PREFIXATION AND INFIXATION IN OLD MON, OLD KHMER, AND MODERN KHMER

By Judith M. Jacob

First I must acknowledge my indebtedness to my colleague, Mr. H. L. Shor for most kindly supplying me with information on OM prefixes and infixes. the data on OM here used have been taken from his notes. For OKhm the bo of material is smaller and the language much less diverse than OM (many of t OKhm texts being lists of slaves' names and their duties). It has therefore provid me with many problems and fewer examples than I should have liked.

In attempting this comparison between the three languages I looked at t collected data with a view to answering three questions :

    I. What graphic/phonetic and phonological elements may be (*a*) prefixe (*b*) infixed in each language ?

    II. In what graphic/phonetic and phonological contexts do these elemen occur ?

    III. What grammatical functions do they perform ?

The answers which I found are presented in the three following sections.

Section I. The graphic/phonetic and phonological elements which may be prefix or infixed.

A table of these elements is given on pages 65–67.

In so far as OKhm and MKhm are concerned, prefixes and infixes may treated phonologically as being entirely consonantal, consisting of one or tw consonants. Such vowels as are written or pronounced before or after or betwe two consonants of a prefix or infix (short ' inherent ' vowel or short neutral vow *ə*, in MKhm ; short ' inherent ' or occasionally *i* in OKhm) do not show sufficie variation to be regarded as essential phonological elements and may be sat factorily treated as prosodic features of the junction between consonants. Cf. :

Khm *chlẁəh* [1] ' to quarrel '	*prəchlẁəh* ' to squabble together ' (Prefix and prosodic *ə*)
rɔ́əs ' to rake '	*rənɔ́əs* ' a rake ' (Prosodic *ə* and infix *n*)
OKhm *jāhv* ' to barter '	*pamjāhv* ' bartered goods ' (Prefix *pN* a prosodic *a* between consonants)
pre ' to use '	*pamre* ' person used, servant ' (Prosodic and infix *m*)

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[1] The phonetic transcription here used for MKhm was evolved by Miss E. J. A. Henders See ' The main features of Cambodian pronunciation ', *BSOAS*, 14, 1, 1952, pp. 149–74. I OM and OKhm a straightforward transliteration is used, with the symbol ' representing vowel-base.

(Contrast *som* ' to beg ', *smom* ' beggar ', where no junctional short vowel is felt to be necessary (Infix *m*).)

It may also be conveniently mentioned here that aspiration is another Khm feature of junction which is recorded in later OKhm spelling and in MKhm : e.g. OKhm *saṁ* ' together ', *phsaṁ* ' to add together ' ; MKhm *kɔəp* ' pleasing ', *phkɔəp* ' to please '. (In both cases prefix *p* and prosodic aspiration.)

In OM more frequent use seems to have been made of a short vowel between prefixes and the initials of roots to which they were attached and a slightly wider variation of vowel is noted (short *a*, *i* and *u* all occur). Thus the prefix *p* (causative) has at least three forms :

lop ' to enter	*plop* ' to bring in '
duk ' to be poor '	*paduk* ' to oppress '
piñ ' to be full '	*pupiñ* ' to fill '

and the hypothetical prefix *s* has two forms, *s* and *si* :

kīr ' to dig '	*skīr* ' shall dig '
dmoñ ' to stay '	*sdmoñ* ' shall stay '

and, before another *s*,

sūl ' to write '	*sisūl* ' shall write '
	sisgih ' shall be rich '
	sisip ' shall embellish '

and

k'īm ' to smile '	*sik'īm* ' shall smile ' (an isolated instance of *si* before a consonant other than *s*)

I have entered in the graphic column of the tables the exact spelling of OM words (as for OKhm also), but in the phonological column I have taken the liberty of singling out the M consonants, for the purpose of comparison with Khm.

Some OM infixes are preceded or followed by a short vowel and here Mr. Shorto takes the consonant as the phonological element, e.g. :

gruñ ' to laugh '	*ginruñ* ' laughter '
p'ār ' to put into practice '	*pun'ār* ' conduct ' (Infix *N* in both cases)

These are entered in the phonological column as *N*.

