AN EXAMINATION OF THE VOWELS AND FINAL CONSONANTS IN CORRESPONDENCES BETWEEN PRE-ANGKOR AND MODERN KHMER

Preparation of Table 1
Summary of the information provided by Table 1
PA-MK correspondences and OK Phonology
Appendix of examples with reference to Table 1

This study is intended to be complementary to a paper on the correspondences between Old and Modern Khmer initial consonants (Jacob: 1976). Only Pre-Angkor Khmer (PA) is dealt with here, however, and not the Angkor dialect (A). It seemed desirable to limit the investigation to PA, partly because of the inclusion of A, with its different vowel-notations, would cause confusion and partly because the author now has a complete card-index of PA,1 whereas that for A is still in progress.

The majority of correspondences between Old Khmer (OK) and Modern Khmer (MK) involve the same final consonant at both stages of the language. Two regular exceptions to this are final r, which has turned to zero in MK (except in the Battambang area) and final s, which has completely merged with the final aspirate in MK. An example of each final consonant of PA with its MK correspondence is given below:

<table>
<thead>
<tr>
<th>Final consonant</th>
<th>PA orthography</th>
<th>MK pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>k</td>
<td>sruk</td>
<td>/srok/</td>
<td>inhabited area, district</td>
</tr>
<tr>
<td>n</td>
<td>srun</td>
<td>/srən/</td>
<td>bathe</td>
</tr>
<tr>
<td>c</td>
<td>roc</td>
<td>/rəːc/</td>
<td>wane</td>
</tr>
<tr>
<td>ñ</td>
<td>añ</td>
<td>/ʔən/</td>
<td>l</td>
</tr>
<tr>
<td>t</td>
<td>ket</td>
<td>/kæt/</td>
<td>wax, be born</td>
</tr>
<tr>
<td>n</td>
<td>mañ</td>
<td>/miːn/</td>
<td>have</td>
</tr>
<tr>
<td>p</td>
<td>cap</td>
<td>/CAP/</td>
<td>seize</td>
</tr>
<tr>
<td>m</td>
<td>psam</td>
<td>/psam/</td>
<td>unite</td>
</tr>
<tr>
<td>y</td>
<td>toy</td>
<td>/dəʊ/</td>
<td>along</td>
</tr>
<tr>
<td>r - zero</td>
<td>dər</td>
<td>/tiːə/</td>
<td>claim v.</td>
</tr>
<tr>
<td>l</td>
<td>jmol</td>
<td>/çhmːəl/</td>
<td>male</td>
</tr>
<tr>
<td>v</td>
<td>jəhv</td>
<td>/çiːəv/</td>
<td>barter</td>
</tr>
<tr>
<td>s</td>
<td>thəs</td>
<td>/thaːʔ/</td>
<td>tray</td>
</tr>
<tr>
<td>h</td>
<td>vrah</td>
<td>/prəːʔ/</td>
<td>holy; god</td>
</tr>
<tr>
<td>Zero</td>
<td>ivə</td>
<td>/iviːə/</td>
<td>fig</td>
</tr>
</tbody>
</table>

These regular correspondences between 15 PA and 13 MK final consonants were taken as the basis of the comparison. A table was made, using over 200 well-established correspondences, so as to find out their frequency and versatility of occurrence with vowels and arrange them in order. This is the order in which they are presented in Table 1, except
that h is placed next to s for easy comparison.

Up to this point, the enquiry had been made with only established vocabulary. When the validity of certain empty slots in the table was tested by reference to some less certain correspondences, however, it became apparent that a much wider variety of vowels and final consonants was probably in operation. The PA card-index was therefore searched for additional probable correspondences, as much in order to avoid claiming empty slots mistakenly as to try to fill more slots. This led to the preparation of Table 1, which forms the basis of this study.

PREPARATION OF TABLE 1

The vocabulary used comprises:

*ESTABLISHED CORRESPONDENCES*. These consist of (i) correspondences established by the occurrence of the PA form in a grammatical context with clear meaning and (ii) correspondences established by analogy, the PA form being in a context which clearly indicates the kind of word to be expected. In a place name, for example vrai *forest* and stuk *pool* are regularly followed by names of trees. Thus, a word such as rânten, which on K. 430 follows vrai, and which also has a form which suggests the correspondence, is held to be an established correspondence for MK /rûmdeːŋ/ amomum galanga (zingiberæcæes).

*NAMES*. Although, as has just been stated, words occurring in place-names may be held to be established when the context makes their nature clear, other words occurring either as place names or personal names or parts of such names may be held to be probable but not established correspondences. Cambodian names, even now, are often names of animals, plants or objects; or they may be descriptive of physical or mental characteristics. Where such words are used as material for the present study the PA word is followed by ‘N.’ in the Appendix and, if the vowel-symbol in the table depends entirely on examples which are names, it is followed by an asterisk.

