʰ̬ɛjH	1	1.39	11	6.3.4
muaj	have	*n-mɛj	1	1.9	11	2.1.2.1, 2.1.3.1, 4.3, 4.4

WHm	English	Reconstr	L	Onset	Rime	Chapter
muas	buy	*mɛjX	1	1.9	11	2.1.3.1, 4.4
mloog	listen	*(S-)mrṵɔŋH	1	1.54	29	4.4
nab	snake	*ʔnaŋ	1	2.7	24	
nag	rain	*m-noŋ^{C}	2	2.9	28	2.1.2.1
nas	mouse/rat	*naŋ^{B}	2	2.9	24	
nej	2PL (you-all)	*mi̱əu	1	1.9	1	5.3, 6.3.4
neej	person	*næn^{A}	2	2.9	19	
nees	horse	*mjæn^{B}	2	1.24	19	6.3.1
niam	female	*min^{D}	2	1.9	18	
no	cold	*ʔnṵɔmH	1	2.7	27	
no	this	*ʔneinX	1	2.7	25	5.4
noj	eat	*nuŋ^{A}	2	2.9	27	2.1.4
noob	seed	*hnrṵem	1	2.53	29	
noog	bird	*m-nɔk	1	2.9	29	2.1.2.1, 2.1.4, 4.2.4, 6.3.2
nug	ask	*nɛŋ^{C}	2	2.9	22	
nus	mother's brother	*neuŋX	1	2.9	23	
nws	3SG (he/she/it)	*ni̱æn(X)	1	2.9	1	2.1.4, 5.3
ncaj	straight	*ɲci̱aŋ^{A}	2	4.4	26	4.4
ncau	bamboo strip	*ɲcɔuk	1	4.4	6	7.6
ncauj	mouth/beak	*ɲɟuj	1	4.6	9	
ncaws	peck/dig	*ɲcow^{D}	2	4.4	13	
nce	climb	*ɲcæw^{C}	2	4.4	3	
nceb	mushroom	*ŋkjæu	1	5.19	3	
ncej	pillar	*ɲɟæu	1	4.6	3	
nco	remember	*ɲco^{C}	2	4.4	7	
ncoo	pillow	*ɲcṵəmH	1	4.4	29	
ncuav	rice cake	*ŋkjuəX	1	5.19	16	
ncho	cooking smoke	*ɲchi̱ouH	1	4.5	7	
nchuav	sprinkle/spill	*ɲchu^{B}	2	4.5	16	
nkag	crawl	*ŋgjoŋ^{C}	2	5.21	28	
nkaj	indigo	*ŋglam	1	5.36	24	
nkawm	pair	*ŋgjow^{D}	2	5.21	13	
nkees	lazy	*ŋglæn^{B}	2	5.36	19	
nkoj	boat/ship	*ŋgjəŋ^{A}	2	5.21	21	
nkos	muddy	*ŋko^{D}	2	5.4	7	
nkoog	thick (liquid)	*ŋgjɔŋ^{C}	2	5.21	29	
nkuaj	cattle pen	*ŋgluə	1	5.36	16	
nkhaus	crooked	*ŋkhuw^{D}	2	5.5	9	
nkhawb	soot	*ŋkhow^{A}	2	5.5	13	
npau	boil (INTR)	*mpṵæiH	1	1.4	12	
npau	dream	*mpeiH	1	1.4	12	4.3, 6.3.3

WHm	English	Reconstr	L	Onset	Rime	Chapter
npe	name	*mpɔuH	1	1.4	3	4.3
npua	pig	*mpæ^{C}	2	1.4	5	4.2, 7.1
npua	throw on (clothes)	*mpu̯a^{C}	2	1.4	15	
npuaj	clap	*mbæ^{A}	2	1.6	5	
npuav	hold in mouth	*mpæ^{B}	2	1.4	5	
nphoo	scatter/sprinkle	*mphu̯ənH	1	1.5	29	
nplag	smooth/glossy	*mbliə̯ŋH	1	1.36	18	
nplaig	tongue	*mblet	1	1.36	10	4.4, 6.2.2
nplaum	glutinous/sticky	*mblut	1	1.36	9	
nplawm	whip	*mblow^{D}	2	1.36	13	7.6
nplej	rice plant/paddy	*mbləu	1	1.36	3	7.4
nplooj	leaf	*mblɔŋ^{A}	2	1.36	29	6.2.4
nplhaib	finger ring	*mphle^{A}	2	1.35	10	2.1.2.2, 7.6
