SOME COMMENTS ON THE RELATIONSHIP BETWEEN KHMER WORDS HAVING IDENTICAL VOWEL NUCLEI AND FINAL CONSONANTS

In Khmer we are familiar with the build-up of words by prefixation and infixation from a base having the form CVF. E.g. from the base *gāp'* /kɔ̀əp/[1] 'fitting' we have, by prefixation, *phgāp'* /phkɔ̀əp/ 'to suit' and *paṅgāp'* /bɔŋkɔ̀əp/ 'to order' while, by infixation, we have *gamnāp'* /kùmnɔ̀əp/ 'salute n.' However, a considerable number of sets of words are to be found which also have comparable meanings but which have only VF, not CVF, in common and which are not therefore derivatives by affixation. The following two pairs of words are examples of this:

khūṅ	/khoːŋ/	'sunken, hollowed'
sralūṅ	/srəloːŋ/	'very deep; very high'
ṭās	/daːh/	'widespread'
bās	/pìəh/	id.[2]

Words related in this way have interested the writer for a long time, particularly since they sometimes elucidate the meaning of vocabulary which occurs in poetry or in older texts and which is not found in dictionaries. This paper is concerned with the search for an explanation of the occurrence of such sets of words.

At least two ways have been suggested to account for the origin of some of them. First,[3] Maspero 1912:82,85 demonstrated that in Viet-Muong phonetic changes in the initial consonant or consonants had taken place, varying from one dialect to another, and had thus produced several words from the same base having similar meaning, similar VF sequences but different initial consonants. In Khmer we have some sets of words which may be the result of this kind of change, e.g.

crak	/crɔːk/	'to stuff'
jrak	/crɔ̀ːk/	'to hide under, take shleter'
prahak	/prəhɔːk/	'to bore into'
ŝak	/sɔ̀ːk/	'to thrust in v.tr.'

in which, if the presence of /r/, a possible infix, is ignored in the first two examples, the four pre-vocalic consonants are suspiciously similar and might easily have been differentiated by dialectal change. Such sets as this, in so far as I have recognized them, have been excluded from consideration here so that they may not confuse the issue before us.

Second, Jenner 1969:61-62 discussed the analysis of some pairs of words, differentiated only by the initial consonant, where one of the two

has initial glottal stop:

īep	/ʔiəp/	'to squeeze'	kīep	/kiəp/ 'to nip'
īek	/ʔiək/	'to grip'	kīek	/kiək/ 'to hold (e.g. under the arm)'
ap	/ʔɔːp/	'connected'	kap	/kɔːp/ 'related'
āk'	/ʔak/	'thwarted'	cāk'	/cak/ 'to suffer internal pain'

He suggested that the second word might have been formed when the first acquired a prefix and then lost the glottal stop. (There are many other cases in Khmer, of course, where the glottal stop has been retained when prefixation has taken place, e.g. *op* /ʔaop/ 'to hold by putting the arms round' > *ph-op* /phʔaop/ 'to brace tightly together'.) This suggestion, which may account for some instances, would not, however, cover all cases since we could not assume that all bases originally had initial glottal stop.

It seemed that far more occurrences were to be found than could be accounted for by either of these ways and I decided to try to investigate the origin of the VF relationship. My procedure was to examine, using some lists of words collected over many years, all the acceptable Khmer VF sequences and to extract examples of groups of words which have the same VF, but not the same CVF, and similar meanings. Thus words related by affixation processes, e.g. words in which pre-vocalic /r/ infix might be present, were excluded and, as has already been stated, groups with suspiciously similar initial consonants were omitted. Wishing to be sure of the existence of a relationship rather than to proliferate examples, I omitted all groups unless at least three separate bases had been noted. It is interesting that some VF sequences produced more than one set of words. The VF *aeñ* /ʔaeŋ/ for example yielded a set of words having the meaning 'division' and a set of words having the meaning 'clarity'. However, personal judgement concerning similarity of meaning is involved here and the choice of a translation may be used, even unconsciously, to persuade the writer as well as the reader. The two *aeñ* sets, for example, might easily seem to have associated meanings: 'to divide; set out (as if for analysis) separately' and 'to set out clearly'. Thus difficulty arose sometimes about the inclusion of some words in a given set. Was it right, for example, to add to the *uol* group (set 18), which carry the meaning 'choking, upset' the words *muol* /mùəl/ 'to twist v.tr.; dysentery'? I decided that the meanings are separate, the group meaning 'heaving agitatedly' and *muol* meaning 'to turn round and round' but the decision is personal and arbitrary. I have listed, in Appendix A, 35 sets of words for consideration. The examples have for the most part the form CVF, the simplest Khmer word-form, and involve every Khmer initial consonant except /n/ and all except three of the final consonants.[4] In order to present all my relevant material, I have added in Appendix B the groups for which I found only two examples.