In identifying correspondences of the two categories just described, certain regular relationships between PA and MK initial clusters were regarded as being dependable. These are:

(i) The relationship between a MK base and a PA form consisting of base with name-prefix, kN. This prefix, which consists of initial k, neutral vowel a, as junction, and nasal consonant, was tentatively included in an analysis of OK affixes (Jacob:1963, pp.69-70). This now seems well substantiated by the preponderance of names beginning with kN in contrast to other prefixes and by information supplied by Mr. Kuoch Hak Srea, that a kN name-prefix is used as a term of endearment before girls' names still. Some examples are given below with a reference to the number of an inscription on which they occur and the MK equivalent:

<table>
<thead>
<tr>
<th>CA</th>
<th>PA</th>
<th>MK</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>562</td>
<td>/caŋ/</td>
<td>kandai 561</td>
<td>/têy/ cloth bag</td>
</tr>
<tr>
<td>1030</td>
<td>/caŋ/</td>
<td>kansuc 582</td>
<td>/soc/ N. of insect</td>
</tr>
</tbody>
</table>
(ii) The relationship between a MK base and a PA form consisting of base with infix -an-. This correspondence was mentioned before (Jacob: 1976) but more examples have now been found, of which some are given here:

<table>
<thead>
<tr>
<th>MK base</th>
<th>PA pronunciation</th>
<th>Transcription</th>
</tr>
</thead>
<tbody>
<tr>
<td>kanmoy 38</td>
<td>/kmu:ay/ nephew, niece</td>
<td>canmat 126</td>
</tr>
<tr>
<td>kanmau 357</td>
<td>/khmau/ black, dark</td>
<td>ransi 134</td>
</tr>
<tr>
<td>tuñnot 9</td>
<td>/tnaot/ sugar-palm</td>
<td>sunñay 9</td>
</tr>
<tr>
<td>danhum 424</td>
<td>/thûm/ scented, smell</td>
<td>anlik 480</td>
</tr>
</tbody>
</table>

(iii) The relationship in which the PA form has the ‘wrong’ consonant as the first consonant of an initial sequence, i.e. surd where one expects sonant or vice versa. This type of relationship was accounted for as being due to loss of voicing in this pre-consonantal context and examples were given (Jacob:1976).

Table 1 represents the result of examining over 550 correspondences. Down the left side are arranged all MK vowels, the pairs of vowels produced on the two registers being kept together in accordance with the written symbol with which they are now spelt, since the written tradition is held to represent a development which has taken place from a time when the surd and sonant initial consonants genuinely represented surd and sonant initials and the vowel-symbols did not yet represent vowels diverging according to register. In each slot is placed one or more vowel-symbols, representing PA spellings found in the correspondences. An asterisk indicates that the only examples available are names. For symbols without an asterisk, established correspondences are offered. The Appendix gives as far as possible two examples for each vowel-symbol in the table, reading from left to right.

Notes with reference to Table 1

(i) It is held that the vowel occurring before y, v, c and ñ and having in those contexts, in MK, the realisations ay/êy, au/û, ac/êc and ap/êp, according to register, may best be regarded as being a plus final consonant. Strictly according to the conventions of the present table, their representations on the second register would be: êy, êv, êc and êp.

(ii) Short e/ê and i in MK occur, in native words, apart from ê in êp and êy mentioned in (i), only before h. Since MK long e: and i: cannot occur before h, the few examples of MK eh, êh and ih are entered along the e:e: and i: lines to save space.

SUMMARY OF THE INFORMATION PROVIDED IN TABLE 1

1. USE OF THE PA VOWEL-SYMBOLS

(i) Consistency. It will be observed that in the case of two MK vowel-pairs,
PA correspondences were represented consistently by one vowel-symbol with all final consonants. Thus PA vowels ~ MK ao/ô: were exclusively represented by o and PA vowels aɔ/ɔ: were exclusively represented by e. Two other pairs were almost as consistent: PA vowels ~ MK i:o were exclusively written with ā, (though a few PA words of which the vowel ~ MK partner vowel a: were written with a) and PA vowels ~ MK ae/è: were all represented by e, with the exception of kamratān (written kamraten in the A period, however) and one non-established word.

The short-vowel symbols, i and u, were fairly consistently used to write respectively the vowels ~ MK ɔ/û and o/û. In each case, however, some confusion of spelling with the more open vowels, e on the one hand and o on the other, took place. Open i and u also represent vowels ~ MK ɔ:i/ (open) and o:v/û:. The extent to which i and u occur apart from these uses is minimal.

While ā, i and u were chiefly used to write vowels ~ one MK vowel-pair, a, o and e were used to write vowels corresponding with a variety of MK vowel-pairs. Table 2 summarises these uses.

(ii) Register difference. PA vowels ~ MK vowels of one register are sometimes represented by one vowel while correspondences with the MK partner vowel on the other register are not. It seems that this may indicate the beginning of a differentiation between the vowels of the two registers. The details are therefore summarised here:

(i) As was mentioned above, a occurs as well as ā to represent PA vowels ~ MK a:, but not i:o.

(ii) u occurs alongside o or a to represent the vowel ~ MK ɔ, but not ɔ.

(iii) The experimental va, vā were used in the PA period to write the diphthong ~ MK ɔ: in second register words only.

