

# SELEPET VERB MORPHOLOGY

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## 0. INTRODUCTION

In a recent article, Kenneth L. Pike has demonstrated the value of using matrix theory as "a tool for gaining insight into morphemic patterns of great complexity" (1963:1). Morphemes, which in the initial analysis were simply listed and memorised as complex units, were later shown to have significant internal patterning. This patterning was graphically displayed in matrices which indicated the formatives, the vectors and the categories. The formatives are phonological particles filling the cells of the matrix. The vectors are contrastive rows or columns in the matrix (e.g., columns indicating singular, dual and plural number). The categories are the meanings of emic vectors. The formative is relevant to phonology, the vector to grammar, and the category to semantics; the total being a form-meaning composite.

In an early treatment of Selepet verb morphology the writer concluded that the morphemes were of such complexity that they should be simply listed as portmanteau morphemes indicating person, number and tense and memorised as composites (McElhanon 1967a:21).<sup>1</sup> A list of data relevant to this paper is presented below with the verb root ari 'to go'.<sup>2</sup> The symbol â represents [ɔ].

§1 remote past tense (rpt) 'I went a long time ago' etc.

	S	D	P
1st person	ari-wan	ari-wit	ari-win
2nd person	ari-on	ari-owot	ari-wi
3rd person	ari-op	ari-owot	ari-wi

The rpt is made habitative by the occurrence of -mini preceding the above suffixes: ari-mini-wan 'I used to go' etc.

§2 immediate past tense (ipt) 'I recently went' etc.

	S	D	P
1st person	ari-an	ari-ait	ari-ain
		-it	-in
2nd person	ari-at	ari-awot	ari-ai
3rd person	ari-ap	ari-awot	ari-ai

The ipt is made habitative or prohibitive by the occurrence of -m preceding the above suffixes: ari-m-ap 'He always goes' or 'He should not go'.

§3 inceptive future tense (icft) 'I am about to go' etc.

	S	D	P
1st person	ari-woman	ari-româit	ari-nomâin
2nd person	ari-womat	ari-româiwot	ari-nomâi
		-romawot	-nomai
3rd person	ari-womap	ari-româiwot	ari-nomâi
		-romawot	-nomai

§4 delayed future tense (dft) 'I will soon go' etc.

	S	D	P
1st person	ari-womosan	ari-romosait	ari-nomosain
		-romosit	-nomosin
2nd person	ari-womosat	ari-romosawot	ari-nomosai
3rd person	ari-womosap	ari-romosawot	ari-nomosai

§5 immediate future tense (ift) 'I will go, you will go, you must go' etc.

	S	D	P
1st person	ari-wom	ari-rom	ari-nom
2nd person	ari-wuat	ari-romawot	ari-nomai
3rd person	ari-wuap	ari-romawot	ari-nomai

§6 remote future tense (rft) 'I will go in the distant future' etc.

	S	D	P
1st person	ari-wiom	ari-wioit	ari-wioin
		-wieit	-wiein
2nd person	ari-wion	ari-wiowot	ari-wioi
			-wiei
3rd person	ari-wiop	ari-wiowot	ari-wioi
			-wiei

§7 future tense, habitative (hbt) *'I will always go'* etc.

	S	D	P
1st person	ari-bisâm	ari-bisâit	ari-bisâin
2nd person	ari-bisân	ari-bisâwot	ari-bisâi
3rd person	ari-bisâp	ari-bisâwot	ari-bisâi

§8 desiderative (desid) *'I want to go'* etc.

	S	D	P
1st person	ari-wesâman	ari-resâmait	ari-nesâmain
2nd person	ari-wesâmat	ari-resâmawot	ari-nesâmai
3rd person	ari-wesâmap	ari-resâmawot	ari-nesâmai

In addition to the above forms the desiderative may evidence labialisation after the m: [a<sup>h</sup>ribesəm<sup>h</sup>an] etc.

§9 contrary-to-fact (ctf) *'I should have gone'* or *'I might go'* etc.