The M infix *u/i*, for which Mr. Shorto uses the symbol *u*, occurs as follows. Either

(*a*) it is infixed between the two consonants of an initial sequence

(i) with no change taking place in either consonant, e.g. *kcit* ' to die ', *kucit* ' death ' ; or

(ii) with voicing of the first consonant, e.g. *phic* ' to fear ', *buhic* ' to frighten '. Or

 (*b*) when the root has a single initial consonant

  (i) this is reduplicated and the infix occurs between the two consonan[
   e.g. *moy* ' one ', *mimoy* ' each ' ; or

  (ii) reduplication occurs but the first consonant is deglottalized, e
   ḅat ' to compare with ', *biḅat* ' to measure, test '.

Such occurrences as (*b*) (i) and (ii) are phonetically so like the Khm wo[
formed by the occurrence of the reduplicative prefix (e.g. *kəkaːy* ' to scra[
continually ', from *kaːy* ' to scratch ' ; *pəbaos* ' to sweep diligently ', from *bə*
' to sweep '), that I have entered them, in square brackets, in the graphic colu[
of the prefix table to demonstrate that a phonetic similarity may conceal
morphological difference.

The M infix *N* may similarly occur either between the two consonants of
initial sequence or between the two consonants formed by the reduplication [
a single initial in the root, e.g. *pi* ' three ', *pumpi* ' triad ' ; *juñ* ' leg ', *jiñjuñ* ' p[
of building '. Again the resulting phonetic, as opposed to morphological, similar[
between this phenomenon and some Khm prefixed forms (e.g. *tɔən* ' to be in tim[
to catch up ', *tὼəntɔən* (with prefix + *N*) ' to be just behind ') seems sufficien[
striking to be entered in square brackets in the prefix table, I A 2, as well as in t[
infix table, I B 2, where they belong morphologically. *pun*, *pum*, in the M pre[
column have also no place in the phonological column, since they represen[
prefix (*p*) and an infix (*N*), and not two prefixed consonants.

Summary : *Section I*

 No particular likenesses are observed in connection with the single consona[
which may be prefixed in the three languages, but when two consonants a[
prefixed these may in all cases be either C + *r* or C + *N*.

 Where one consonant is infixed it may be *n*, *m*, or *N* in all the languages.
addition M has *r* and *l* infixes while Khm has *p*, *b*. Where two infixed consona[
are concerned, all three languages have only nasals and liquids. One tw[
consonant infix, *mn*, occurs in all the languages.

 M is unique in having a vowel infix, *u*.

Section II

1. The graphic/phonetic contexts in which prefixes and infixes occur.
 It was found

 (*a*) that the prefixes of all the languages (single consonant and two consonar[
may all be prefixed to roots having a single initial consonant, thus forming wo[
in which two or three consonants occur in close succession. Some prefixes oc[
before words beginning with a two-consonant sequence, e.g. *s* in OM (*dmoñ* '
stay ', *sdmoñ* ' shall stay ') ; *kN* in OKhm (*steñ* (title), *kaṁsteñ* (title)) ; *pr*[
MKhm (*chlὼəh* ' to quarrel ', *prəchlὼəh* ' to squabble together ').

1. Single Consonant prefixed

Phonetic nature of prefix or infix	OM		OKhm		MKhm	
	Graphic	Cons. only	Graphic	Phonol.	Phonetic	Phonol.
Velar .	(gu)	(g)	—	—	k, kh, kə kə [+ k] ŋə [+ ŋ]	k Rd. k Rd. ŋ
Palatal .	[ji + j]	—	—	—	c, ch, cə cə [+ c] ɲə [+ ɲ]	c Rd. c Rd. ɲ
Dental .	[ti, tu + t] [di + d]	— —	(ta) [+ t] (na) [+ n]	Rd. t Rd. n	t, th, tə tə [+ t] də [+ d]	t Rd. t Rd. d
Bilabial .	p, pa [bi + 'b] (m), [mi + m]	p — (m)	p, ph — (mi) [+ m]	p — (Rd. m)	p, ph, pə pə [+ p] bə [+ b] m, mə mə [+ m]	p Rd. p Rd. b m Rd. m
Liquid .	(r) (ru/lu)	(r)	—	—	rə rə/lə [+ l]	r Rd. r/l
Sibilant .	s, si (sa/su)	s (s)	—	—	s sə [+ s]	s Rd. s
Glottal .	—		—	—	—	—

