

# NOTES ON THE NUMERALS AND NUMERAL COEFFICIENTS IN OLD, MIDDLE AND MODERN KHMER

Four states of the Khmer language are discussed below, those respectively of the inscriptions of the 7th to 12th centuries (Old Khmer); the 17th century inscriptions (Middle Khmer); the poetry of the *Ream Ker*<sup>1)</sup> and present-day spoken Khmer (Modern Khmer). Ideally they would have been treated in this order. The material for the earlier stages is, however, not abundant; the Khmer inscriptions consist chiefly of short accounts of donations to religious foundations, information about boundaries and lists of personnel. It seemed preferable therefore to give as a starting point the fuller statement which is possible on modern Khmer. The other sections then follow in the above order.

As far as has been possible the same plan has been followed for all parts. Thus *x* represents a numeral, *c* a numeral coefficient and *X* the 'numeral construct' or close sequence of both members, *x* and *c*. For Old Khmer a straightforward transliteration is used, with the symbol ' representing the vowel-base. The transcription used for both Middle and Modern Khmer is that evolved by Professor Henderson<sup>2)</sup> with the addition of unpronounced symbols given in parentheses. Word for word translations in parentheses follow the free translations of examples unless both translations are the same.

## 1. MODERN KHMER

### 1.1. Numerals

1.1.1. *Catalysis*.<sup>3</sup> Numerals may be catalysed by their occurrence immediately after the word *ti*., 'place'<sup>4)</sup> *ti: m̀ə̀y*, *ti: pi:(r)*, etc. are in fact the ordinal numbers, 1st, 2nd, etc. Numerals are catalysed as words by their needing in any context only one stress, e.g. *pram-'by*, '(five-three)

---

<sup>1)</sup> Cambodian version of the Ramayana. This was included for interest since it is thought to be based on very early versions. As far as the numeration is concerned, however, it resembles Modern Khmer more closely than Middle. The published version, *Ream Ker*, Fascicules I-X and LXXV-LXXX, Phnom Penh, Éditions de la Bibliothèque Royale, 1937, was consulted.

<sup>2)</sup> 'The Main Features of Cambodian Pronunciation', *BSOAS*, xiv, 1, 1952. For typographical reasons, however, the grave accent that indicates the second register has been transferred in the short diphthong *wə* from the *w* to the *ə*, viz. *wə* and has had to be omitted from the vowel *v* and from the vowel *u* in a number of words scattered through the paper. Since this later vowel is restricted to second register syllables, little confusion should arise.

<sup>3)</sup> The terms 'catalysis and 'catalyse' are used in the sense of 'proof' and 'prove' with reference to the assigning of words to word categories.

<sup>4)</sup> Two other words, *ponma:n*, 'how many' and *cra:n* 'many' are thus also catalysed as numerals.

eight', hoksɿp-'pi:(r) 'sixty-two' are thus compound words, x.

The multiplied terms, 100, 1,000, etc. are also thus catalysed as one word, e.g. pram-mūəy-'rò:y, 'six hundred', pram-buən-'pòən, 'nine thousand'. When further numerals follows a multiplied term the whole number is a series of words, e.g. pram-'rò:y cɿtsɿp buən, 'five hundred and seventy-four'. Such a sequence may be uttered with rise in pitch on the last syllable of the first word and pause before the second; this could not happen in the middle of a Khmer word.

1.1.2. *Lexicon*. All numbers are composed from the following terms: 1–5 mūəy, pi:(r), bɿy, buən, pram (plus irregular prampɿl); 10 dɔp and-'teen', dɔndɔp; 20 mphuɿy.

The Thai loan-words, 30–100, sa:msɿp, saesɿp, ha:sɿp, hoksɿp, cɿtsɿp, paetsɿp, kausɿp, rò:y and 1 000, pòən, 10 000, mɿ:n, 100 000, saen, million, li:ən.

Sanskrit loan-words, ten million kaot(i) and so:n(y) zero.

1.1.3 *Internal grammatical characteristics*. In the composition of the numbers, 1–99, sequences of the terms are to be added together beginning with 6 (6, pram-mūəy, 8, pram-bɿy, 18, dɔp-pram-bɿy, 24, mphuɿy-pram, 56, ha:sɿp-pram-mūəy. prampɿl is the spoken form of the written pram-pi:(r), which is sometimes read as pram-pi:. pram-dɔndɔp, pram-bɿy-dɔndɔp, 15, 18, etc., are alternative forms of dɔp-pram, dɔp-pram-bɿy.

From 100 onwards, the Thai and Sanskrit loan-words are multiplied by a preceding number to form the hundreds and thousands, e.g. 1 500, mūəy-pòən, pram-rò:y. Subsequent numbers are added, e.g. 20 601, pi:(r)-mɿ:n pram-mūəy-rò:y mūəy. A multiplying mūəy has in the spoken language the alternative form mə, e.g. mərò:y, məpòən.

1.1.4. *Written figures and their arrangement*. The Khmer script includes 10 symbols, 1–9 plus zero; these are arranged in the same way as in the West to represent, from right to left, units, tens, hundreds, thousands, etc.

## 1.2. Numeral coefficients

1.2.1. *Catalysis*. Numeral coefficients are catalysed by their occurrence immediately after the numeral in close juncture, e.g.

mənùs (s) buən nēək	four men	(men <sup>5</sup> ) four persons)
bɿy thɿɿay	three days	
'ɔŋkɔ:(r) pram cì:əl	five baskets of husked rice	(husked-rice five baskets)

nēək, thɿɿay, cì:əl are catalysed as *c*.