	S	D	P
1st person	ari-bâm	ari-bâit	ari-bâin
2nd person	ari-bât	ari-bâwot	ari-bâi
3rd person	ari-bâp	ari-bâwot	ari-bâi

§10 inchoative future (if) *'I must go! You go! Let him go!'* etc.

	S	D	P
1st person	ari-we	ari-re	ari-ne
2nd person	ari-∅	ari-yet	ari-ŋet
3rd person	ari-âk	ari-yet	ari-ŋet
	-ek		

Allomorph -ek follows vowels a and â and allomorph -âk follows vowels i, e, o, u and consonants.

§11 permissive (perm) *'You may go'* etc.

	S	D	P
2nd person	ari-wot	ari-welon	ari-wion

§12 dependent heteropersonal (hetero) *'I went and...(someone else)...'*  
etc.

	S	D	P
1st person	ari-mune	ari-mutŋe	ari-munŋe
2nd person	ari-râ	ari-mutâ	ari-ŋetâ
3rd person	ari-mu	ari-mutâ	ari-ŋetâ

§13 The dependent homopersonal (homo) forms are: {-mâ} punctiliar and -ma habitative. The morpheme {-mâ} has two allomorphs: -mâ following consonants and -m following vowels. Examples are: ek-mâ kinsap 'He stood and looked'; sâ-m kinsap 'He stood and spoke'; sâ-ma kinsap 'He stood and spoke continually'.

A simple comparison of the forms did not yield any clearly segmentable morphology with separate forms indicating tense, person or number. E.g., comparing (ipt) and (rpt) 1.s suggested -w as rpt and -∅ as ipt; comparing (ipt) and (rpt) 2.s presented no basis for segmentation; comparing (ipt) and (rpt) 3.s yielded -a as ipt and -o as rpt. A comparison of (ipt) and (ift) 1.s yields no basis for segmentation whereas (ipt) and (ift) 2.s and 3.s presents -wu ift and -∅ ipt as possibilities. Adding (icft) and (dft) singular forms to the comparison suggests -wom as icft and -womos as dft. The comparison of dual and plural forms, however, only adds to the complexity of the analysis. Although recurrent partials were recognizable, no consistent linear ordering of slots marking tense, person and number was discernible. It was not until the writer applied matrix theory and considered each paradigm as a matrix with row vectors and column vectors possibly manifesting allo-formatives, that the morphology became clear. This paper, it is hoped, will attest to the usefulness of matrix theory in morphemic analysis.

## 1. INDEPENDENT VERB PERIPHERY

### 1.1. Benefactive tagmeme

The first order suffix is filled by the bound benefactive pronouns:

	S	D	P
1st person	-nihi	-nitki	-ningi
2nd person	-gihi	-yitki	-yingi
3rd person	-wagi	-yitki	-yingi

ot-nihi-ap 'He did it for me.'  
do-for me-he

puluwu-wagi-wi 'They bought it for him.'  
buy-for him-they

ari-yitki-op 'He went for them(du).'  
go-for them-he

tuhu-yingi-wi 'They did it for them(pl).'  
do-for them-they

1.2. The second order suffix is filled by morphemes indicating -mini habitative (see §1), -m prohibitive or habitative (see §2). Other morphemes indicating mode appear to be fused forms and are analysed in the course of this paper.

1.3. The remainder of the periphery, those forms listed in paradigms 1-13, consists of fused forms indicating tense, person and number.