(iv) The experimental ya, ye were used in the PA period to write the diphthong ~ MK i in first register words, while ya, yā occur in words ~ MK second register words.

2. MK VOWELS AND FINAL CONSONANTS FOR WHICH PA HAS NO CORRESPONDENCES

(i) The first observation which must be made is that MK ɔ: and ɔ: have no entries in the Table. To the best of the writer's knowledge, no correspondence for any of these vowels occurred in PA or A. The first occurrences which are datable are probably the following, all Thai loanwords, found in the Middle Khmer inscriptions (Inscriptions Modernes d'Angkor): mūn on No. 8 (1625 A.D.)1. 19; krūn and (rūn) - rūn on No. 12 (1638 A.D.), 11. 16 and 19. iv:n(-loj) occurs on No. 38 (1701 A.D.), 1.26.

Mk ū is represented by only one correspondence in PA, gi, gui, ~ /kūː/ that is, is. In MK, although it is not widely distributed, ū: occurs before n, t, p and h.

(ii) An examination of the MK vowels and final consonants which are not
represented in PA correspondences showed that the chief lack of correspondence occurred in connection with MK forms having the vowels ao,/ò/; o,/ù/; and u:/ù: and having palatal final consonants, ç, ŋ or y. It happens that many PA words ending in oň seem to have no correspondence with MK.

3. CORRESPONDENCES FOR WHICH TABLE I DOES NOT PROVIDE A SLOT

Although generally speaking the correspondence between 15 PA and 13 MK final consonants is regular and reliable, there are some exceptions:

(i) In spite of regular correspondences between PA and MK ń and PA and MK ŋ, as in tiń - /dvń/ know, duń - /tęp/ buy, etc., there is an instance of ŋ going to jń: triń, tmiń 557 (cf. MK. jęń/ pluck strings) player of stringed instrument. MK /vęń/ back, again also goes back to an old form with velar nasal final consonant. When this is considered in conjunction with the variation between ŋ and ŋ in the final consonant of several OK titles (táń and tań, mratăn and mratän, steń and steñ), it seems probable that we are dealing here with dialectal differences.

(ii) One PA word is written both with and without final r. Thus we have camąk 426, 115 and camkär 664 ~ MK /comka:/ plantation, market-garden. This may be a dialectal variation or a mistake. In Middle Khmer poetry r rhymed with 1 (Jacob:1966,232); this would suggest that at least it was not absent in the pronunciation of speakers in the earlier PA and A periods. One or two words which have in MK final l were written with r in PA:

    kantor N. 1030 /kondol/ rat, mouse
    sampor N. 910 /sombol/ complexion
    knur N. 557 /khnol/ jack-fruit

(iii) Written s and h as final consonants, now both realised as the aspirate, were also rhymed together in Middle Khmer poetry. It is possible that already there was a merging of pronunciation of the two final consonants at the Middle Khmer stage and that it was after that that s was used in writing to indicate certain long vowels preceding it, while h indicated a short vowel preceding it. In any case, certain correspondences between PA s and MK written h seem acceptable. M. Cædès identified PA pas with MK /boh/, written poh, for example, in interpreting PA pamas as grinder; and some names suggest such a correspondence, e.g. trases 765 /traseh/, written traseh N. of a kind of woodpecker and kańcus 956 /kancyh/, written kańcuńh N. of a smallfish with two spears.

PA-MK CORRESPONDENCES AND OK PHONOLOGY

The question of what vowels were actually operating at the phonological level in PA times now faces us. In an earlier study (Jacob: 1960) the writer attempted to analyse OK phonology from a synchronic viewpoint. She would, however, be the first to admit that more progress has been
made by diachronic methods. The combined vowel phonology of PA and
A has been admirably tackled by Professor Sakamoto in a series of four
articles (Sakamoto:1970-4). He uses two methods to analyse his material.
One method is the examination of the spelling of the vowels in individual
words corresponding with a given MK vowel, to show where there was
confusion and where not. The confused spellings, taken in conjunction
with the MK corresponding vowel, show that a comparable distinction
was already in operation but that it was a distinction for which symbols
were lacking. The second method is the examination of the initial and final
consonants of correspondences to show that where OK vowels, written
with one symbol, correspond with MK words involving more than one
MK vowel (quite apart, that is, from the question of MK divergence
according to register), if no explanation of the divergence can be found
in the initial or final consonants of the OK words, and if no correlation can
be seen between particular vowels and particular final consonants, then
one is at liberty to suppose that OK had the same distinctions as MK and
that spelling ambiguities were tolerated.

Sakamoto's use of the first method was highly successful in sorting out
the a and ā vowels so as to establish the phonemes which he writes *n and
*a. It was also successful in separating his *ō (~ ao/ô/); *o (~ o/û/; and
*u ( ~ u/a/u;). The second method was used to establish that *e (~ ae/ê/)
and *a (~ aa/ý/) were separate phonemically from *e (~ e/ê/). Here
Sakamoto did not refer to initial consonants but his implication is that
they provide no explanation of the MK differences. We have, for example,
PA tem, tek ~ MK /daam, daek/; PA cen, cer ~ MK /caen, ce/; PA vek,
ver ~ MK /vê:k, vê:/; PA pre, preñ ~ MK /pra, pre:n/.