nqaij	meat	*NGej	1	5-6.6	10	7.3
nqaim	narrow	*ɴGe^{D}	2	5-6.6	10	
nqe	hook	*ɴqæw^{C}	2	5-6.4	3	
nqe	price	*ɴqa^{C}	2	5-6.4	4	2.1.2.2
nqes	descend	*ɴGa^{B}	2	5-6.6	4	4.3, 6.2.2
nqeeb	cogongrass	*NKan	1	5-6.4	19	4.3, 7.2
nqos	shuttle	*ɴGəŋ^{B}	2	5-6.6	21	7.6
nqos	swallow, to	*ɴGəŋ^{B}	2	5-6.6	21	
nqov	low/bellow	*ɴqəŋ^{B}	2	5-6.4	21	
nquab	pigeon	*ɴqu^{A}	2	6.4	16	
nquag	diligent	*NGəjH	1	5-6.6	15	
nqhis	thirsty	*NKhat	1	5-6.5	4	
nqhuab	dry/thirsty	*NKhæj	1	5-6.5	5	
nrab	center/middle	*ntroŋ	1	2.49	28	
nras	plain (level ground)	*ndroŋ^{B}	2	2.51	28	
nraim	seek shelter	*ŋgre^{D}	2	5.51	10	
nrau	butt (of bulls)	*ntruw^{C}	2	2.49	9	
nraug	young man	*ndru̯ei^{C}	2	2.51	12	
nrig	lean (on stick)	*ŋgra^{C}	2	5.51	4	
nro	turbid	*ŋkro^{B}/ŋgro^{B}	2	5.49	7	
nrob	breast/chest	*ntrəŋ^{A}	2	2.49	21	
nrog	drip	*ŋgro^{C}	2	5.51	7	
nrog	interior	*ndrəŋ^{C}	2	2.51	21	
nrog	track, to	*ndro^{C}	2	2.51	7	7.3
nruas	drum	*ndruX	1	2.51	16	7.7
nrhoob	puttees	*nthrɔŋ^{A}	2	2.50	29	2.1.2.2, 7.6
ntab	float	*ntaŋ^{A}	2	2.4	24	
ntaj	sword, long	*ndaŋ^{A}	2	2.6	24	
ntais	have a gap	*NK^{w}et	1	5-6’.4	10	

WHm	English	Reconstr	L	Onset	Rime	Chapter
ntau	many/much	*ntɔ^{C}	2	2.4	6	7.5
ntaub	cloth	*ntei	1	2.4	12	7.6
ntaus	beat (someone)	*ntuw^{D}	2	2.4	9	
ntaws	navel	*ntəut	1	2.4	13	2.1.2.1
ntawv	paper	*ntow^{B}	2	2.4	13	7.6, 6.2.4
nte	warm self by fire	*ntauH	1	2.4	3	
nteg	lay eggs	*ndəuH	1	2.6	3	
ntev	long	*ntauX	1	2.4	3	6.3.4
ntiv	finger	*nta^{B}	2	2.4	4	2.1.4
ntiv	flip with finger	*ntik	1	2.4	2	
ntiaj	front surface	*ɴGlin^{A}	2	6.36	18	
ntos	weave	*ntət	1	2.4	7	7.6
ntov	chop	*ntəwX	1	2.4	7	
ntoo	put on/wear (cap)	*ntɔŋH	1	2.4	29	4.3, 7.6
ntoo	tree	*ntjuə̯ŋH	1	2.19	29	6.3.3
ntub	wet	*ntu̯ɛn	1	2.4	22	
ntuj	sky/heaven	*ndɛuŋ	1	2.6	22	
ntuag	ragged/shabby	*ɴGlu^{C}	2	6.36	16	
ntuag	ramie/hemp	*nduH	1	2.6	16	7.6
ntws	flow	*ɴGlɯ^{B}	2	6.36	8	
nthab	attic	*nthaŋ^{A}	2	2.5	24	2.1.2.2, 7.6
nthua	weed/hoe	*nthu^{C}	2	2.5	16	
nthuav	open out/undo	*nthu̯a^{B}	2	2.5	15	
ntsaj	groan/moan	*mbraŋ^{A}	2	1.51	24	
ntsais	wink	*ntsjep	1	3.19	10	
ntsaum	ant	*mbrɔ^{D}	2	1.51	6	6.3.3
ntsaws	stop up/plug	*ntsjot	1	3.19	13	