1.2.2. *Lexicon*. A representative selection of modern numeral coefficients are presented in the paragraphs, a)–g), below according to their

<sup>5</sup>) Plural forms are given in the literal translations where suitable, since they facilitate quick reading and are no less implicit than the singular in the Khmer.

lexical characteristics.

a) Reference to persons, e.g.

ko:n byy nēak	three children	(children three persons)
sdac byy prēah- 'ōŋ(k)	three kings	(three kings eminent-bodies)
lō:k-sōŋ(kh) byy 'ōŋ(k)	three monks	(monks three bodies)

In colloquial speech these numeral coefficients are not always present; ko:n byy and sdac byy may equally well be heard.

b) Reference to shapes, e.g.

ba:ryy pi:(r) daəm	two cigarettes	(cigarettes two trunks)
smau mūəy səsay	one blade of grass	(grass one sinew)
thnam pi:(r) krōəp	two pills	(medicine two seeds)
sko:(r) dōp phaen	ten lumps of sugar	(sugar ten discs)
krāda:s pi:(r) sōnlvk	two sheets of paper	(paper two leaves)
'vt(th) mūəy dom	one brick	(brick one piece)

Where the noun represents an uncountable substance, like grass, the coefficient is essential but otherwise, as with cigarettes, it may be absent.

c) Reference to quantities, e.g.

tu:k-tae mūəy pē:ŋ	one cup of tea	(water-tea one cup)
sko:(r) byy ni:əl	three pounds of sugar	(sugar three pounds)
dvy dōp pyi:əm	ten fathoms of land	(land ten fathoms)
sōmpwət pi:(r) tbo:ŋ	ten yards of material	(material two five-yard-lengths)

The coefficient is essential here.

d) Reference to manner of presentation of a commodity or manner of growing, e.g.

satra mūəy khsae	a fascicle of manuscript pages	(manuscript one string)
dō:ŋ pi:(r) cəŋkaom	two clusters of coconuts	(coconuts two clusters)
phlê:ŋ mūəy sōmrap	a set of musical instruments	(music one set)
'ōmbōh pi:(r) hōŋ	two reels of cotton	(cotton two reels)
sac byy tranaot	three skewers of meat	(meat three skewers)
trvy mūəy kōntūy	one fish	(fish one tail)
mlū: mūəy trābō:k	one wrapper of betel	(betal one wrapper)
khao-'a:v pi:(r) sōmrap	two suits	(trousers-shirt two sets)

The coefficient is essential.

e) Reference to people or animals in pairs and groups, e.g.

siam mūəy pūək	a group of Thais	(Thais one group)
dōmrvy mūəy hvo:ŋ	a herd of elephant	(elephant one herd)

Although these nouns plus numeral could occur without a coefficient, these coefficients are essential to the kind of counting required.

f) Reference to objects considered as items, kinds, examples, e.g.

la:n pi:(r) ya:ŋ	two kinds of car	(cars two kinds)
dōmlo:ŋ byy baep	three kinds of potato	(potato three kinds)
haet pram praka:(r)	five reasons	(reasons five items)

Again the nouns could occur with numeral and no coefficient, but the kind of numeration required makes the coefficient essential.

g) Reference is to the date, e.g.

thəy ʔŋki:ə(r), 15 rō:c khæ mēəkara, 'Tuesday, the 15th of the waning moon, month of January'.

The word, kavt, 'to wax', occurs in the same way as rō:c. Both are thus classifiable as numeral coefficients. The coefficient is essential.

1.2.3. *Membership of other word categories.* Most of the forms classifiable as numeral coefficients may be separately classified as nouns or verbs. Thus the word, ca:n, is catalysed as a noun, (by its use with particles which regularly precede or regularly follow nouns, e.g. knoŋ ca:n nūh, 'in that bowl, (in bowl that)') and cəp is catalysable as a verb, (by its occurrence with particles which regularly precede verbs, e.g. mun cəp, 'isn't at-an-end'). Both are catalysable as numeral coefficients by their occurrence after numerals, however, e.g.

ba:y pi:(r) ca:n	two bowlfuls of rice	(rice two bowls)
sot:(r) by cəp	recite three times	(recite three get-to-the-ends)

Although the connection between the same form used as noun, verb or coefficient is lexical, an interesting point of grammatical comparison is seen in the fact that sometimes the coefficient is qualified like a noun. Thus the following utterance was heard, when meat was being served, 'aoy mədom thom! 'Give (him) a big piece! (give one-piece big)'. mə, the colloquial form of multiplying mūəy in numbers, occurs also before coefficients. The headword, sac, 'meat', was here absent, mooted by the context of situation. The verb, thom, was used attributively with the coefficient, dom, which occurs as a noun as well as a coefficient.

Frequency of occurrence in the function of noun or verb causes one to feel that a form is primarily noun or verb and only secondarily coefficient and thus to make the dictionary entry, '1.n.---2.c.---', or '1.v.---2.c.'. There are, however, some words which occur with greater frequency as coefficients and some which may never occur as nouns. Words expressing measurements such as pyi:əm, 'fathom', hat(th), 'handpsan', ki:lo:, 'kilo' are unlikely to occur in a context in which they would be catalysed as nouns. rō:c, and kavt, the words relating to the waxing and waning of the moon, do not seem to occur as members of other categories. The infix forms, rənd:c and khnavt supply noun-partners for these words. səlvk, 'single leaf', is a numeral coefficient of which no other usage has been noted; it has a parallel, non-infixed form, slvk, 'leaf', which occurs as a noun.

1.2.4. *Grammatical relationship with the numeral.* Numeration may take place in first reference with numerals only, as in mūəy, pi:(r), by, buən, 'one, two, three, four;. A noun may be followed by a numeral only, with no coefficient, e.g.

siəvphu pi:(r)	two books	(books two)
chkae mūəy	one dog	(dog one)

When a coefficient is used, it follows the numeral in close junction. It is