In some parts of his analysis, however, it seems that Sakamoto did not
apply his methods where he might have done. In 'e de khmer ancien' he
sets out to use the confused or non-confused spellings of individual words
to define phonemes written with e. Having found no confused spellings for
PA tamre, ampel, et, vañe, ber or pi, ti piñ, siñ, he deduces that the A
spelling ya, which all these words later have, represented a fusion of two
distinct PA sounds, *i and *e. In fact he had an example of confused
spelling among his few words, in the word tamre, which was spelt two ways
in PA times, with r as well as with e, and he knew that vîe had later
spellings vîi and vîya. He could therefore have allowed these cases of
confused spellings to assign the tamre set to *i. Similarly, in 'i, í, ya, yâ de
khmer ancien' p. 498, he concludes, in spite of the confused A spellings i, í,
yâ of *i and ya, yâ of *iə, that the same diphthong phonetically was heard
in the pronunciation of these two phonologically distinct vowels, *i and
*iə, and that they were somehow distinguished again later so as to yield
two separate MK vowels. It still seems to the present writer more
satisfactory to assume that there was at least a difference in A between *iə
(spelt ya and yâ) and previously spelt e, ya, ye and yâ in PA) and *i (spelt i,
î and ya and previously spelt i, e in PA). The distinction made
(Jacob:1961,359) between the short and long A diphthongs iə, ia still
seems therefore to be valid.

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With most of Sakamoto’s conclusions, however, the writer heartily agrees. His second method might now be applied further to the analysis of *a and *o. In paragraph 6 of ‘a and a de khmer ancién’ Sakamoto examines his examples with reference to their final consonants to see whether short and long pairs may be substantiated in each case and decides that his twelve instances in which a PA vowel corresponds with both a short and a long vowel before the same consonant in MK are not enough to make a satisfactory conclusion. However, PA examples in the Appendix to this study indicate the occurrence of:

PA *a ~ both MK a: and MK a before k, n, m, p, l, s, y, t, c, ŋ.
PA *a ~ both MK i:a and MK êa ~ ëa before ŋ, n, m, p, y, v.
PA *o ~ both MK o: and MK o before k, n, m, p.
PA *o ~ both MK ë: and MK ù before k, ŋ, n,

Pre-vocalic consonants may – in one case only! – assist the conclusion. PA soň 493 /sɔːŋ/ pay back may be compared with PA sañ 137 /sɔŋ/ build.

APPENDIX OF EXAMPLES WITH REFERENCE TO TABLE 1

As far as possible, two examples are given for each PA vowel-symbol entered on the table, reading from left to right along each line. When possible, different words have been chosen to illustrate different spellings of vowels corresponding with one MK vowel. N. = name. Pl.N. = place name. Numerals give a reference to an inscription, MK pronunciation is given between sloping lines.