1.3.1. The paradigm which appears to be the simplest is *ipt* (§2). The formative -a occurs throughout the matrix as a third order morpheme and may be tentatively assigned the meaning *immediate past tense*.<sup>3</sup> One may posit a zero allomorph occurring in 1.d and 1.p. This leaves the following forms indicating person and number:

	S	D	P
1st person	-n	-it	-in
2nd person	-t	-wot	-i
3rd person	-p	-wot	-i

1.3.2. The paradigm indicating *rpt* (§1) may now be compared. Comparison of other paradigms is not as fruitful. It is immediately evident that most forms already tentatively identified as indicating person and number may be separated. Only -n 2.s is apparently different. This leaves the formatives indicating *rpt* in a clearly discernible L pattern opening to the lower left:

-wa	-w	-w
-o	-o	-w
-o	-o	-w

The irregularity of the formative -wa causes us to re-evaluate our analysis of the formatives indicating person and number. If we posit the morpheme division of -wan (§1) as -w and -an we resolve this irregularity. The new formative indicating 1.s is -an. This does not conflict with the realised form indicating 1.s in *ipt* (§2) because of a phonological rule which states that "when two like vowels come into conjunction they reduce" (McElhanon 1967b:18). Thus *ari-a-an* (*go-ipt-I*) is realised as *arian* 'I went'.

1.3.3. The person-number composites are easily separable in the *rft* (§6) and *hbt* (§7). The morph -m 1.s may be added to the inventory of person-number morphemes. The forms not yet analysed are: -wio future tense, punctiliar mode and -bisâ future tense, habitative mode. Continued investigation of these forms does not yield any further morphemic divisions. One may assume, however, that mode precedes tense

on the basis of the forms *-mini*, *-m* habitative mode occurring as second-order suffixes (§1, §2).

1.3.4. In comparing the forms of *ctf* (§9), one may again separate the person-number morphemes and identify *-bâ* **contrary-to-fact mode**. There is no occurrence of a tense morpheme with this mode. Time is indicated by the occurrence of a filler in the time slot of the clause.

*mukan ari-bâ-p* 'He should have gone yesterday.'  
*yesterday go-should have-he*

*hâdâhen ari-bâ-p* 'He might go tomorrow.'  
*tomorrow go-might-he*

In anticipation of further analysis, a summary of the description thus far is given in Chart A. The term **non-immediate future verb** is used to describe the suffixal structure.<sup>4</sup>

#### CHART A

##### Non-immediate Future Verb

+ nucleus ± bene. prn.	+ mode	+ tense	+ person-number						
			1.s	2.s	3.s	1.d	2-3.d	1.p	2-3.p
-mini habit. -∅ punct.	-w,-o rpt	-an		-n					
-m habit. prohib. -∅ punct.	-a,-∅ ipt		-t	-p	-it	-wot	-in	-i	
-bâ ctf		-m							
-bisâ fut.habit. -wio,-wie fut.punct.			-n						

The chart above is intended to illustrate the co-occurrence restrictions amongst the suffixes. The allomorph *-an* 1.s occurs with past tenses; allomorph *-m* occurs elsewhere. The allomorph *-t* 2.s occurs with *ipt* and *ctf* only; allomorph *-n* occurs elsewhere. Allomorphs *-w* *~* *-o* *rpt* are phonologically conditioned; *-w* precedes vowels, *-o* precedes consonants.<sup>5</sup> Allomorph *-a* *ipt* occurs with all person-number forms;  $\emptyset$  occurs only with 1st person, dual and plural forms. The remaining person-number suffixes have no co-occurrence restrictions.

1.3.5. A comparison of *ift* (§5) yields striking dissimilarities between its structure and the structure of the Non-immediate future verb. Person-number suffixes indicating 2nd and 3rd person (see 1.3.1.) may be easily isolated. Note, however, that in the first person the forms distinguishing singular, dual and plural are respectively *-w*, *-r* and *-n*. These forms carry on through the 2nd and 3rd persons. First person is indicated by  $\emptyset$  but there is no ambiguity regarding number because of the separate forms indicating number. Chart B presents the structure of the Immediate future verb.

#### CHART B

##### Immediate Future Verb

+ nucleus ± bene. prn.	+ number	+ tense-mode (ift)	+ person-number
	-w sg.	-om	$\emptyset$ 1st person
	-r du.	-ua	-t 2.s
	-n pl.		-p 3.s
		-oma	-wot 2-3.d
			-i 2-3.p

Co-occurrence restrictions are:  $\emptyset$  1st person occurs with *-om*; *-t* 2.s and *-p* 3.s occur with *-ua*; and *-wot* 2-3.d and *-i* 2-3.p occurs with *-oma*. Concord exists between the number indicated in the number slot and the number indicated in the person-number composites.