2. Two Consonants prefixed

Phonetic nature of prefix or infix	OM		OKhm		MKhm	
	Graphic	Cons. only	Graphic	Phonol.	Phonetic	Phonol.
Velar .	[kin + k] [kir + k] [gin + g] [gir + g]	— — — —	kaŋ, kaɲ, kan, kam	kN	k + short ' inherent ' + any nasal krə	kN kr
Palatal .	[jiñ + j] [ñir + ñ]	— —	(cam)	(cN)	c + s.i. + a.n. crə	cN cr
Dental .	—	—	(tam) (dam) [+ d]	(tN) (dN)	t + s.i. + a.n. trə d + s.i. + a.n.	tN tr dN
Bilabial .	pan, pun (pur) [pun, pum]	pN (pr) —	pañ, pan, pam pra (mra)	pN pr (mr)	p + s.i. + a.n. prə b + s.i. + a.n.	pN pr bN
Liquid .	rin (rir) (lum)	rN (rr) (lN)	(ram) (lan) [+ l]	(rN) (lN)	r + s.i. + a.n. l + s.i. + a.n.	rN lN
Sibilant .	[sir + s]	—	—	—	s + s.i. + a.n. srə	sN sr
Glottal .	—	—	'an, 'am	'N	' + s.i. + a.n.	'N

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I. B. Infix Table

1. *Single non-nasal Consonant infixed*

Phonetic nature of prefix or infix	OM		OKhm		MKhm	
	Graphic	Phonol. (HLS)	Graphic	Phonol.	Phonetic	Phonol
Bilabial .	—	—	p, ap	p	b	b
Liquid .	ir, ar, ur, ra, ri (il) w, uw	r (l) w	—	—	—	—

2. *Single nasal Consonant infixed*

Nasal .	m	m	m, hm, am	m	m, hm	m
			(All occur when root has a single initial consonant)			
			am	m		
			(Occurs between two cons. of init. sequence also)			
	n	n	n, hn, an	n	n, hn	n
			(All occur when root has a single initial consonant)			
			am	n		
			(Occurs between two cons. of init. sequence also)			
	in, iñ, uṁ, un, añ, aṁ	N	am, aṅ, an	N	short 'inherent' + any nasal	N
	(Occur between two consonants of initial sequence of root or between two consonants formed by reduplicated initial of root)					

3. *Two Consonants infixed*

OM		OKhm		MKhm	
Graphic	Phonol. (HLS)	Graphic	Phonol.	Phonetic	Phonol.
inm, aṁm	Nm	—	—	—	—
aṁn	Nn	aṁn	mn	short 'inherent' + mn	mn
irn	rn	—	—	rən	rn
—	—	—	—	rəm	rm
uṁw	Nw	—	—	—	—
(All occur only when root has single initial consonant)					

4. *Vowel, or Vowels, infixed*

OM		OKhm		MKhm	
Graphic	Phonol.	Graphic	Phonol.	Phonetic	Phonol.
u/i	*u*	—	—	—	—

(Occurs between two consonants of initial sequence of root or between two consonants formed by reduplicated initial sequence of root. May be accompanied by voicing or deglottalization of initial.)

Meaning of abbreviations, etc. in tables :

( ) (OM) only one or two occurrences known. (OKhm) meanings not completely established.

[ ] Placed for interest in graphic column but have no place in phonological column of the table.

Rd. Reduplicated.

N Nasal which may vary in point of articulation according to the context, or even at the discretion of the scribe.

(*b*) That in all the languages infixes may occur with roots having either a single initial consonant or a two-consonant initial sequence.

2. The phonological contexts in which prefixes and infixes occur.

Here there are some striking features of resemblance. In all three languages both prefixes and infixes are chiefly consonantal and as such either

(*a*) they occur without adding a syllable to the structure of the root, e.g. OM *cow* ' to return ', *scow* ' shall return ' ; *goṅ* ' to be brave ', *gmoṅ* ' brave ' ; OKhm *gāl* ' to present oneself to a superior ', *phgāl* ' to have oneself presented to a superior ' ; *raṁ* ' to dance ', *rmaṁ* ' dancer ' ; MKhm *rỳːs* ' to pick out, choose ', *crỳːs* ' to take one's choice ' ; *doː* ' to trade ', *thnoː* ' price '. Or

(*b*) they are linked to the root by means of a short vowel. In this case, the resulting word often has an iambic construction, length of syllable and, for MKhm at least, stress occurring in the utterance of the vowel and final of the root, e.g. OM *puwiñ* ' play ', from *wiñ* ' to play ' ; *jirhān* ' love ', from *chān* ' to love ' ; OKhm *'antām* ' plantation ', from *tām* ' to plant ' ; *camnār* ' engraving ', from *cār* ' to engrave ' ; MKhm *bɔŋriən* ' to teach ', from *rìən* ' to learn ' ; *trənùm* ' perch ', from *tùm* ' to perch '.