With the aim of explaining the similarity of the VF sequence in these sets of words, I first tried a traditional approach and asked the question: are the CVF forms, after all, the irreducible roots or bases we always think them to be or might they be analyzable into parts? Could there be a stem or root which is not CVF but VF, even though this would mean assuming

that all consonants, except possibly /n/, may precede such stems? In support of this idea we may first note how easily a different initial consonant may be substituted in the formation of reduplicative words in Khmer, Khasi, Bahnar and Ngeq, to name just a few languages. The following are examples from Khmer:

pan' /bɔn/ 'to pray for something > pan' sran' /bɔn-srɔn/ id.
maen /mɛːn/ 'actual' > maen daen /mɛːn-tɛːn/ 'really'
rāy /rìːəy/ 'scattered' > rāy māy /rìːəy-mìːəy/ 'littered about'

In fact Mon-Khmer initial consonants and clusters generally may be said to be highly subject to change while the VF sequence tends to remain intact. It is indeed due to the stability of the VF sequence in Khmer, as I have suggested in a recent article (Jacob 1979:119), that the interpretation of unfamiliar reduplicatives, for example in poetry, is possible at all. It sometimes happens that one VF sequence is the only recognizable part of the word, even to a Cambodian. Thus the word *krañev krañoeñ* /krəneːv-krənaəɲ/ is to be understood by looking for another word with final *oeñ*. This is found in the word *kamñoeñ* /kɔmɲaəɲ/ 'threatening'. Definitions of words in the Cambodian Dictionary, *Vacanānukram khmaer*, also indicate the meaningfulness of the VF sequence. The definition, for example, of *jraek* /crɛːk/ 'to infiltrate, enter through curtains, creepers, etc.' is given by using three others words with VF *aek: jaek vaek; ñaek cūl* /cèːk vèːk; ɲèːk coːl/ 'to part (some obstruction) and make a way through; to put aside (so as to) enter'. It seemed reasonable to conclude, therefore, that definite meaning may be attached to the VF sequence. However, though it has not, I think been stated categorically by anyone, the Mon-Khmer root is generally held to have the form CVF as its minimum and, in any case, even if the VF sequence were the root, the same difficulty would arise as Jenner's suggestion would entail, that of presupposing that almost every Khmer initial consonant is a prefix. It seemed best therefore, not to think of the VF sequences as roots but simply to bear in mind that this part of the word did seem to have the potentiality of carrying the meaning when other parts of the word underwent change.

I then took another line of enquiry, also based on established methods of grammatical analysis. Was it possible that the similarity of vowel was accidental in such groups of words and that the final consonant was a suffix? There is some slight evidence for suffixation in Khmer, as is well known, and as the following examples suggest:

lā /lìːə/ 'to part company' lāt /lìːət/ 'to open out v.tr.'
ghlā /khlìːə/ 'to be separated' ghlāt /khlìːət/ id.
roe /rɤ̀ː/ 'to sift through' roes /rɤ̀ːh/ 'to choose'
loe /lɤ̀ː/ 'above' loek /lɤ̀ːk/ 'to raise'
loeṅ /laəŋ/ 'to rise, climb'
loes /lɤ̀ːh/ 'over and above, exceeding'

Henderson found in Khasi some examples of final consonant variation associated with meaning (1976a:508-9). The Khmer lexicon provides many examples of words having final /p/ and the meaning 'pressing upon' (See A, sets 1, 2, 25 and 34); having final /m/ and the meaning 'closure' (see A, sets 14 and 35) or having final /k/ and the meaning 'breaking away' (see A, sets 4 and 28). However there is also a connection in meaning between words having homorganic plosive and nasal final consonants, for example between /p/ and /m/ (see A, sets 34 and 35 where all examples have a meaning associated with 'encirclement') and between /k/ and /ŋ/ (see A, sets 28 and 29 where the meaning of 'separation' is involved). I had also noticed some pairs of words with similar meaning of which one had a plosive final consonant and the other the homorganic nasal consonant, e.g.:

ṭak	/dɔːk/	'to pull out, uproot'	ṭaṅ	/dɔːŋ/	'to draw water'
yok	/yòːk/	'to sway'	yoṅ	/yòːn/	'to haul up on a rope'
naep	/nɛ̀ːp/	'next to'	ŝaem	/sɛ̀ːm/	'to add on top'
ap	/ʔɔːp/	'to fix a splint'	am	/ʔɔːm/	'to flank'

All this suggested not the suffix which bears grammatical meaning but an association between the actual sound or point of articulation of the final consonant and the meaning. And, in any case, the sets involve ten final consonants, and one really cannot postulate so many suffixes with so few examples of each, quite apart from the question: to what would these consonants be suffixed?

A little research into the Khmer lexicon soon revealed that vowel nuclei too may be associated with meaning. The following examples illustrate that o /ao/ may be associated with the idea of 'curving', ā /aː ~ ɨːə/ with that of 'spreading' and oe /aə ~ ɤ̀ː/ with that of 'being or feeling above others':

koṅ /kaoŋ/	'bent'	poṅ/paoŋ/	'inflated'
on /ʔaon/	'to bow'	op /ʔaop/	'to hold with arms around'

cay /caːy/	'to spend'	ṭāp/ daːp/	'to seep'
bās /pìːəh/	'throughout'	rāl /rìːəl/	'to spread'

oet /ʔaət/	'to raise one's head'	ṅoep /ŋɤ̀ːp/	id.
kantoey /kɔntaəy/	'uncaring'	khboem /khpɤ̀ːm/	'to despise'

Thus it looked as though the explanation of the relationship between the vowel nuclei and final consonants of the individual sets was that it was due to sound symbolism, not to grammatical construction. The words in the 35 sets had not been chosen for any phonaesthetic properties they might have; they had been collected entirely because they had the same VF sequences and similar meaning. Arriving, therefore, at the conclusion that these features must be iconic, I looked eagerly to see what kind of word, plain or expressive, was involved. It was interesting to find that most of them are

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not expressive words and are of one grammatical category, that of verbs. The nine exceptions are nouns. Surprisingly, however, the lists include more operative verbs (83) than stative (39). The occurrence of phonaesthetic features in Khmer must, then, be regarded as a continuum, ranging from nouns and operative verbs to the more consciously expressive vocabulary. Grammatically, too, there is no hard and fast line between them, in contrast to what occurs in Semai, as shown by Diffloth 1976:255-56.[5]

In support of the conclusion which we are now making, namely that iconicity may be found throughout the Khmer lexicon, other work on Austroasiatic languages may be cited. Iconicity in Mon-Khmer languages has been discussed by Henderson 1965:462, 1976a:513-16, 1976b:533-37, Diffloth 1972, 1976, 1979, Shorto 1973, Gorgoniev 1976 and Rabel–Heymann 1976. Taken as a whole their work has been concerned more with expressive than plain vocabulary and more with initial consonants and vowel alternation than with VF sequences but Shorto has discussed iconic traits in prosaic (to use Diffloth's term for non-expressive) words (1973:375,381) and Diffloth has shown (1979:56-57) that in Semai not only may an initial consonant such as /w/ be associated with meaning but also final consonants. E.g. final /p/ gives the meaning 'wide and heavy' (not the same meaning as in Khmer!), final velar plosive suggests 'abruptness' and final palatal consonants indicate 'flexibility'. The most detailed work on Khmer sound symbolism is that of Gorgoniev. He devised a system of analysis which may be applied either to reduplicative words or to phonaesthetic vocabulary in general, extracting meaningful sounds from families of words of related meaning, e.g.

prāñ	/praːɲ/	'dense'	-aːɲ		
skāñ	/skaːɲ/	'thick (of hair)'	-aːɲ,	s...ɲ	
smuñ	/smoɲ/	'tangled (of wool or hair)'	-aːɲ,	mo,	sm
smuy	/smoy/	'matted'		mo,	sm
suy muy	/soy-moy/	'untidy and tousled'		mo	

