

Numerals and reckoning in Hmong-Mien

tsis ntau tsis tsawg
“not many not few”

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1. Numerals 1-10: most borrowed

1.1. Native

	White Hmong	Proto Hmongic	Proto Hmong-Mien
two	ɔ ¹	*ʔuu	*ʔui
three	pe ¹	*pjæw	*pjəu

1.2. Borrowed (Downer 1971; Benedict 1987; Dempsey 1995; Peiros 1998; Mortensen 2002)

	WH	HM	Source form	Source language
one	i ¹	*ʔi	ʔjit	OChinese (一)
four	plau ¹	*plei	*-ləy	Tibeto-Burman
five	tʂi ¹	*prja	*-ŋja	Tibeto-Burman
six	ʈau ⁵	*kruk	*k-ruk	Tibeto-Burman
seven		*ŋji ^C (M)	*ni	Tibeto-Burman
	ɕa ⁵	*dzjuŋH (HM)		
eight	yi ⁸	*jat	*-rjat	Tibeto-Burman
nine	cua ²	*N-juə	*gəw	Tibeto-Burman
ten	kau ⁸	*gjuəp	*g(j)ip *gip	Tibeto-Burman or OChinese (十)

2. The higher numerals: all borrowed

	WH	HM	Source form	Source language
hundred	pua ⁵	*pæk	pæk	MChinese (百)
thousand	tshia ¹	*tshien	tshen	MChinese (千)
ten thousand	va ⁸	*wan ^C (H)	van	Early Mandarin (萬)
ten thousand	meŋ ⁸ (Laos)		mɛ̃n	Lao (‘ten thousand’)
million	la ¹ (Laos)		lâan	Lao (‘million’)
ten thousand	meŋ ⁸ (Thailand)		mɛ̃n	Thai (‘ten thousand’)
hundred thousand	la ² (Thailand)		lâan	Thai (‘million’)

3. Zero and ordinals in White Hmong: all borrowed

	<u>White Hmong</u>	<u>Source form</u>	<u>Source language</u>
zero	sɔŋ ⁸ /su ⁸	suun	Lao
first	thi ¹ i ¹	thii	Lao ('time, chance, turn')
second	thi ¹ ɔ ¹		
third, etc.	thi ¹ pe ¹		

4. Alternate (Mienic) or secondary layered (Hmongic) numeral systems: all borrowed

Iu Mien: 2 sets of numerals, one as in #1 above, the other Chinese: the two sets are in complementary distribution (Purnell 2007)

Jiongnai (as representative of other Hmongic systems): 1-10 as in #1 above, but all combining numerals 12-19, 20, 30, etc. use Chinese numbers for 1-9 (Mao & Li 2001) (In White Hmong a piece of this system is retained: for '20', /neŋ⁴ ŋkau⁸/, lit. '2 x 10' Chinese '2' is used—not native /ɔ¹/)

5. Quantifiers and other reckoning words: half borrowed (including 'half'!)

5.1. Native

	<u>WH</u>	<u>PH</u>	<u>PHM</u>
half(way through)	tɔ ⁶	*daŋ ^C	*N-dam(H)
many	ntau ⁵	*ntɔ ^C	
pair	nkau ⁸	*ŋgjow ^D	
fingerspan	dɔ ⁷	*qro ^C	
armspan	da ²	*Gran ^A	
half (vertical)	nta ³		
half (day)	ta ^{4/7}		
enough	tsau ^{4/7}		

5.2. Borrowed

	<u>WH</u>	<u>HM</u>	<u>Source form</u>	<u>Source language</u>
more	ntsi ³	*mpjaX	*mə-ppa?	OC (補 Man. <i>bǔ</i> 'to add to')
to count	ʂua ³		srjuX	MC (數 Man. <i>shǔ</i>)
half (horizontal)	nɕa ¹	*ntroŋ	trjuwng	MC (中 Man. <i>zhōng</i> 'middle')
part	i ¹ -qhɔ ⁵	*qhəŋ ^B	khuwng	MC (孔 Man. <i>kǒng</i> 'hole')
many	cɔŋ ¹		<i>zhòng</i>	Man. (眾 'multitude, numerous')
few	tɕau ⁶		<i>shǎo</i>	Man. (少 'few, little')

how much pe^{4/7} t̚sau⁶ (lit. ‘how few?’)
 pair khu¹ khuu Lao

6. Discussion

6.1. The native core: (‘1’—see 6.3 below), ‘2’, ‘3’

6.2. For the others—replacement or introduction? Both historically interesting:

–if replacement, we might find evidence of relic numerals hidden in a ‘Buyang’ (Tai-Kadai language whose numerals show strong similarity to Austronesian numerals: Sagart 2004);