ntse	sharp	*ntsjæw^{C}	2	3.19	3	
ntse	soak	*ntsjæw^{C}	2	3.19	3	
ntseg	ear	*mbræu	1	1.51	3	
ntseg	vertical/upright	*ndzjæw^{C}	2	3.21	3	
ntses	fish	*mbrəuX	1	1.51	3	4.2.2, 4.3, 6.3.2
ntsev	salt	*ntsjəuX	1	3.19	3	4.3
ntsim	spicy	*mbrat	1	1.51	4	
ntsia	drive in (nail)	*ntsjin^{C}	2	3.19	18	
ntsuab	green/blue	*mpru^{A}	2	1.49	16	7.7
ntsuag	bamboo shoot/orphan	*mbrəjH	1	1.51	15	6.3.2
ntsuas	sorghum	*ntsju^{C}	2	3.19	16	
ntswg	nose	*mbruiH	1	1.51	8	2.1.2.2, 4.2.2
ntsws	lung	*mprɯ^{C}	2	1.49	8	
ntshav	blood	*ntshjamX	1	3.20	24	6.3.3
ntshai	fear/be afraid	*ntshjeH	1	3.20	10	4.3

WHm	English	Reconstr	L	Onset	Rime	Chapter
ntshauv	louse, head	*ntshjeiX	1	3.20	12	6.3.3
ntshiab	clear	*ntshjɻəŋ	1	3.20	18	4.3
ntshuab	otter	*ntshjʉa^{A}	2	3.20	15	
ntxa	grave/tomb	*ntsaŋ^{C}	2	3.4	24	
ntxaib	twin	*mplje^{A}	2	1.35.1	10	
ntxais	suck	*ntse^{D}	2	3.4	10	
ntxaug	thin (person)	*ndzʉei^{C}	2	3.6	12	
ntxiv	repair/mend	*mpjaX	1	1.19	4	
ntxias	braid/a braid	*mbjinX	1	1.21	18	4.4
ntxov	early	*ntsɻouX	1	3.4	7	
ntxuag	have food with rice	*mbljæ^{C}	2	1.36.1	5	
ntxuam	fan	*mbljæp	1	1.36.1	5	7.6
ntxuav	wash (hands)	*ntsæwX	1	3.4	5	
ntxhab	steep	*ntshoŋ^{A}	2	3.5	28	
ntxhais	daughter/girl	*mphje^{D}	2	1.20	10	2.1.2.2
ntxhib	rough/coarse	*ntsha^{A}	2	3.5	4	
ntxhua	launder	*ntshuH	1	3.5	16	
ntxhw	elephant	*ntsh~~u~~^{C}	2	3.5	8	
nyab	sister-in-law	*ʔɲam	1	4.7	24	6.3.1
nyiag	steal	*ɲemH	1	4.9	20	
nyiaj	silver	*ɲ^{w}ɻən	1	4’.9	18	3.2, 7.1
nyias	thin	*ɲen^{B}	2	4.9	20	
nyiav	weep	*ʔɲæmX	1	4.7	20	6.3.3
nyob	be at/live	*ʔɲəŋ^{A}	2	4.7	21	4.4
nyoos	raw/unripe	*ɲʉemX	2	4.9	29	
nyuj	water buffalo/cow	*ŋiuŋ	1	5.9	23	
o	swell	*ʔəumH	1	7.1	21	
ob	two	*ʔɻi	1	7.1	14	5.2, 7.5
os	duck	*ʔap	1	7.1	7	
oo	cloud/haze	*ʔɔŋ^{C}	2	7.1	29	
pa	air	*poŋ ^{C}	2	1.1	28	
paj	flower	*bɻaŋ	1	1.3	24	2.1.2.2, 4.2
paub	know	*pei	1	1.1	12	
paug	pus	*bʉei^{C}	2	1.3	12	7.1
pauj	repay	*bʉei^{A}	2	1.3	12	
pauv	soybean	*N-peiX	1	1.1	12	
peb	1PL (we/us)	*N-pɔu	1	1.1	3	5.2, 5.3
peb	three	*pɻɔu	1	1.16	3	5.2, 5.3, 7.5
pes	mountain	*bæw^{B}	2	1.3	3	
poj	female/woman	*bo^{A}	2	1.3	7	
pom	see	*bʉət	1	1.3	7	