Diffloth has also been working on parts of words. He has described expressives as having no homogeneous root but as being composed of phonological features which are meaningful components. He also suggests (1976:261) in connection with expressives that we should be prepared to find roots decomposed and to discard conventional notions of root and morphology. It seems to me that such treatment may be necessary in Khmer in the prosaic as well as in the expressive lexicon. How are we to refer to the members of Set 29? It seems we must say they are historically unrelated roots having a morpheme in common. The morpheme consists of a sequence of vowel and final consonant which by sound symbolism means 'dividing'. If these words are to be regarded as roots and as unrelated, how did it come about that they share the same morpheme? Were they separately formed, created by mimicry in the spontaneous fashion in which reduplicatives are created?

Shorto showed (1973) that despite the immense variety of vowels to be found in Mon-Khmer phonaesthetic vocabulary, the laws of phonetic change were observed. He quoted Jespersen's declaration that, whenever phonaesthetic factors favour one of a pair of competing synonyms or conflicting homophones, the word favoured by its sounds is likely to be retained. May we perhaps imagine, then, two further processes: first, certain roots (CVF), already retained by choice for chance phonaesthetic qualities, were the subject of much spontaneous reduplicative word-building (of which much may have now disappeared) which would help to instil the notion that, for example, /aek ~ ɛ̀ːk/ was to be associated with the idea of 'division'; second, the development of the meaning of other roots which happened to have VF /aek ~ ɛ̀ːk/ may have been influenced, owing to the meaningfulness of their VF sequence to speakers of the language. This kind of process may, I suggest, account for the 35 sets of words.

Appendix A

Sets consisting of at least three words, not related by processes of affixation, having the same sequence of vowel nucleus and final consonant and comparable meaning.

1.	ap	/ʔɔːp/	'to flank'
	prap	/prɔːp/	'next to'
	khlap	/khlɔːp/	'flattened against'
2.	ap'	/ʔɔp/	'to enclose and perfume'
	yap'	/yùp/	'night, dark'
	lap'	/lùp/	'to cover over, efface'
3.	lā	/lìːə/	'to part company'
	trā	/traː/	'everywhere, spread about'
	hā	/haː/	'to open (especially of the mouth)'
4.	cāk	/caːk/	'to depart from'
	lāk	/lìːək/	'to leave, turn from'
	ṅāk	/ŋìːək/	'to turn away from'
5.	caṅgrāṅ	/cɔŋkrìːəŋ/	'lying on the back with limbs up in the air'
	crañāṅ	/crəŋraːŋ/	'lying athwart'
	sradāṅ	/srətìːəŋ/	'lying stretched out'
	traṭāṅ	/trədaːŋ/	'to stretch (e.g. arms), spread out (e.g. map)'
6.	ṭāp	/daːp/	'to seep'
	dāp	/tìːəp/	'low-lying'
	rāp	/rìːəp/	'lying flat'

7. cāy   /caːy/   'to spend'
    rāy   /rìəy/   'scattered'
    sāy   /saːy/   'to diffuse v.intr.'

8. ṭāl   /daːl/   'to spread, rage (of fire)'
    rāl   /rìəl/   'to spread (of disease)'
    vāl   /vìəl/   'plain n.'

9. āk'   /ʔak/   'hindered'
    cāk'   /cak/   'to stab; knit'
    dāk'   /tèək/   'to be caught up in'
    p̈āk'   /pak/   'to embroider'
    bāk'   /pèək/   'to hang on v.tr., wear'

10. āṃṅ   /ʔaŋ/   'to roast, hold up to a fire'
    pāṃṅ   /baŋ/   'to place as a screen'
    rāṃṅ   /rèəŋ/   'to screen'
    vāṃṅ   /vèəŋ/   'enclosure, palace'

11. kit   /kɤt/   'to follow closely'
    jit   /cùɪt/   'near'
    ṭit   /dɤt/   'to be close against'
    pit   /bɤt/   'to put close, to close'

12. dhṃiṅ   /thmùɪŋ/   'taciturn'
    raṃbiṅ /rùmpùɪŋ/   'to ponder'
    sañjiṅ /sɔncùɪŋ/   'to brood upon'