a:k  cāk N. 24 /ca:k/ corypha pilearia. skāk N. 109 /ska:k/ shelf, rack.
aːŋ  kantrān N. 748 /traːŋ/ ficus pilosa. tanlān N. 74 /thlaːŋ/ large earthenware cooking pot.
aː  kralā 557 /krɔːlː/ court. pka 21 /phkaː/ flower.
aːːm  hãm N. 129 /haːm/ forbid.
aːːp  c-āp N. 559 /chʔaːp/ smelling of fish. sāp N. 877 /saːp/ woven basket for catching small fish. tarap 56 /dɔːrːaːp/ all the way, always.
aːːl  kantāl 79 /kɔndaːl/ middle. āl N. 357 /ʔaːl/ be hasty. amplāl 389 /ɔmbal/ all.
aːːh  thās 505 /thaːh/ tray. kmās N. 11 /khmaːh/ bashful.
aːːy  tānḥvāy 9 /tɔŋvaːy/ offering. svāy 134 /sɔvaːy/ mango.
aːː  skār N. 76 /skaː/ weasel. cpar 562 /cbaː/ garden. cmar 424 /chmaː/ fine, small.
aːːt  tmāt N. 49 /tmaːt/ vulture.
aːːːc  trāc 726 /tracː/ N. of large tree of dipterocarpus family, producer of excellent oil. trālāc 51 /tralːaːc/ N. of a variety of gourd.
aːːːn  tmān 956 (cf. /tbaːn/ weave v.) weaver. kravān N. 561 /krɔvɔːn/ cardamum. tpān, tpañ N. 18, 66 /tbaːŋ/ weaving.
iəŋ jān N. 24 /ciːŋ/ artisan. vān N. 149 /piːŋ/ sterculia foetida.
iə nā 79 /niː/ at a time when, at, with regard to. "mā 1029 /miː/ uncle.
iən mān 154 /miːn/ have.
iəm marām N. 149 /mriːm/ finger. amvām Pl. N. 451 /piːm/ place where trees run into river or river into sea.
iəp prāp N. 562 /priːp/ pigeon
iəl gval 689 /khvːl/ herd. v.
iəh mās 388 /miːh/ gold.
iəy kajāy N. 149 /khciːy/ Kaempferia pandurata.
iə dār 493 /tiː/ claim. dmar 79 (cf. /tiː/ claim) claimant.
iəv jāhv 79 /ciːv/ buy, barter. jamnāhv 811 (cf. /ciːv/ barter) barter n.
ak canlāk 79 /comlak/ sculpted object. prāk 388 /prak/ silver. cpāk Pl. N. 76 /cbak/ place where roots are exposed.
an tlann 561 /thlan/ cobra. santan N. 137 /sɔ̃دان/ Garcinia Merguensis. cân. N. 66 /can/ sandalwood.
am cam 438 /cam/ guard. prām 607 /pram/ five. tām 689 /dam/ cook v. lkām N. 560 /ɾəkəm/ N. of a tree with very long branches and strong thorns.
al cal N. 138 /cal/ jealous.
ah cas, *cas 493, 726 /caθ/ old. panlas 137 /bonlah/ exchange.
ah kanlah 416 /konlah/ half. klah 726 /khlah/ some.
ay tinai 38 /θnay/ day, sun. tlaï 133 /θlay/ expensive, costing.
at kan-at N. 134 /kʰat/ radpole. sñat N. 423 /sɲat/ quiet. chvāt 341 (cf. /chvat/ in /chvat-chviəl/ and /chvat-chvaen/ criss-cross) mark out. sāt N. 18 /sát/ drift.
ac srac 555 /sraː/ achieved, finished. stac N. 560 /sdac/ king; preverbal particle in royal vocabulary. kāc 790 /kac/ cut off. hāc N. 138 /hac/ restlessly looking for something new and different.
au krau 18 /kɾau/ outside. cau 51 /cau/ grandchild.
ap añ 561 /pᵃŋ/ I. tarañ 341 /tɾan/ small flat grass-covered area. kantān N. 689 /kɔɔɾŋ/ curly. krān N. 557 /kɾan/ unwilling.
ēæk *nak 422 /nəæk/ person. vnāk 21 (cf. /pēæk/ be attached, wear) adornment, attachment.
ēən jāɲṈaŋ 561 (cf. /cəŋ/ tread on) causeway.
ēəm ramañ 557 (cf. /ɾəm/ dance v.) dancer. nām 137 /nəm/ lead, bring.

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 öğret rānap N. 557 /rœŋɔːp/ calmed down. rāṁnap N. 66 /rûṃŋɔːp/ apease, silence v.tr.; kill.

ēh vrah passim /prɛəh/ holy; god. hvaḥ 502 /vɛəh/ cut open.

ey(strictly)

ēy(bhai 582. cf. /mɔmpʰɛy/ twenty. vrai 18 /prɛy/ forest. vanli 561 /pʊnɛlɛy/ Zingiber cassumunar.

ət mat N. 66 /mɔɔt/ mouth, edge.

ec(strictly)

ēc(luc 38 /lɛc/ sink, set; west. kandec N. 904 /kɔntɛc/ l. scabies 2. part of name of plant which stings when touched. vlac N. 11 /plɛc/ forget.

yu(strictly)

əv dau 76 /tʃu/ go. tvau N. 54 /thpʊu/ sorghum millet. nu, nuv 424, 939 /nʊu/ and, with.

əp (strictly)

əp duñ 424 /tɛŋ/ buy.


əŋ sañ 137 /sɔŋ/ build. snañ 137 (cf. /sɔŋ/ build) foundation. sroñ 124 /sɾɔŋ/ bathė.

əm cañ 561 /kɔm/ as in /riŋɔm/ make ready, provide. psɔm 127 /pʃɔm/ unite.

op tap 388 /dɔp/ ten. trap 21 /tɔp/ egg-plant.

ɔl tnal 493 /tɔnɔ/ main road. kañval N. 22 /kɔŋvɔl/ trouble. cañol N. 138 /çŋɔl/ surprised.

əh klas 505 /kʰɔl/ parasol. tras. N. 502 /trɔŋ/ N. of tree which grows in wet places; medic.

əh sɑŋtɔŋ N. 8 /somɔŋ/ spittle. soŋ N. 24 /sɔŋ/ exhausted.

uak lak 22 /lɔŋk/ sell. caruk 124 /crɔŋk/ pickle.


uəŋ pandoñ 726 /bɑŋtʊəŋ/ tame v.tr. lahvan N. 137 /lʊŋ/ graceful.

uəl candal 877 /ɔŋtʊəl/ support, stand n. rahval N. 926 /ɾəʊvʊəl/ busy. pradul Pl. N. 557 /prəʊɗul/ opposite.

uəh t纳斯 877 (cf. /thnʊəh/ object contrived with branches used to channel fish into the place where they are to be caught) means of directing water in gutter (?). kvas N. 24 /kʰpʊəh/ tall, high. kavos. N. 910 /kʰpʊəh/ tall, high.

uəh jmah 557 /chmʊəh/ name. vlau 561 /phluəh/ double.

uət rat 66 /rʊət/ run.

