THE RELATIONSHIP BETWEEN REDUPLICATION
AND SOME OTHER GRAMMATICAL MEANS IN KHMER*

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Reduplicative words in Khmer, which account for a sizable portion of the vocabulary, are by no means of a uniform type. They may differ in the specific manner of their formation, in certain structural peculiarities, in their aspectual function, in their grammatical rôle, and in other respects as well. This variability notwithstanding, reduplicatives have one feature in common, namely the general manner of their formation by reduplication of a formal unit. It is this circumstance that permits us to speak of reduplicatives as a single structural category.

Provisionally, the primary or conditionally primary form from which a reduplicative is derived may be termed the reduplicand (R) while the form added to it may be termed the reduplicator (r). Further, the reduplicated portions of R and r may be known as the stable base (S) while their variable portions may be known as the divergent base (D). The symbol $D_R$ stands for the divergent base of the reduplicand, $D_r$ the divergent base of the reduplicator. Now, if we assume that reduplication is always accomplished by repetition of S and creation of $D_R$ and $D_r$, all instances of reduplication in Khmer acquire a common basis.
In this light we may distinguish complete reduplicatives from partial reduplicatives. With complete reduplicatives $D$ is zero. With partial reduplicatives $D_R$ is never zero, though $D_r$ may be zero. In partial reduplicatives, moreover, $R$ and $r$ do not coincide formally inasmuch as reduplication per se is complicated by one or more additional operations. These latter constitute divergence, i.e., some transformation of the primary or conditionally primary form. Such divergent reduplication could evidently be taken as the more comprehensive initiation of the specific operations involved in the formation of reduplicatives, because it embraces all cases of reduplication. In a sense, complete reduplicatives may be regarded as specific instances of this more general transformation.

If transformations from $S$ and $D$ are compared with such common transformations as composition and affixation, the essential differences between them become easily apparent. Composition and affixation are effected by adding certain morphemes or morpheme-combinations to other morphemes or morpheme-combinations. The difference between composition and affixation consists of the nature of the morphemic material employed; in composition we are concerned with root morphemes, in affixation with accessory morphemes. What is more, composition and affixation can both be characterized as linear morphemic transformation; and since morphemes occupy the same structural level, both types of transformation may be defined as monolevel. In the overall scheme of reduplication, however, reduplication of whole morphemes ($S =$ morpheme) is only one among a number of types of reduplication of units which do
not correspond to morphemes \((S < \text{morpheme}, S > \text{morpheme})\). Such units occupy more than one structural level and may consist of phonemes, combinations of phonemes (either coinciding or not coinciding with the syllable), morphemes, combinations of morphemes, and combinations of morphemes with nonmorphemes. Hence, divergent reduplicative transformations (i.e. partial reduplicatives) cannot be characterized as monolevel--despite the fact that, like composition and affixation, they are generally used as a means of word-building and form-building and may consequently be considered as primarily morphological. Contrary to the case of strictly morphemic transformations, therefore, we shall treat divergent reduplicative transformations as multilevel.¹

When it comes to identifying multilevel divergent reduplicatives, two main questions arise. First of all, we must deal with the question of the framework within which such transformations operate. Secondly, we cannot avoid the question of their relationship to monolevel linear morphemic transformations, i.e. composition and affixation. In this paper we shall confine ourselves to examining (a) reduplication and phonetic variation, (b) reduplication and affixation, (c) reduplication and composition, and (d) reduplication and so-called attendant words.

Reduplication and Phonetic Variation

By "phonetic variation" we refer to the formation of words by alteration of certain phonetic components of a given word against the background of common components which carry the semantic load. Vocabulary formed by phonetic variation is typically divisible into sets of related words. Thus,
κηδ 'upright, erect'; κοσκ 'bent arch-wise'; κηθε-κην 'crooked bent'; κεσκ 'short and crooked (of a person's neck)'; κηατ 'crooked (of a person's nose)'; κηοκ 'hooked'; κηθο 'bent ringwise'; κοιόλ 'doubled up'; κοιο 'too short'; κηωμ 'nasalized (owing to deformation of the naso-pharynx)'; κηθσθ 'leaning to one side'; κηαθεν 'crooked (of a person's arm)'; κηαθοκ 'peacock (bird with a fanlike tail)'.

As can be seen from these examples, the recurrent element κη- carries the notion of 'curvature' in the varying elements—whose formation is not governed by specific rules of sound alternation—vides the phonetic integument of each particular d, which belongs to one or another semantic set.