1.3.6. A comparison of *if* (§10) and *perm* (§11) reveals some similarities but also some unresolvable dissimilarities. The 1st person *if* forms resemble the 1st person *ift* forms since only the tense-mode marker *-e* is different. A comparison of the formatives indicating 2nd and 3rd

person in *if* with the formatives of the personal pronoun paradigm is illuminating. The personal pronoun paradigm is:

	S	D	P
1st person	nâ	net	nen
2nd person	gâ	yet	yen
3rd person	yâk	yâkyet	yâkyen

In the pronoun paradigm the formatives indicating person are: -n 1st person, -g 2nd person (occurring with singular number) and -y 2nd, 3rd person. The formatives indicating number are: -âk/-∅ singular (a tentative assignment of the assumption that the vowel is simply a part of syllable structure), -t dual and -n plural.<sup>6</sup>

It may be posited that in *if* (§10) the formative -y has taken on number marking significance, so that -y indicates dual, -ŋ indicates plural and -ek/âk/∅ indicate singular. The final -t may have taken on non-singular significance rather than specifically dual. The postulation of -y being an allo-formative of -r is not incongruous in light of the possibility of y and r being submembers of one phoneme in the proto-language (McElhanon 1968:9).

The *if* forms exhibit the structure of the Immediate future verb and the following morphemes may be added to the inventory: -∅/âk/ek singular, -y dual, -ŋ plural and -e *if*.<sup>7</sup>

1.3.7. The formatives of the *perm* (§11) are not clearly discernible. Number is evident in the l of -weloŋ dual. Perhaps a zero may be posited for plural as in -wi-∅-oŋ since zero may indicate plural in the person-number composites (see 1.3.11.).

1.3.8. The desiderative verb (§8) is analysed as a clause manifesting two embedded clauses and having the phonological characteristics of a word. The structure is:<sup>8</sup>

Desiderative = + inchoative future verb + sâ-m + ot- (in ipt)  
Verb in first person

Concord exists between the number indicated in the inchoative verb and the number indicated in ot- 'to do'. The inchoative future verb is an independent clause functioning as the object of the dependent verb sâ-m 'saying'. This dependent clause in turn functions as the object of the independent verb ot- 'to do'. The examples given below are written indicating grammatical structure rather than phonological unity as in paradigm (§8).

ari-we sâ-m o-a-an (go-must I, say-ing, do-ipt-I)  
'I want to go.'

ari-re sâ-m o-a-it (go-must we(du.), say-ing, do-ipt-we(du.))  
'We(du.) want to go.'

ari-re sâ-m o-a-wot (go-must we(du.), say-ing, do-ipt-you/they (du.))  
'You/they(du.) want to go.'

ari-ne sâ-m o-a-in (go-must we(pl.), say-ing, do-ipt-we(pl.))  
'We(pl.) want to go.'

ari-ne sâ-m o-a-i (go-must we(pl.), say-ing, do-ipt-you/they(pl.))  
'You/they(pl.) want to go.'

1.3.9. The inceptive future tense (§3) which indicates immediate intended action, is analysed as a clause manifesting an embedded clause as the object. It too has the phonological characteristics of a word.