pos	thorn	*-bo^{B}	2	1.3	7	4.2.3

WHm	English	Reconstr	L	Onset	Rime	Chapter
pov	shoot	*pənX	1	1.1	21	6.3.3, 7.3
poob	fall	*pʉŋ^{A}	2	1.1	30	4.4
pub	feed	*pɛŋ^{A}	2	1.1	22	
puv	full	*pu̯ɛŋX	1	1.1	22	6.3.3
pua	hundred	*pæk	1	1.1	5	2.1.4, 3.2, 5.2
puab	molar tooth	*pæ	1	1.1	5	
puab	thigh	*pæ^{A}	2	1.1	5	4.2
puag	embrace, hatch	*buəH	1	1.3	16	
puas	bad/spoiled	*bu̯a^{B}	2	1.3	15	
pw	sleep/lie down	*pu̯eiH	1	1.1	8	
pwg	shoulder	*bʉ^{C}	2	1.3	8	
phob	CLF-quilts	*phəan	1	1.2	21	6.2.4
phua	cut open	*phajH	1	1.2	15	6.2.2
phuab	push earth aside	*phʉ^{A}	2	1.2	8	
plab	stomach	*plaŋ^{A}	2	1.31	24	
plas	owl	*ploŋ^{D}	2	1.31	28	
plaub	four	*plei	1	1.31	12	5.2, 6.3.1, 7.5
plaub	hair	*pljei	1	1.31.1	12	
plawv	heart	*pljow^{B}	2	1.31.1	13	7.1
plig	soul/spirit	*blja^{A}	2	1.33.1	4	7.7
plis	wildcat	*pljɨ^{D}	2	1.31.1	2	7.3
pliag	mussel/clam	*blin^{C}	2	1.33	18	
pliaj	forehead	*bl-^{A}	1	1.33	xx	
plhaub	shell/covering	*phlei	1	1.32	12	2.1.2.2
plhu	cheek/face	*phl-^{C}	2	1.32	xx	
plhws	stroke	*phlʉ^{C}	2	1.32	8	
qab	back (vs. front)	*N-Kaŋ	1	5-6.1	24	2.1.2.2
qab	sweet	*Kam	1	5-6.1	24	2.1.2.2
qav	frog	*KæŋX	1	5-6.1	24	2.1.2.2
qaib	chicken	*Kəi	1	5-6.1	10	2.1.2.2, 6.3.2
qaij	slant/slanting	*ɢe^{A}	2	5-6.3	10	
qaug	fall (over)	*ɢu̯ei^{C}	2	6.3	12	
qaum	back (of body)	*ɢuw^{D}	2	6.3	9	
qe	egg	*qæw^{C}	2	5-6.1	3	
qej	garlic	*ɢa^{A}	2	5-6.3	4	
qes	low/short	*GaX	1	5-6.3	4	4.3, 6.2.2
qev	borrow	*KaX	1	5-6.1	4	
qeej	bamboo pipes	*ɢæn^{A}	2	5-6.3	19	
qoob	crops	*qɔŋ^{A}	2	5-6.1	29	
qub	old	*qu̯oH	1	6.1	7	
qub	star	*qɛŋ^{A}	2	5-6.1	22	
qua	crow, to	*KajH	1	5-6.1	15	

WHm	English	Reconstr	L	Onset	Rime	Chapter
quaj	sing/cry out	*Gæw	1	5-6.3	5	6.2.2
quav	excrement	*N-KəjX	1	5-6.1	15	2.1.2.2, 4.3
qwj	snail	*Gʉ^{A}	2	6.3	8	
qhaib	tie/cross (legs)	*qhe^{A}	2	5-6.2	10	
qhiav	ginger	*qhin^{B}	2	5-6.2	18	
qhov	hole	*qhəŋ^{B}	2	5-6.2	21	6.2.4
qhua	guest	*Khæk	1	5-6.2	5	2.1.4
qhuav	dry/withered	*KhæwX	1	5-6.2	5	2.1.2.2
qhwv	pack/wrap	*qhʉ^{B}	2	5-6.2	8	
rab	CLF-tools	*traŋ^{A}	2	2.46	24	6.2.4
raj	flute/tube	*droŋ^{A}	2	2.48	28	
rau	hoof/claw/nail	*tru̯ei^{C}	2	2.46	12	
rau	put on/wear (shoes)	*trɔ^{C}	2	2.46	6	4.4