–if introduction, we might look for other languages with no or only a few numerals. This is not unprecedented:

South America

Pirahã (Brazil) only ‘small size’, ‘somewhat larger size’, ‘many’ (Everett 2005: 623); also no words for ‘all’, ‘each’, ‘every’, ‘most’, ‘few’

Botocudo (Brazil) only ‘1’, ‘many’ (Greenberg 1978:276)

Papua New Guinea

Haruai only ‘1’ and ‘2’ (Comrie 1999:81–82)

Australia

“Most Australian languages lack a separate class of numbers. There are generally reported to be forms meaning ‘one’, ‘two’—also sometimes ‘three’—and ‘many’ in the adjective class.” (Dixon 2002:67)

Southeast Asia

Mlabri only ‘1’, ‘2’ and ‘3’ (as ‘2’ plus ‘1’) (Rischel 1995)

6.3. Comparative/historical thoughts about HM ‘1’, ‘2’, and ‘3’

– ‘1’: It is strange for a language to borrow a word for ‘1’ (only one other good case in Leipzig Loanword Typology database). Compare with OC and AN: perhaps native after all?

HM *ʔi

OC *ʔjit

AN *isa (Formosan Paiwan /ita/ ‘one’)

– ‘2’: Although most HM languages have dual pronouns, these are either phrases with ‘2’ or are fairly transparently built on the numeral ‘2’ itself. For example, if there is a single form for the 1DU, it is either identical to the word for ‘2’, or it is a phonologically reduced form of ‘2’:

Yanghao (East Hmongic) ʔo¹ ‘2’, ‘we-two’

Xuyong (West Hmongic) ʔao¹ ‘2’ > ʔa¹ ‘we-two’

Bunu (West Hmongic) ʔau¹ ‘2’ > ʔa¹ ‘we-two’

– ‘3’: And plural pronouns in some HM languages indirectly seem to involve the numeral ‘3’. Reconstructed ‘3’ is almost identical to the reconstructed 1PL pronoun (*pjəu ‘3’; *N-pəu ‘we/us’), and in many Hmongic languages the two are identical (White Hmong /pe¹/ ‘3’ and /pe¹/ ‘we/us’). Some languages from both sides of the family use this morpheme both as a pronoun and as a plural marker, a morpheme roughly meaning ‘group’. This makes sense for plural = ‘3 or more’ in languages with dual pronouns. For example, in Iu Mien

1SG /jiə ¹ / ‘I/me’	1PL /buə ¹ / ‘we/us’ (INCL), /jiə ¹ -buə ¹ / ‘I-group’ (EXCL)
2SG /mei ² / ‘you’	2PL /mei ² -buə ¹ / ‘you-group’
3SG /nin ² / ‘he/she/it’	3PL /nin ² -buə ¹ / ‘he-group’

(Purnell 2007)

6.4. So initially not ‘1, 2, 3’, but ‘1, 2, many’

Greenberg (1978):

“The largest value of L in systems with only simple lexical representation is 5 and the smallest is 2.” (276) [where “L” = “the next largest natural number after the largest expressible in the system” (273), so the Hmong-Mien system would be “L = 3”: 1, 2, many]

“The most common values for L are 3 and 4.” (276)

“It is of interest to note that these simplest systems parallel that of number in the noun. Corresponding to L = 2 is a singular/plural distinction, and to L = 3, singular/dual/plural.” (276)

6.5. The evolution of numeracy

Rutkowski (2003): following neuropsychologist N. Cowan (2001), R proposes that numerals 1–4 have different morphosyntactic properties than higher numerals because no more than 4 entities can be stored in short-term memory, without need for counting. This also explains why some languages have no more numerals than these (and sometimes fewer).

Lest one thinks a language without many numerals is ‘primitive’, see Hurford (1987: 68-78) on the “non-universality” of numeral systems: language is acquired, but numeracy is invented (or borrowed). Lack of a rich numeral system does not demonstrate a lack of ability to form higher numeral concepts.

7. White Hmong expressions (for what they’re worth)

/ɔ¹ pe¹/ (lit. ‘2-3’)

‘quelques; plusieurs’

Bertrais 1964

‘several’

Mottin 1978 (more than ‘4 or 5’!)

yet in a recent dictionary, the meaning has shifted to a more literal reading

... ‘a few’

Xiong 2006

tsis ntau tsis tsawg /tʃi^{4/7} ntau⁵ tʃi^{4/7} tʃau^{6/} ‘not many not few’ (p.c. Lo Pao Vang, Hmong language coordinator at SEASSI, 2007: “We are not so concerned with exact numbers.”)

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