Inceptive Future = + immediate future verb + ot- (in ipt)  
Tense Verb                      in first person

The verb ot- occurs in its contracted form o-. In singular forms of paradigm §3 the o- is lost. In dual and plural forms the o- and the following tense marker -a contract to form â. Some speakers, particularly younger people, replace 2nd and 3rd person, dual and plural forms with the corresponding ift (§5) forms. Concord exists between the number indicated in the immediate future verb and the number indicated in -ot.

ari-wom o-a-an (go-I will, do-ipt-I)  
'I am about to go.'

ari-wom o-a-t (go-I will, do-ipt-you)  
'You are about to go.'

ari-rom o-a-it (go-we(du.) will, do-ipt-we(du.))  
'We(du.) are about to go.'

ari-rom o-a-wot (go-we(du.) will, do-ipt-you/they(du.))  
'You/they(du.) are about to go.'

ari-nom o-a-in (go-we(pl.) will, do-ipt-we(pl.))  
'We(pl.) are about to go.'

ari-nom o-a-i (go-we(pl.) will, do-ipt-you/they(pl.))  
'You/they(pl.) are about to go.'

1.3.10. The delayed future tense verb (§4) has the same structure as the inceptive future tense verb (§3) except that *ot-* occurs in a non-contracted form. Note the morphophonemic rule  $t + s \rightarrow s$  which yields the forms *o-san*, *o-sat*, *o-sap* etc.<sup>9</sup> This construction is used to indicate intended action which will commence after a short delay. Concord exists between the number indicated in the immediate future verb and the number indicated in *ot-*.

<i>ari-wom o-sa-an</i>	( <i>go-I will, do-ipt-I</i> ) ' <i>I will soon go.</i> '
<i>ari-wom o-sa-t</i>	( <i>go-I will, do-ipt-you</i> ) ' <i>You will soon go.</i> '
<i>ari-rom o-sa-it</i>	( <i>go-we(du.) will, do-ipt-we(du.)</i> ) ' <i>We(du.) will soon go.</i> '
<i>ari-rom o-sa-wot</i>	( <i>go-we(du.) will, do-ipt-you/they(du.)</i> ) ' <i>You/they(du.) will soon go.</i> '
<i>ari-nom o-s-in</i>	( <i>go-we(pl.) will, do-ipt-we(pl.)</i> ) ' <i>We(pl.) will soon go.</i> '
<i>ari-nom o-sa-i</i>	( <i>go-we(pl.) will, do-ipt-you/they(pl.)</i> ) ' <i>You/they(pl.) will soon go.</i> '

1.3.11. The person-number composites may be analysed to indicate that the person-marking formative precedes the number-marking formative. This is immediately apparent in comparing *-it* 1.d with *-in* 1.p. The *t* marks dual and the *n* marks plural. We may posit that  $\emptyset$  marks singular.<sup>10</sup> The structure is + person + number and the formatives are:

	S	D	P
1st person	-an- $\emptyset$	-i-t	-i-n
2nd person	-t- $\emptyset$	-wo-t	-i- $\emptyset$
3rd person	-p- $\emptyset$	-wo-t	-i- $\emptyset$

## 2. DEPENDENT VERB PERIPHERY

The dependent verb, as the independent verb, has first-order benefactive pronoun suffixes. The remainder of the periphery consists of fused forms indicating mode, person and number. In paradigm §12, one may tentatively isolate *-mu* punctiliar mode as a second-order suffix. This leaves the remaining forms indicating person-number:

	S	D	P
1st person	-ne	-t $\eta$ e	-n $\eta$ e
2nd person	-râ	-tâ	- $\eta$ etâ
3rd person	- $\emptyset$	-tâ	- $\eta$ etâ

In accordance with the morphophonemic rules, vowel + d  $\rightarrow$  vowel + r and t + d  $\rightarrow$  t, these forms may be rewritten and a zero morpheme indicating singular added to form:

	S	D	P
1st person	- $\emptyset$ -ne	-t- $\eta$ e	-n- $\eta$ e
2nd person	- $\emptyset$ -dâ	-t-dâ	- $\eta$ et-dâ
3rd person	- $\emptyset$ - $\emptyset$	-t-dâ	- $\eta$ et-dâ

One may then posit the structure: + nucleus  $\pm$  bene. prn. + mode + number + person. The morphemes indicating person and number are: - $\emptyset$  singular, -t dual, -n or - $\eta$ et plural (compare the *if* forms §10 and 1.3.6.), -ne or - $\eta$ e first person, -dâ second person and - $\emptyset$  3.s (the distinction between second and third person in the dual and plural forms being neutralised).