rau	six	*kruk	1	5.46	9	2.1.4, 5.2, 6.3.1, 7.5
raug	hit target	*drɔ^{C}	2	2.48	6	4.4
rauv	burn (TR)	*kru̯ei^{B}	2	5.46	12	
rawg	chopsticks	*drouH	1	2.48	13	3.2
rawm	bamboo	*drow^{D}	2	2.48	13	
rog	fat, to be	*grəunH	1	5.48	21	4.4
roj	animal fat/oil	*grəŋ^{A}	2	5.48	21	4.4
roj	step	*dro^{A}	2	2.48	7	
ros	laugh	*krət	1	5.46	7	
rov	return	*trəŋ^{B}	2	2.46	21	
rooj	door/gate	*gru̯eŋ	1	5.48	29	7.6
rooj	table/bench	*drɔŋ^{A}	2	2.48	29	
ruaj	firm/durable	*dru^{A}	2	2.48	16	
rhais	insert	*threp	1	2.47	10	
rho	pull out	*thro^{C}	2	2.47	7	
sai	quick	*hre^{C}	2	2.56	10	
sau	receive/gather in	*sjuw^{A}	2	2.28	9	
sau	write	*hru̯ei^{C}	2	2.56	12	
sawv	stand/get up	*sjouX	1	2.28	13	
sib	light(weight)	*-sji̯eu	1	2.28	2	
sib	RECIPROCAL	*sjɨ$^{A\text{-}D}$	2	2.28	2	4.1, 6.2.3
siab	high/tall	*-hri̯əŋ	1	2.56	18	2.1.3.1
siab	liver	*-hri̯ən	1	2.56	18	2.1.3.1
siab	measure for grain	*sjin^{A}	2	2.28	18	
siav	cooked/ripe	*sjen^{B}	2	2.28	20	
so	rest, to	*sjo^{C}	2	2.28	7	
so	wipe	*sjəŋ^{C}	2	2.28	21	
sov	warm	*sji̯ouX	1	2.28	7	

WHm	English	Reconstr	L	Onset	Rime	Chapter
soob	thin	*sjɔŋ^{A}	2	2.28	29	
su	midday meal	*sjɛŋ^{C}	2	2.28	22	
suab	fern	*-hru^{A}	2	2.56	16	
suab	sound/noise	*-hru^{A}	2	2.56	16	
tas	half (of day)	*N-dam(X)	1	2.3	24	4.3
tav	rib	*tamX	1	2.1	24	
tais	bowl	*de^{B}	2	2.3	10	7.1
tais	pick up/clamp	*te^{D}	2	2.1	10	
tau	get/gain	*təuk	1	2.1	6	6.2.3
taub	gourd	*tuw^{A}	2	2.1	9	
taum	bean	*dup	1	2.3	9	7.4
taus	axe	*tu̯ei^{C}	2	2.1	12	7.1, 7.6
taw	foot	*tow^{C}	2	2.1	13	
tawg	explode	*douH	1	2.3	13	4.4
taws	fire	*douX	1	2.3	13	4.4
taws	ignite/light	*tow^{D}	2	2.1	13	4.4
tawv	skin	*N-top	1	2.1	13	2.1.2.1
te	frost	*tæw^{C}	2	2.1	3	
teb	answer	*tau	1	2.1	3	
teb	earth	*N-təu	1	2.1	3	4.3
tes	hand/arm	*-bɔuX	1	1.3	3	2.1.2.1, 4.2.3
tij	elder brother	*da	1	2.3	4	
tis	wing	*N-tat	1	2.1	4	4.3
tiab	skirt	*tin^{A}	2	2.1	18	7.6
tiaj	level	*din^{A}	2	2.3	18	
tob	deep	*N-tu̯o	1	2.1	7	4.3
tog	sink	*dəŋ^{A}	2	2.3	21	
tom	bite	*dəp	1	2.3	7	6.3.4
tos	wait	*dəŋ^{B}	2	2.3	21	
tooj	copper	*dɔŋ	1	2.3	29	3.2, 7.1
tu	snap	*tɛŋH	1	2.1	22	
tub	son/boy	*tu̯ɛn	1	2.1	22	4.2, 6.2.4