ɔ:k clok N. 138 /chlo:k/ N. of animal of weasel family. sampok N.
562 /sômô:k/ bark.

coŋ 341 /coŋ/ put together, tie.

phôn 38 /phôn/ all, too.

ka 137 /ko:/ construct. ta passim /do:/ the one which, the. tmo 21
/thmo:/ stone. so 79 /so:/ white.

kan-am N. 648 /kôm:/ pitcher. krahm N. 41 /kôrhôm/ red.

ckop 44 (cf. /kôp, prêkôp/ equipped with) involved (in debt).

tampar N./ 155 /dômô:/ foursome, 4.

tat N. 22 /trô:t/ hurrying, though weary, in quick spurts.

mok 341 /mô:k/ come. svok 124 /spô:k/ tray.

cgoŋ N. 137 /chôkôŋ/ imperfect.

lôo 124 /lô:/ sesame. kambho 438 /kômphô:/ N. of variety of
fish, barbus macrolepidotus.

mon N. 149 /môn/ mulberry.

kadam N. 424 /khôm:/ hut. sagogô N. 357 /skô:m/ thin (of
human physique).

karap 21 /krô:p/ cover n.

bhar N. 664 /phô:/ tell a lie.

sno 904 /sno:/ sesbania paludos.

karoŋ 137 /kram/ below. cûnnoŋ 44 (cf. /caam/ enclose,
enclosure.

srâmôl N. 18 /srôamôl/ shadow.

oy passim /pôy/ give. toy 590 /daoy/ along, by.

kantor N. 1030 /kôndôn/ mouse, rat. Alternative pronunciation
in MK: /kôndô/.

tuônôt 9 /tnôt/ sugar-palm. sôt 79 /saot/ in addition.

kmôc Pl. N. /khômac/ ghost.

moû N. 138 /môô/ N. of area between Byo and Pursat. yôô N.
451 /yôô/ draw water in bucket at end of rope.

jmol 127 /chômôl/ male. yol Pl. N. 134 /yôl/ swing.

roc 451 /rôc/ period of waning moon. sâmôc N. 816 /sômpôc/ civet-cat.

toû 424 /doû/ coconut. antoû, antvoû 124 (cf. /ôndoû/ well n.)
beehive, container for oil.

kon, kun 66 /kôn/ child. paôn 76 /phô:n/ younger sibling.

smôm N. 127 /smôm/ beggar.

canhor, canhvar 904, 341 /sônho:/ stream. vnu 341 /phôv:/
mound. hvar 726 /hôv/ flow.

vnot N. 422 /phônt/ birthmark. slot N. 940 /sônt/ good-natured.

kroc 757 /kôc/ citrus fruit. ptoôc 726 (cf. /dôc/ like, as)
equivalent.

plu 76 /phôv/ way, path. sru, srû 424, 726 /srôv/ paddy.

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Vowels and final consonants in Khmer

ü:k  dok, dvak 44, 341 /tʊ:k/  boat.
ü:n  tmon 415 (cf. /tʊ:n/  beat drum) drummer.
ü:  ru, rū 341, 664 /rʊː/  like, as.
ü:n  jon, jvan 30, 74 /cʊ:n/  offer. jamnon 689 /cʊmnʊ:n/  offering.
ü:  ṇnarör, ṇранör 689, 124 /tæʃʊː/  syrup.
ue  tao, taor N. 559, 149 /tɹuːə/  terminalia tree.
ue:n  kalmon 124 /kɹamʊən/  wax. pon 90 /buːən/  four.
ue:  posi 44 /buːəh/  enter the religious life.
ue:y  kanmoi 38 /kmʊei/  nephew, niece. troy N. 137 /truːəy/  new leaf.
uk  vnok, vnvak 134, 7 (cf. /pʊːæk/  group.
u:  mo. N. 24 /mʊːə/  wild rice.
u:ay  moy 137 /mʊːəy/  one.
uat  kampot N. 109 /tʊːət/  great-grandparent. vot N. 149 /pʊːət/  join forces, help at work.
u:co  lvāc 341 /lʊːɛ/  steal.