13. tpul   /tbol/   'to advance gradually'
    trasul   /trəsol/   'to find a way into (e.g. a heap of chaff)'
    mamul   /məmùl   'to make a great effort to find a way into'
    rul   /rùl/   'to creep forward, crawl up'

14. krabuṃ   /krəpùm/   'bud n.'
    juṃ   /cùm/   'a going round, a gathering'
    muṃ   /mùm/   'angle, corner n.'
    ruṃ   /rùm/   'to wrap round'
    ĥum   /hùm/   'to hold something round (a person) as a screen'

15. ūs   /ʔoːh/   'to drag along the ground'
    gūs   /kùːh/   'to scratch, draw a mark'
    rūs   /rùːh/   'to scratch, file'

16. kraluoc /krəluːəc/ 'high-pitched'
    sruoc   /sruːəc/   'pointed'
    huoc   /huːəc/   'to whistle'

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17. juot   /cùːət/   'to wrap up the head'
    buot   /pùːət/   'to join in helping'
    ruot   /rùːət/   'layer n.'

18. uol   /ʔuːəl/   'to choke'
    ktuol   /kduːəl/   'to choke with suffering'
    khsuol   /khsuːəl/   'to sob'
    raṃjuol   /rùmcùːəl/   'turbulent (of wind, sea, feelings)'

19. toek   /taək/   'to move slightly'
    bhloek   /phlɤ̀ːk/   'sluggish'
    voek   /vɤ̀ːk/   'to move sluggishly'

20. ghñoec   /khɲɤ̀ːc/   'jerking'
    ghvoec 2   /khvɤ̀ːc-khvɤ̀ːc/ 'to limp'
    bhoec   /phɤ̀ːc/   'to snatch away'

21. andoet 2   /ʔɔntɤːt-ʔɔntɤːt/ 'on tiptoe'
    oet   /ʔaət/   'to raise the head to look, stretch
                               the neck'
    ñoet   /ŋɤ̀t/   'to raise the head'
    joet   /cɤ̀ːt/   'to hold up (e.g. shadow-puppets) and
                               control movements'

22. khboem   /khpɤ̀ːm/   'to disdain'
    kramoem   /krəmɤ̀ːm/   'grand'
    saṃpoem   /sɔmbaəm/   'impressively large'

23. caṃhīen   /cɔmhiəŋ/   'half of a spherically shaped object,
                               profile'
    jrīeń   /crìəŋ/   'sloping (re style of handwriting)'
    mīeń   /mìəŋ/   'sideways (of a glance)'
    ralīeń   /rəliəŋ/   'sloping slightly'
    l-īeń   /lʔiəŋ/   'inclining to one side, partial'

24. cań-īet   /cɔŋʔiət/   'constricted'
    cīet, crīet /ciət, criət/ 'to insert'
    pīet   /biət/   'to press'
    sīet   /siət/   'to insert'

25. kīep   /kìəp/   'to nip'
    dīep   /tìəp/   'close upon'
    hīep   /hiəp/   'about to'

26. kīes   /kiəh/   'obliquely (of reference)'
    cīes   /ciəh/   'to avoid'
    bhīes   /phìəh/   'to slip away unnoticed'

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27. eḥ	/ʔeh/	'to scratch oneself'
keḥ	/keh/	'to scratch, lift with a finger'
peḥ	/beh/	'to pluck'

28. caek	/caek/	'to divide'
jajaek	/cəcèːk/	'to dispute'
ñaek	/ɲɛ̀ːk/	'to part v.tr.'
paek	/baek/	'to break'
p̈aek	/paek/	'part, party'
prakaek	/prəkaek/	*'to argue against'*
braek	/prɛ̀ːk/	'paired, forked; tributary'
maek	/mɛ̀ːk/	'branch n.'
raṃlaek	/rùmlɛ̀ːk/	'to split into parts v.tr.'
vaek	/vɛ̀ːk/	'to put on one side out of the way'
haek	/haek/	'to tear to pieces'
ḷaek	/laek/	'different, at variance'