It is in all the languages the initial or initial sequence of the root to which an infix (as well as a prefix) is attached, the vowel and final of the root being unaffected. It is partly because of this that phonetically similar material has seemed grammatically different to Mr. Shorto and myself. Mr. Shorto, for whom *u/i* is an infix in its own right (*kmin* ' to be king ', *kumin* ' to enthrone ' ; etc.), arrives at the conclusion that the same infix occurs in the initials of the roots *jāp* ' each, all ', *moy* ' one ', necessitating the reduplication of those initials : *jijāp* ' all ',

mimoy ' each '.   Similarly the high-frequency occurrence C_1NC_1VC (e.g. *jiñji*
is to him an instance of infix N in a root with a single initial consonant (*ju*
To me the high-frequency occurrence in MKhm : $C_1 \ni C_1VC$, represents a redu
cating prefix, as in *kəkaːy* ' to scratch constantly ', from *kaːy* ' to scratc
(I have no reason to suspect the presence of a vowel-infix.)   The comparatively r;
occurrence C_1NC_1VC represents a prefix CN + root with accidentally simi
initial.

Section III.   The grammatical functions performed by the prefixes and infixes.

The collected data are presented in a table on p. 69.

It will be observed that the nominalizing and causative functions are comm
to all three languages and are carried out by both prefixes and infixes.   It is only
OKhm that no instance of a causative infix has been noted and this may be c
to lack of evidence only.   The nominal function may be further analysed into ty
of noun produced, and here one is struck by the occurrence in all three langua;
of the double nasal infix (*Nn/Nm/mn*) for general nouns, the utensil-infix
and the agent-infix *m*.

The frequentative function is common in both OM and MKhm and the abser
of instances in OKhm may be due again to lack of evidence and also to lack of
right kind of text ;   frequentative words tend to occur in a rather vivid style
language in Khm.   Only prefixes are used in Khm to express this function, wher
M uses both prefixes and infixes.   A glance at the Khm prefixes, however, sho
that the same kinds of consonant (i.e. nasals and *r*) which are infixed into
beginning of the word in M are present in several of the Khm prefixes.   The lat
have been divided in the table according to whether they tend to give a straig
forward repetitive meaning to the root or have an intensifying or restrict
effect on the meaning of the root.   Reduplicated *c*, *m* and *s* fulfil both functic
e.g. *thɛ̀ək* ' to kick ', *təthɛ̀ək* ' to kick repeatedly ' ;   *kaoŋ* ' to bend ', *cɔmkaoŋ*
bend with effort ' (both intransitive).

The entry for OKhm in the quantifier section was made on the strength
only two occurrences noted by me, *tanloñ* (capacity measure ; quantifier), fr
tloñ (capacity measure), and *sanre* ' rice-field ' (quantifier), from *sre* ' rice-lan
These words I have elsewhere [1] regarded as nouns which have taken the *n*-in
(utensil, means), but it seems worth while to take them out here for compari
with M.   In MKhm the two words seem to have disappeared, and among
quantifiers which I have listed I find only a few words in which the presence of
infix of this kind might be suspected :   *cɔmriək* ' strip ' (quantifier for pieces
fish or meat), from *criək* ' to tear in strips ' ;   *sɔnrap* ' suit, set ', from *s*
' finished ' ;   *kɔndap* ' sheaf ', from *kdap* ' to grasp in the hands '.   In all th

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[1] ' The structure of the word in Old Khmer ', *BSOAS*, 23, 2, 1960, pp. 351–68.