ok  samluk 21 (cf. /səmroʊk/  sink deep in) repoussé. sruk 79 /sɹʊk/  inhabited area, district. samluk 22 (cf. /səmˈlʊk/  variety of cooked dishes) cooking.
on  kamplu 44 (cf. /kəmplʊ/  group, place) inside. kuruţ 388 /kron/  king.
oh  cuh 557 /coh/  go down, put down in writing. uh N. 24 /ˈoʊh/  firewood. kantvoh N. 134 /dɔh/  grow.
oy  canhoy 877 (cf. /kʰnɔh/  steam; steamed food, container for burning in making perfume. sa-uy N. 28 /ˈsɔi/  putrid. uy N. 562 /ˈoʊj/  little basket.
out  kampot N. 561 /kɔmbot/  having lost a limb.
uk  duk 904 /tʊk/  put, reserve, keep. vuk N. 8 /pʊk/  beard.
un  ruţ 76 (cf. /rʊŋ/  in /rʊŋ-rʊŋ/  grand, splendid) big.
un  mun N. 24 /mʊn/  spotty.
up  dap 38 /tʊp/  block, impede. damnap 689 /tʊmnʊp/  dam, barricade.
ul  jul N. 137 /cʊl/  mend.
uh  noţ 79 /nʊθ/  that. loh, Ivāţ 561, 341 /lʊθ/  as far as.
uy  duy N. 24 /tɪʊt/  owl.
út  mut 451 (cf. /mʊt/  cut, pierce) harm. vut N. 11 /pʊt/  pretend.
æk  t-ek N. 149 /təæk/  1. N. of a creeper. 2. hiccough.
æŋ  takeň N. 357 /θɪkəŋ/  lofty.
aa pre 561 /praə/ use, order. paŋ 561 /bomraə/ servant.
aan caŋ 451 / América/ increase, prosper.
aam tem 560 /daam/ tree. phem 79 /phaəm/ with young.
aah pares Pl. N. 9 /praə/ deer.
aya ley 557 /ləy/ at all. trey Pl. N. 1029 /traəy/ the far side.
aat kan-et N. 155 /əet/ strain neck to see. ket 44 /kəə/ wax (of
moon); be born.

ýːŋ jeŋ 79 /cːŋ/ foot, lower part (of hill, etc.). vleŋ 877 /phːŋ/ fire.
ýː jhe 66 /chːː/ wood. tve 127 /thːː/ do.
ýːm kamvêm N. 109 /khpːːm/ despise.
ýːː p dep 726 /tːːp/ then.
ýːː l vrel N. 163 /prːːl/ careless.
ýːː der 149 (cf. /kɔːmːtːː/ middle-sized) adolescent, middle-sized (?).

æk tek 388 /dæk/ iron. santek 689 /sɔːdæk/ bean. cacāk (cf. /caek/
divided (?).
æŋ kamraten 400 /kʊmdaŋ/ lord. prahvên 424 /prɔːvəŋ/ length.
kammratān 561 /kʊmdaŋ/ lord.
æ plə 561 (cf. /phlæ/ fruit) produce, revenue. sre passim /sraːc/
ricefield.
æn pen N. 877 /baen/ thresh.
aem pa-em N. 127 /phəem/ sweet.
ael tel 66 /dael/ which, who.
ae tanker N. 134 /dɔŋkæ/ tick, acarus. her 44 (cf. /hae/ go in
procession) flow.
aev cehv N. 560 /caev/ row a boat. slev. N. 357 /slaev/ having a squint.

èːk ahvek 124 /və:k/ ladle. tvek N. 480 /θpəːk/ bald.
èːŋ rèŋ 426 /rəːŋ/ weave, plait.
èː vavek 562 /pəpːː/ goat.

íaŋ canlek, canlyak 561, 7 /sɔːmliak/ clothing.
íaŋ camrên 557 (cf. /kɾiəŋ/ sing, /kmarːŋ/ song) singer. kanteň N.,
Pl. N. 562, 76 /kɔndiŋ/ commelina communis.
íaŋ hyam N. 109 /hiam/ have a discharge.
íaŋ tkep N. 8 /θkioŋ/ pinch, nip.
íaŋ trel N. 563 /trial/ N. of a creeper. kryel 134 /kɾiəl/ crane n.
íaŋ kantyar N. 755 /kɔndiɔ/ white ant. yer Pl. N. 421 /ʁiə in ʁiː-
mamia go carefully along an edge.

íaŋ deŋ N. 149 /tiaŋ/ exact.
íaŋ den 388 /tiaŋ/ candle. rnnen Pl. N. 424 (cf. /rion/ learn) student.
íaŋ tgyap N. 904 /θkiəŋ/ pinch, nip.
íaŋ chdyāŋ 723 (cf. /kɔntiŋkɔːːŋ/) hampered.
íaŋ kandehv N. 808 /tiəv/ blue jay. vñau 561 /phniəv/ guest.
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e:k
trasek Pl. N. 560 /traseña:/ peltophorum dasyrachis.

e:ŋ
kaniem, kanmiŋ 49, 423 /kmienia:/ young. parenŋ 451 /pren:/ oil.

e:h
ces N. 137 /ceh:/ cotton thread.

eh
ceh N. 137 /ceh:/ know how to. treh N. 149 /treh:/ pluck stringed instrument.

e:
cer 38 (cf. /ce:/ long, as time proceeds/ go, transgress. cmer 502 (cf. /ce:/ long, as time proceeds) transgressor. tmir 137 (cf. /de:/ sew) one who sews, attaches. sir 133 /sé:/ write.

è:
ge passim /ké:/ person. danle 904 /tuanlé:/ river, Tonle Sap.

è:p
vep N. 357 /pè:/ stick out lower lip.

è:h
dves N. 607 /thvèh:/ careless.

è:h
veh N. 76 /vèh:/ slip off, avoid an encounter.