### 3. CONCLUSION

One may question the value of such a solution. Would it not have been sufficient just to list the suffixes in the paradigmatic style and not attempt further analysis? For pedagogical purposes, of course, it may be preferable to simply list paradigms. But for thorough grammatical analysis and especially comparative grammatical analyses, it is necessary to go beyond such simple listings. Had the analysis been terminated with lists of paradigms, the grammatical analysis of the verb morphology would never have been completed.

In a tentative analysis of Mape verb morphology, the writer found similar apparently contrasting types of peripheral verb structure.<sup>11</sup>

(1) Immediate Future and Inchoative Future: + nucleus  $\pm$  bene. prn. + person + number + tense.

kpa-yare-ki-c-miq (kill it-for them(pl.))-1st per.-pl.-ift)  
'We(pl.) will kill it for them(pl.).'

kpa-yare-ki-c- $\emptyset$  (kill it-for them(pl.))-1st per.-pl.-if)  
'Let us(pl.) kill it for them(pl.).'

(2) Present, Immediate Past, Remote Future, Remote Inchoative:  
+ nucleus ± bene. prn. + mode + tense + person + number.

kpa-yare-e-go-be-ne-ŋ (kill it-for them(pl.)-habit.-?-1st per.-  
pl.-pl.)

'We(pl.) always kill it for them(pl.).'

kpa-yare-∅-go-be-ne-ŋ (kill it-for them(pl.)-punct.-?-1st per.-  
pl.-pl.)

'We(pl.) are killing it for them(pl.).'

kpa-yare-∅-∅-be-ne-ŋ (kill it-for them(pl.)-punct.-ipt-1st per.-  
pl.-pl.)

'We(pl.) killed it for them(pl.).'

kpa-yare-ie-go-be-ne-ŋ (kill it-for them(pl.)-rft-?-1st per.-pl.-  
pl.)

'We(pl.) will later kill it for them(pl.).'

kpa-yare-ine-∅-be-ne-ŋ (kill it-for them(pl.)-rif-?-1st per.-pl.-  
pl.)

'We(pl.) must later kill it for them(pl.).'

(3) Remote Past, Contrary-to-fact Past, Contrary-to-fact Future:  
+ nucleus ± bene. prn. + mode + person + number.

kpa-yare-∅-be-ŋ (kill it-for them(pl.)-factual past-1st per.-  
pl.)

'We(pl.) killed it for them(pl.) a long time ago.'

kpa-yare-no-be-ŋ (kill it-for them(pl.)-ctf.past-1st per.-pl.)

'We(pl.) should have killed it for them(pl.).'

kpa-yare-igo-be-ŋ (kill it-for them(pl.)-ctf.future-1st per.-pl.)

'We(pl.) might kill it for them(pl.).'

(4) Dependent Heteropersonal: + nucleus ± bene. prn. + mode +  
relative time + person + number.

kpa-yare-gu-ka-be-ne (kill it-for them(pl.)-habit.-simultan-  
eous-1st per.-pl.)

'While we(pl.) used to kill it for  
them(pl.)...'

kpa-yare-Ø-ka-be-ne	(kill it-for them(pl.))-punct.-simultaneous- 1st per.-pl.) 'While we(pl.) killed it for them(pl.)...'
kpa-yare-Ø-Ø-be-ne	(kill it-for them(pl.))-punct.-antecedent- 1st per.-pl.) 'After we killed it for them(pl.)...'
kpa-yare-gu-Ø-be-ne	(kill it-for them(pl.))-habit.-antecedent- 1st per.-pl.) 'After we used to kill/hit it for them(pl.)...'