THE GRAMMATICAL FUNCTIONS OF THE PREFIXES AND INFIXES

Grammatical Function	OM Pref.	OM Inf.	OKhm Pref.	OKhm Inf.	MKhm Pref.	MKhm Inf.
1. Nominalizing						
(a) General	tN, p, m, r, rN, rr, lN	N_1, N_2, Nn, Nm, Nw, n, r, rn, l, w, uw, u	pN, $'N$ (pr)? (kN)?	mn	cN, dN, tr, m, lN, sN	mn, N
(b) Utensil	—	n	—	n	$'N$	n, N, rn
(c) Agent	(gu)	Nm	—	m	—	m, N, rm
(d) Object made	—	—	—	p	—	b
(e) Attributive noun	—	m, um N_2	—	—	—	—
2. Causative	p, (r)?, rin, lu?	u, (N)?, r	p	—	cr, dN, p, pN, bN	m
3. Frequentative	pr, (r)?	N, r	—	—	Rd. k, c, t, d, p, b, $ŋ$, $ɲ$, m, s	—
Intensifier	—	—	—	—	Rd. c, m, $s + kN$, cN, pr, lN, sr, sN	—
4. Quantifier	—	N, n, w	—	n	—	—
5. Verbalizing	(p)	u	$('N)$	—	—	—
6. Hypothetical	s	—	—	—	—	—
Preparative	sa/su	—	—	—	—	—
7. Distributive numeral	—	u	—	—	—	—
Group numeral	—	N, r	—	—	—	—
8. Proper name	—	—	(kN)?	—	—	—
9. Attributive verb	—	N_2	—	—	k, kr, kN, tr, r, rN	—

words, the infix is N, which may represent the general nominalizer or the agent infix just as well as the n-infix.

OM and OKhm are again comparable in using prefixes or infixes to express a verbalizing function, although evidence for OKhm is slender ('$ampān$' to arrest ', from $pān$ ' to hold, keep ').

OM is alone in using prefixes and infixes for two sets of functions :

(i) The hypothetical and preparative function (prefixes s and sa/su). These

I have put together as they are similar in meaning as well as possibly identi
phonologically : e.g. *gap* ' to please ', *sgap* ' shall please ' ; *rap* ' to hold ', *su*
' to put ready at hand '.[1] MKhm has a separate word for this grammatical functi
(*nùŋ* ' shall, will, having the idea of '). In OKhm, the word *pi* ' in order to, w
the intention of ', seems to have a very wide variety of usages and might be regar
as at least partially fulfilling this function.   No evidence of a prefix has been fou

(ii) Two functions which relate to numerals, i.e. the formation by means
infixes of distributive and group numerals. These seem to be entirely non-exist
in Khm.

OKhm alone has a prefix to indicate a proper name. MKhm is alone in hav
a series of prefixes which turn a transitive verb into an attributive verb, w
' passive ' sense, e.g. *cat-caːy* ' to spend ', *khcat-khcaːy* ' dispersed ' ; *dɔːk*
uproot ', *rədɔːk* ' uprooted '.   The OM infix N_2, which also forms an attribut
verb, may, however, be regarded as comparable in function.

In M more than one prefix/infix may be used at the same time with a root, e.

> *dow* ' to run away '   *spdow* ' shall chase away ' (Prefixes *s* and *p*)
> *c'ah* ' to be pure '   *scu'ah* ' shall purify ' (Prefix *s* and infix *u*)

This is very rare in Khm.   Even where a ' family ' of words are current,
kɔ̀əp ' pleasing ', *phkɔ̀əp* ' to please ', *bɔŋkɔ̀əp* ' to give an order ', one does
regard *-ɔŋ-* (N) as infixed into the prefixed form *phkɔ̀əp*, since *bɔN* is itself
commonly used as a prefix with many roots for which there is no intermedi
form comparable with *phkɔ̀əp*, e.g. *pèɲ* ' full ', *bɔmpèɲ* ' to fill ' ; *tùm* ' rip
bɔntùm ' to ripen ' (transitive).

It is possible, however, that a diachronic study of Khm would reveal that so
apparent two-consonant prefixes developed from two separate prefixed or infi
units.

I would summarize the result of this inquiry as follows.   There is very li
in OKhm which has not continued and developed in MKhm.   Where import
contrasts are found, they are chiefly between M on the one hand and Khm, O
Mod, on the other.   One is faced by close resemblances, in which are combined
aspects, phonetic, phonological, and functional, and by complete contra
Nevertheless it would seem to me that a comparison of MK on these same po
(elements prefixed or infixed, contexts in which they occur, functions perform
with other non-MK languages would demonstrate the resemblance rather than
difference between M and Khm.

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[1] Mr. Shorto has suggested that the OM preparative function is in effect a ' causative o
hypothetical '. ' To put ready at hand ' might then be paraphrased ' to cause (someone) t
about to hold '.