è:
hvera 127 /vè:/ help in turn, form a rota.

vk
slik 560 /svlk/ 400. anlik N. 480 /slolv:/ melon.

vŋ
ttiŋ 451 (cf. /komdvŋ/ owing) pay (back). piŋ 557 /bvn:/ lake.

vn
sin 24 /svn/ further, too.

vp
crip 726 /crvp/ detach.

vl
ampel 940 /svmbvl/ salt.

vh
is 562 /svh/ all.

vy

vt
kampit N. 562 /kambvt/ knife. spit 137 (cf. /svt/ pour) libation. samrat 30 /svromvt/ husk, clean (rice).

ùk
dik 137 /tùk/ water.

ùŋ
cdíŋ 134 /stùŋ/ river. kajin N. 648 /khcúŋ/ lamprey, numbfish.

ùn
udén 389 /sótnun/: container for fish sauce x twin N. 726 /thpún/ blindfold. vin N. 562 /pùn/: topmost, best.

ùm
dnem 560 /thinum/: yoke, pair.

ùl
valvel 877 /papúl/: taper-holder. amvil 129 /svmpúl/: tamarind.

ùh
vis. N. 11 /pùh/: venom, poison.

ùh
sgh N. 133 /skùh/: slow.

ùt
kamvit N. 155 /pùt/: true. jit. N. 76 /cut/: near.

i:ŋ
vreŋ 790 /príŋ/: Syzygium. kandén N. 8 /khtíŋ/: wild buffalo.

i:
amv 79 /svmpl/: from. aji 451 /ci/: grandparent, ancestor. vnée 134 /phpí:/ flower. ye 562 /ni:/ female (?) laye N. 66 /nì:/ douroucouli monkey (?)

ih
neh 388 /nih/: this. gnh N 555 id.

i:
ber 388 /pi/: two.

ù
ge, gui 561 (both) /kù:/ is, that is.
| MK vowels | k | ń | Zero | n | m | p | PA-MK final consonants | l | s-h | h | y | r Zero | t | c | v | ū |
|-----------|---|---|------|---|---|---|-------------------------|---|-----|---|---|------|---|---|---|---|---|
| a:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| e:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| e-ń:      | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| o:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| ū:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| ū:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| u:        | a | a | a*   | ą |   |   |                        | a | a   | a | a | a    | a | a | a | a | a |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| i:        | i | i | i*   | e |   |   |                        | i | i   | i | i | i    | i | i | i | i | i |
| i:        | i | i | i*   | e |   |   |                        | i | i   | i | i | i    | i | i | i | i | i |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| i:        | i | i | i*   | e |   |   |                        | i | i   | i | i | i    | i | i | i | i | i |
| i:        | i | i | i*   | e |   |   |                        | i | i   | i | i | i    | i | i | i | i | i |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |
| e*        | e | e | e*   | e |   |   |                        | e | e   | e | e | e    | e | e | e | e | e |

† Final v usually not written in PA following these vowels.
Vowels and final consonants in Khmer

Table 2
Summary of the MK correspondences with PA Vowel-Symbols

<table>
<thead>
<tr>
<th>PA vowel-symbol</th>
<th>MK correspondences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usual</td>
</tr>
<tr>
<td>aː</td>
<td>aː/iː</td>
</tr>
<tr>
<td>a</td>
<td>aː/ɛə əə</td>
</tr>
<tr>
<td>a, o</td>
<td>o/ʊə</td>
</tr>
<tr>
<td></td>
<td>oː/ŋː</td>
</tr>
<tr>
<td>o</td>
<td>aə/ŋː</td>
</tr>
<tr>
<td>o, u, ū, va</td>
<td>oː/ʊː</td>
</tr>
<tr>
<td>o, va, və</td>
<td>uːə/ʊːœ</td>
</tr>
<tr>
<td>e</td>
<td>eː/ɛː</td>
</tr>
<tr>
<td></td>
<td>aə/ŋː</td>
</tr>
<tr>
<td></td>
<td>ae/ɛː</td>
</tr>
<tr>
<td>e, ya, ye, yə</td>
<td>iə/ɪə</td>
</tr>
<tr>
<td>i (closed)</td>
<td>ɤ/ʊ</td>
</tr>
<tr>
<td>i (open)</td>
<td>ɤy/ɪː</td>
</tr>
<tr>
<td>u (closed)</td>
<td>ʊ/ʊ</td>
</tr>
<tr>
<td>u (open)</td>
<td>ʊː/ʊ</td>
</tr>
<tr>
<td>aɪ</td>
<td>ay/ɛy</td>
</tr>
<tr>
<td>au</td>
<td>au/ɛu</td>
</tr>
</tbody>
</table>

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NOTES

1. This includes the texts published by G. Cœdès plus the texts of K. 1029 and 1030 kindly supplied by Monsieur C. Jacques of the Ecole Pratique des Hautes Etudes, Paris.

2. The accent indicates second register.

3. r and l are not in opposition in this pre-consonantal context.

4. I am grateful to Mr. Kuoch Hak Srea for suggesting this correspondence.

BIBLIOGRAPHY

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