29. kandhaeṅ	/kɔnthɛ̀ːŋ/	'spread apart'
khjaeṅ	/khcɛ̀ːŋ/	'to spread arms or legs'
caṃdaeṅ	/cɔmtɛ̀ːŋ/	'to take long strides'
jraeṅ	/crɛ̀ːŋ/	'to stand astride'
lvaeṅ	/lvɛ̀ːŋ/	'compartment, room'

30. caeṅ	/caeŋ/	'to give an account of'
thlaeṅ	/thlaeŋ/	'to set out clearly in words'
daeṅ	/tɛ̀ːŋ/	'in *cpās' daeṅ* /cbah tɛ̀ːɲ/ 'very clear'
staeṅ	/sdaeŋ/	'clear, manifest'

31. kaem	/kaem/	'to reinforce'
thaem	/thaem/	'to add'
ŝaem	/sɛ̀ːm/	'to add on top'

32. jhoṅ	/chòːŋ/	'to hold out one's hand'
toṅ	/taoŋ/	'to hang on to'
doṅ	/tòːŋ/	'swing n.'
yoṅ	/yòːŋ/	'to draw up at the end of a rope'
raṇoṅ	/rənaoŋ/	in *raṇaeṅ raṇoṅ* /rənaeŋ-rənaoŋ/ 'to hang in disarray'

33. tramoc	/trəmaoc/	'isolated'
lanloc	/lùənlòːc/	'melancholic'
sraṅoc	/srəŋaoc/	'nostalgic'

34. op	/ʔaop/	'to hold by putting the arms around'
krasop	/krəsaop/	'to put the arms around, embrace'
ktop	/kdaop/	'enclosed (especially in closed hands)'
bop	/pòːp/	'to climb a pole or tree'

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35. com   /caom/   'to surround'
    rom   /rɔːm/   'to encircle'
    ḷom   /laom/   'to ambush, overwhelm, by force'

Appendix B

Examples consisting of pairs of words, not related by processes of affixation, having the same sequence of vowel nucleus and final consonant and comparable meanings.

gaṅ	/kɔːŋ/	'to rest (one long thing) on another'
roṅ	/rɔːŋ/	'to support; deputise'
ṅap'	/ŋùp/	'bowed in sorrow'
jrap	/crùp/	id.
nāc	/nìːəc/	'to ebb'
sāc	/saːc/	'to splash over'
rān	/rìːən/	'platform, verandah'
sbān	/spìːən/	'bridge'
rāp	/rìːəp/	'low-lying, flat'
dāp	/tìːəp/	'low, not tall'
ṭās	/daːh/	'widespread'
bās	/pìːəh/	id.
sralaḥ	/srəlah/	'clear of obstruction'
jraḥ	/crèːəh/	'clean'
knuṅ	/knoŋ/	'in'
druṅ	/trùŋ/	'cage'
cuḥ	/coh/	'to go down'
ruḥ	/rùh/	'to fall off (of leaves, petals, etc.)'
khūṅ	/khoːŋ/	'sunken, hollowed'
sralūṅ	/srəloːŋ/	'very deep; very high'
poeṅ	/paəŋ/	'to float in the air'
ḷoeṅ	/laəŋ/	'to rise, climb'
coes	/caəh/	'bloated'
loes	/lɤ̀ːh/	'exceeding, over and above'
kīek	/kiək/	'to tuck into the folded elbow'
klīek	/kliək/	'armpit'

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aep	/ʔaep/	'next to'
naep	/nɛːp/	id.
jor	/còː/	'to flood'
bor	/pòː/	'to brim over'
pol	/baol/	'to gallop'
drol	/tròːl/	'to stampede'

Notes

[1]All Khmer vocabulary is given first in the Lewitz 1969 transliteration and second in my 1968 transcription.

[2]Vowel nuclei which are spelt the same and differ only because they are on different registers have been regarded as equivalent for the purpose of the present study since it may be assumed that before the divergence of the two registers they would have been pronounced the same.

[3]As Henderson mentioned in connection with a similar set of words in Khasi (1976a:494).

[4]I.e. all final consonants except/ɲ, n/ and /v/. It should be mentioned that inevitably many sets will have escaped my notice.

[5]Khmer expressive are *par excellence* reduplicative compounds. These are chiefly stative verbs of which the grammatical role is typically, though not exclusively, that of the post-positioned verb. However, this role is also fulfilled by non-expressive stative verbs.

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