tus	CLF-horses	*dɛŋ^{B}	2	2.3	22	6.2.4
tuv	louse, body	*tɛmX	1	2.1	22	6.3.4
tua	kill	*təjH	1	2.1	15	4.4, 6.3.4
tuab	thick	*tæ^{A}	2	2.1	5	7.1
tuag	die	*dəjH	1	2.3	15	4.4, 6.3.2, 6.3.4
tuaj	come	*daj	1	2.3	15	2.1.3.1
tuam	step on/tread	*dæ^{D}	2	2.3	5	
tuav	hold/grasp hand	*tæ^{B}	2	2.1	5	
tuav	husk/pound rice	*tuX	1	2.1	16	
tw	tail	*tu̯eiX	1	2.1	8	4.2.2, 6.3.3

WHm	English	Reconstr	L	Onset	Rime	Chapter
twg	which	*dʉ^{C}	2	2.3	8	
thee	charcoal	*thanH	1	2.2	19	3.2
thi	hoop	*thɨ^{C}	2	2.2	2	
thoob	bucket	*thɔŋ(X)	1	2.2	29	3.2, 6.2.4
tsaim	chin/lower jaw	*dzje^{D}	2	3.18	10	
tsaug	porcupine	*N-dzjeiH	1	3.18	12	4.3
tsaus	dark	*pruw^{D}	2	1.46	9	
tsawg	few/lack	*dzjok	1	3.18	13	
tsaws	pheasant	*tsjow^{D}	2	3.16	13	
tseb	to sow	*præw^{A}	2	1.46	3	
tsev	house	*prəuX	1	1.46	3	7.6
tsi	pour	*pra^{C}	2	1.46	4	
-tsi	what	*tsjɨ^{B}	2	3.16	2	
tsib	five	*pra	1	1.46	4	5.2, 6.3.1, 7.5
tsib	gall bladder	*tsjiə̯u	1	3.16	1	
tsim	wake	*dzja^{D}	2	3.18	4	
tso	let go	*tsjəŋ^{C}	2	3.16	21	
tsos	armpit	*tsjo$^{C/D}$	2	3.16	7	
tsov	tiger	*tsjo^{B}	2	3.16	7	
tsoov	winnow	*prɔŋ^{B}	2	1.46	29	
tsu	rice steamer	*tsjɛŋH	1	3.16	22	3.2
tsuag	bland/tasteless	*dzjæ^{C}	2	3.18	5	
tsuag	rat	*brʉa^{C}	2	1.48	15	
tsw	malodorous	*tsjʉeiH	1	3.16	8	
tshaib	hungry	*tshje	1	3.17	10	
tshau	sieve, to	*tshjɔ^{C}	2	3.17	6	
tshauv	ashes	*tshjʉəiX	1	3.17	12	
tshiab	new	*tshjiə̯ŋ	1	3.17	18	4.3
tshov	play (flute)	*phro^{B}	2	1.47	7	
tshuab	blow, to	*phru^{A}	2	1.47	16	
tshuab	spinning wheel	*tshjʉa^{A}	2	3.17	15	
txaj	ashamed	*dzaŋ^{A}	2	3.3	24	
txais	receive/borrow	*tsep	1	3.1	10	
txaug	chisel	*dzəuk	1	3.3	6	4.2
txawj	able	*dzow^{A}	2	3.3	13	
txi	bear fruit	*pji^{C}	2	1.16	1	4.4
txiv	father/male	*pjaX	1	1.16	4	
txiv	fruit	*pjiə̯uX	1	1.16	1	4.4
txia	crop of bird	*pjin^{B}	2	1.16	18	
txiaj	money	*dziə̯en	1	3.3	20	
txias	cool (water)	*dzin^{B}	2	3.3	18	
txog	reach/arrive at	*dzo^{C}	2	3.3	7	

WHm	English	Reconstr	L	Onset	Rime	Chapter
txos	stove	*N-tsoH	1	3.1	7	3.2
txoob	mane	*tsʉŋ^{A}	2	3.1	30	4.2.3
txuas	billhook	*tsæ^{C}	2	3.1	5	7.6
txuas	join	*tsæ^{D}	2	3.1	5	
txha	bone	*tshuŋX	1	3.2	28	4.2.3
txhab	sore/boil/blister	*tshaŋ	1	3.2	24	