It should be clear from the foregoing that phonetic variation is a process analogous to reduplication insofar as it is carried out on the basis of identical units, namely S and D. In our examples recurrent κη- is S while the varying elements D₁, D₂, D₃, and Dₙ.

On the other hand, phonetic variation differs from reduplication in four respects. In the first place, rather than yielding units consisting of R or r, phonetic variation gives rise to new, independent words. In the second place, whereas there generally two D's in reduplicatives, the number D's manifested in phonetic variation is unlimited; this respect we are concerned not so much with duplication as with repetition. In the third place, phonetic variation S and D always occupy the same structural level rather than being on different levels. In the fourth and last place, phonetic variation always serves the purpose of word-building.
We have already seen that divergent reduplicative transformation as a whole is to be considered multilevel, inasmuch as S and D in such transformation may be manifested by units on different levels. Conversely, the structural material used in phonetic variation bears out the assumption that specific instances of this type of transformation are monolevel: S and D are always represented by units below the morphemic level. Sometimes the level in question is "psycho-associative"; at other times it may be merely submorphemic.

It might seem that the base of a divergent reduplicative transformation would be morphemic only when there exists a primary form, i.e. a self-contained word from which the reduplicative is formed. In this type of transformation, however, S and D do not usually coincide with morphemes in Khmer— as they do in complete reduplicatives, which however are fairly rare. Cases in which r is formed from R when the latter consists of more than one morpheme show that Khmer completely disregards the morphemic structure of R in the process of reduplication and that S and D are not identified according to any morphemic criteria. For instance, the form សម្រាប់ 'to develop' (< ស្រាប់ 'much, many' + infix -ស្រ- ) yields the reduplicative សម្រាប់-សម្រាប់ 'to develop successfully'. Here r cannot be divided into morphemes, and the link between r and R exists only on the divergent reduplicative basis: S = សម្រ-. While -ស្រ = $D_R$ and -ស្រ = $D_r$.

It can be seen from this that the structural level of the base (primary form), while of no special importance in the formation of reduplicatives, is at least definite in the case of words formed by
netic variation, even though reduplication and netic variation alike are manifestations of emergent reduplicative transformations. By virtue this latter circumstance it is common for both cesses to co-occur in the sense that among words onging to the same set some will be formed by uplication, others by phonetic variation. For instance:

praːn 'dense':
- aːn = S₁; pr- = D₁

skaːn 'thick (of a person's hair)':
- aːn = S₁; sk- = D₂; but also s-ːn = S₂;
  -kaːn = D₃

smoːn 'thick and tangled (of wool, hair)':
  s-ːn = S₂; -moː= D₄; but also sm- = S₃;
  -oːn = D₅

smoːy 'toussled, matted, tangled':
  sm- = S₃; -oːy = D₆; but also sm- = D₇;
  -oːy = S₄

soy-moːy 'untidy and tousled (of a person's beard)':
  -oːy = S₄; s- = D₈; m- = D₉

soy-moː-s-ːy 'very untidy, tousled' (reduplicative of the second power):
  m- = S₂; -oːy = D₁; -oː = D₂

It can thus be seen that phonetic variation may ur either on the basis of S alone, as in our lier examples of S = kŋ-, or with a consecutive lacement of one S by another, as in the examples t given. In both cases reduplicatives may crop within a given set, as in our last two examples. the same time, the models of reduplication and
of phonetic variation do not coincide completely.

Reduplication and Affixation

The question of the relationship between reduplication and affixation has a number of facets. It may, for example, be examined with a view to isolating phenomena common to both processes. Or, it may be considered from the standpoint of the co-occurrence of affixes with certain reduplicative models. The school of Khmer studies founded by G. Maspero established a theory of two types of reduplication in Khmer. One of these is reduplication proper, by which, according to Maspero, compounds are created. The other is reduplicative derivation, which is interpreted as a kind of affixation. The latter includes reduplication of the initial consonant of the base form, associated with expression of definite grammatical meaning—e.g., kəːy 'to scratch': kəːkəːy 'to scratch persistently for a long time'. If by "affix" we understand a morpheme singled out as part of a word form and altering the meaning of that form, or as a grammatical morpheme which is part of a word, it must be conceded that such a definition is not inconsistent with such a point of view. Yet certain considerations make it preferable to treat all cases of reduplication as reduplicatives.

In point of structure, what has been termed reduplicative derivation does not differ radically from other kinds of reduplication. Specifically, it is carried out on the basis of S and D. Moreover, it differs fundamentally from ordinary affixation: the latter is characterized by relative stability of the formal content of affixes, that formal content being independent of the formal content of the base
ts with which they operate. The dependence of the
ix on the base may have only morphological
ession; in other words, it is possible to have
xes of common form independent of the form of the
. It seems obvious that reduplicative affixation
roximates ordinary affixation primarily by virtue
the formal stability and grammatical function
r: R remains the bearer of lexical meaning while
complishes a purely grammatical modification of
base. These similarities notwithstanding, we
fer to believe that the deciding factor in
ermining the meaning of any given grammatical
cess must be the base on which that process is
ried out. In the present case the base is clearly
urgent reduplicative, inasmuch as the problem is
of singling out S and D; it is not affixal, since
problem is not concerned with the addition of an
essory morpheme to a notional one. 5

Moreover, if initial-consonant reduplication as
means of expressing grammatical function is taken
affixation, a certain amount of difficulty is
ated when it comes to defining the nature of
lar phenomena. Thus in Khmer, side by side with
itial-consonant reduplication expressing the
quentative, we have many other uses of the same
el to form simple and, from the synchronic point
view at least, underived words such as tɔːʉːl
ceive', kɔːkɔː: 'sediment, dregs', and the like.
ce there is obviously no affixation in these
es, once having accepted the above theory of
uplicative affixation we are obliged to assume
t the model in question is of a dual nature:
some cases it involves reduplication, in others
uplicative affixation. To make matters worse,
if all such formations are assumed to be of the same nature, we cannot avoid accepting affixation as occurring on a nonmorphological basis.

In certain Mon-Khmer languages genetically and typologically close to Khmer as many as three models of reduplication are used to express the same meaning. One of these is the model corresponding to the definition of reduplicative affixation, exemplified by Bahnar đrăng 'to answer' > đrăng-drăng or đơdrăng or đơơdrăng 'first to answer and then to do something immediately'. It seems hardly efficient to isolate forms of the đơdrăng type as affixal and distinguish them from words formed on other models of reduplication. There may well be advantages in setting up a special subgroup of reduplicatives showing certain features of affixation but, in our view, these should still be classed as reduplicatives.

As we have sought to show, in the formation of reduplicatives it is characteristic of Khmer to disregard the morphological structure of the base and, hence also, to disregard affixation in the strict sense. In this connection special attention may be given a small group of reduplicative adjectives of definite phonetic pattern out of which reduplicatives of the second power are formed in the presence of some initials (m-, k-, kr-, kh-, p-, ph-, phl-) whereas no further reduplication occurs in the presence of other initials (t-, tr-), which instead undergo insertion of a monosyllabic infix of fixed shape: -pə-.

Examples of the first type are: iə-miə 'shy'; iə-mə-miə 'very shy'; sə:k-pələ:k 'slowly' > sə:k-pə-pələ:k 'very slowly'; rəəy-pəəy 'scattered here and there' > rəəy-pə-pəəy 'scattered at random.
e and there'; sul-khul 'far-flung' > sul-ko-khul :flung and open'.

Examples of the second type are: su:-tru: :flung' > su:-rho-tru: 'wide and far-flung';
-trao 'spacious' > sao-rho-trao 'very spacious';
u-ta:u 'rising sharply' > ra:u-rho-ta:u 'high steep'.

In these last examples the infix resembles an

Infix. Here too, however, it is more efficient

to speak in terms of reduplication to the second

er--both because of the structural analogy between

true reduplicatives and those forms with inserted

- and because of the fact that *-rho- never occurs

its place. To all appearances, -rho- must be

interpreted as a variant of *-rho- attributable to

torical causes as yet unknown.

Duplication and Composition

Widespread in Khmer are formations consisting

two notional morphemes selected on the basis of

same rules as those operating in the case of

veloplicatives. Examples are: ca:k-cen 'to leave',
a:k 'to leave, go away' + cen 'to go out, set
'; leh-eh-ehn 'to refuse', < leh 'to throw away,
cet' + ehn 'to leave, forsake'. Such formations

be classed as pseudo-reduplicatives.

To the linguist approaching them from the

section of morphemic analysis they must be com-

nads, since they contain two root morphemes.

Data elicited from native informants indicate,

ver, that the essential feature of such forma-

ns in the language-perception of Khmer-speakers

their repetitive structure, i.e. the presence of

nd of such elements as may be regarded as D--which
historically they are not. The D's found in formations of this kind do not stand in the same relationship as primary and derivative elements; in this respect they resemble true reduplicatives, which have no primary form in the sense that the relationship between R and r is purely arbitrary.