txhib	split/chop	*phek	1	1.2	2	6.3.2
txhiab	thousand	*tshi̱en	1	3.2	20	3.2, 5.2
txhuv	rice/millet, husked	*tshɛŋ^{B}	2	3.2	22	7.4
txhuas	tin	*tshæ^{D}	2	3.2	5	
ua	do/work	*ʔəjH	1	7.1	15	
uab	crow (bird)	*ʔu^{A}	2	7.1	16	
vab	winnowing fan	*ʔwaŋ^{A}	2	1.10	24	
vaj	garden	*waŋ^{A}	2	1.12	24	
vam	ten thousand	*wi̱aŋ^{C}	2	1.12	26	
vauv	son-in-law	*ʔweiX	1	1.10	12	6.3.1
vawg	taro	*wouH	1	1.12	13	
viv	wife/elder sister	*ʔwæw^{B}	2	1.10	3	
vov	cover self	*ʔwo^{B}	2	1.10	7	
vuas	tile	*ŋ^{w}æX	1	5'.9	5	2.1.2.2, 3.2
xa	send/deliver	*suŋH	1	2.13	28	
xiab	first day of month	*seŋ	1	2.13	20	
xob	thunder	*S-pho^{A}	2	1.2	7	
xov	thread	*S-pho^{B}	2	1.2	7	
xua	chaff/husk	*S-phjæ^{C}	2	1.17	5	
xuab	twist/rub	*S-phu̱a^{A}	2	1.2	15	
xya	breed/propagate	*ɕaŋ^{C}	2	4.13	24	
xya	seven	*djuŋH	1	2.18	28	5.2, 6.3.1, 7.5
xyab	stretch	*ɕoŋ	1	4.13	28	
xyoo	year	*ɕɔŋ^{C}	2	4.13	29	5.2
ya	fly, to	*ʔjaŋ^{C}	2	4.10	24	
yaj	dissolve/melt	*jaŋ^{A}	2	4.12	24	
yaj	sheep/goat	*juŋ	1	4.12	28	3.2
yaim	lick	*-jɐp	1	4.12	10	
yau	small/young	*ʔjuw^{C}	2	4.10	9	
yim	eight	*jat	1	4.12	4	5.2, 6.3.1, 7.5
yis	whorl at top of head	*jɨ^{B}	2	4.12	2	
yias	cooking pot/pan	*wjin^{B}	2	1.27	18	
yog	be	*jəŋ^{C}	2	4.12	21	4.4
yoov	mosquito	*ʔjɔŋ^{B}	2	4.10	29	
yub	seedling	*ʔjɛŋ^{A}	2	4.10	22	3.2, 7.4
yug	raise (chickens)	*jɐŋ^{C}	2	4.12	22	

WHm	English	Reconstr	L	Onset	Rime	Chapter
yuj	tree of heaven	*jɛŋ^{A}	2	4.12	22	
yuav	ask for/want	*ʔju^{B}	2	4.10	16	
zaj	dragon	*-roŋ	1	2.57	28	
zais	conceal	*ʔre^{D}	2	2.55	10	
zaub	vegetable	*ʔræi	1	2.55	12	
zaug	pangolin	*rɔiH	1	2.57	6	7.2
ze	near	*-ʔræw^{C}	2	2.55	3	
zeb	stone	*-ʔrəu	1	2.55	3	2.1.2.2, 4.2.2, 6.2.2
zes	nest	*-rəuX	1	2.57	3	
zib	honey	*ʔra^{A}	2	2.55	4	
zis	urine	*-raX	1	2.57	4	
ziab	dry (rice) in sun	*ʔrin^{A}	2	2.55	18	7.4
zog	strength	*-rək	1	2.57	7	2.1.4, 3.2
zom	grind (grain)	*ro^{D}	2	2.57	7	
zos	village	*rəŋX	1	2.57	21	6.2.2
zov	look after	*ʔro^{B}	2		7	
zoo	good	*-ʔrɔŋH	1	2.55	29	2.1.2.2
zoov	forest	*-ʔrɔŋ^{B}	2	2.55	29	2.1.2.2
zuag	comb	*ræ^{C}	2	2.57	5	
zuag	sharp	*-rajH	1	2.57	15	

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