Bearing this latter circumstance in mind, we may say that pseudo-reduplicatives meet the basic requirements of divergent reduplicative transformations. In our view, the nature of such formations is dual; accordingly, they must be alternately characterized as basic (divergent reduplicative transformations) and as morphemic (transformations of composition and affixation). Seen as morphemic transformations these pseudo-reduplicatives are compounds, with copulative linkage between the constituents. Seen from the standpoint of reduplication they are reduplicatives.

Reduplication and Attendant Words

There is a large stock of forms in Khmer which modify the meaning of primary words in the manner of r in partial reduplicatives but which never occur independently. The difference between formations containing such items on the one hand and reduplicatives on the other lies in the circumstance that the former fail to manifest the criteria of divergent reduplicative transformations. Specifically, neither S nor D can be isolated from the elements making up the primary word and its modifier.

Examples of such formations are phεeh-səmbæŋ 'house with all things in it and its residents', < phεeh 'house' + *səmbæŋ; and chw:-thkat 'to get thoroughly ill', < chw: 'to ail' + *thkat.
In Khmer grammatical terminology, reduplicators a particular class and modifiers of the above type alike known as barevasap 'attendant words', and need they fulfill precisely such a function. We consequently feel justified in grouping the two types to a single functional class. At the same time it must be emphasized that the two processes in question represent quite different phenomena. It behooves us, therefore, to distinguish barevasap as reduplicators reduplicatives from barevasap which are not constituents of reduplicatives.

*The present paper was received some weeks prior the tragic death of Yuri Aleksandrovich Gorgoniev July 1972 and was presented to the Conference on behalf on 3 January 1973. Dr. Yuri Plam of the Institute of Oriental Studies contributed a detailed piece of his colleague's life and work, which was tributed to Conference participants and will be published in Moscow.

1 A number of general problems relating to diver- t reduplicative transformations have been treated our "Ob osnovoj leksiko-morfologicheskoy edinice erskogo jazyka [The Main Lexico-Morphological t in Khmer]," in Narody Azii i Afriki, 1972, 2, "Nekotornije osobennosti strojenija povtorov some Peculiarities in the Structure of Reduplica- es," 11th Congress of Linguists, Bologna, 1972, "Some Problems in the Structure of Reduplicatives the basis of the Mon-Khmer languages," still manuscript. Specific models of reduplicatives their meanings have been described in our mmatika kamerskogo jazyka [A Grammar of the Khmer language] (Moscow: Nauka Publishing House, 1966), 87, 153-4, 208-9.

2 We make no attempt here to define the struc- tural levels of S and D in phonetic variation. problem is a rather complicated one, and is sely of theoretical importance. In the present e we are concerned with pre-morphemic units which nevertheless capable of carrying meaning. The stion of the status of such units has been raised edately in the literature of linguistics. Various
terms (phonestheme, semantic morpheme, half morpheme, sub-morphemic unit, non-morpheme, psycho-morph) have been proposed for what we have provisionally termed "meaningful nonmorphemic S" (see for example the bibliography in R. Watson, Reduplication in Pacoh, M.A. thesis, Hartford, Connecticut, 1966), but none has gained general acceptance. The descriptive nature of the unit under consideration should be obvious. A detailed analysis of phonetic symbolism in Khmer—more accurately, the psycho-associative meanings of certain sounds and sound-combinations—is given in Long Seam, Ocherki po leksikologii kammerskogo jazyka [An Outline of Khmer Lexicology], M.A. thesis, Moscow, 1971.

3 By "reduplicatives of the second power" we mean reduplicatives formed from reduplicatives. The problem of reduplicatives of the second and higher powers has been considered in "Some Problems in the Structure of Reduplicatives," cited above.


5 In the theory of reduplicative affixation a given affix is, properly speaking, considered to be not some formal unit but a specific model to be filled with the content of the unit undergoing modification.


7 Banker regards them as reduplicatives; she treats these formations in her paper on reduplicative and not in her paper on affixation in the same collection.

8 Another model of reduplication exhibiting features of affixation is one obtaining in some Austroasiatic languages, though not in Khmer, in which the reduplicator has a fixed and independent divergent base. For instance, Vietnamese sáéch 'book' > sáéch-siééc 'books and such, books and the like' (s= S; -áéh = D; -iééc = permanent independent D). Were it not for the fact that r has S dependent on R it would be possible to speak of affixation; since the base shows divergent reduplication, we must speak of reduplicatives.