(5) Dependent Homopersonal: + nucleus ± bene. prn. + mode + relative time.

kpa-yare-ku-c	(kill it-for them(pl.))-punct.-simultaneous) 'While killing it for them(pl.)...'
kpa-yare-ru-Ø	(kill it-for them(pl.))-punct.-antecedent) 'After killing it for them(pl.)...'
kpa-yare-gu-Ø	(kill it-for them(pl.))-habit.-antecedent) 'After continually killing/hitting it for them(pl.)...'

One may note that whereas Selepet manifests four contrasting structures of verb periphery, Mape manifests five. In the dependent forms Selepet manifests the order number + person and Mape manifests the reverse, i.e., person + number. The implications for typological and comparative work are obvious. As data in the other languages of the Huon Micro-phylum become available, one may expect a firm basis to be established for the application of structure statistics.<sup>12</sup>

## N O T E S

1. Data for this paper were gathered during the years 1964-68 while the writer was under the auspices of the Summer Institute of Linguistics and the Australian National University. The 5,500 Selepet-speaking people are located in the Kabwum Sub-district, Morobe District, Territory of New Guinea. The language belongs to the Western family of the Huon Peninsula Stock (see McElhanon 1969).

Analysis of the data was facilitated by use of a concordance of 25,000 words of text in the southern dialect of Selepet. This concordance was made on the IBM 1410 computer at the University of Oklahoma by the Linguistic Information Retrieval Project of the Summer Institute of Linguistics and the University of Oklahoma Research Institute, and sponsored by Grant GS-934 of the National Science Foundation.

Abbreviations used in this paper are: rpt - remote past tense; ipt - immediate past tense; icft - inceptive future tense; rft - remote future tense; hbt - future tense, habitative; desid - desiderative; ctf - contrary-to-fact; if - inchoative future; rif - remote inchoative future; perm - permissive; hetero - dependent heteropersonal; homo - dependent homopersonal; 1.s - first person singular; 2.s - second person singular; 3.s - third person singular; 1.d - first person dual; 2.d - second person dual; 3.d - third person dual; 1.p - first person plural; 2.p - second person plural; 3.p - third person plural; 2-3.d - second and/or third person dual; 2-3.p - second and/or third person plural; + - obligatory occurrence; ± - optional occurrence.

2. The suffixal forms given here occur only following vowels. The following morphophonemic rules provide alternate morphemic shapes: cons. + w → cons. + b, cons. + r → cons. + d.

3. This morpheme has an alternate form -sa following consonant-final fillers of the nucleus.

4. The nucleus is filled by either an intransitive verb root, e.g., ari 'to go', or a transitive verb stem. Transitive verb stems are divided into three classes on the basis of their occurrence with bound

object-pronoun allomorphs: e.g., *gâi-nek-sap* (*cut-me-he*) 'He cut me'; *pene-nihi-ap* (*join-me-he*) 'He joined me'; and *tân-noho-ap* (*help-me-he*) 'He helped me'. For further discussion see McElhanon 1967a:23-4.

5. This raises the interesting question posited by Pike and Erickson, 1964:212; "Emic matrices may prove to be subject to historical reconstruction and to occur in diachronic oscillation from approximations of simple toward ideal matrix, and from ideal toward simple matrix structures." As more data from languages related to Selepet become available, historical reconstruction of the phonological development of matrix patterns may indeed be possible.

6. The fact that  $\emptyset$  marks singular, *t* dual and *n* plural is readily apparent in an examination of the bound object-pronoun forms. Note the following first person forms taken from the bound object-pronoun paradigms:

	S	D	P
Class I	<i>ne-<math>\emptyset</math>-ek</i>	<i>ne-l-ek</i>	<i>ne-n-ek</i>
Class II	<i>ni-<math>\emptyset</math>-gi</i>	<i>ni-t-gi</i>	<i>ni-n-gi</i>
Class III	<i>no-<math>\emptyset</math>-go</i>	<i>no-t-go</i>	<i>no-n-go</i>

7. The designation **inchoative future** is preferred over the designation **imperative** because the idea of time is foremost. The English translation, however, is best represented by the English imperative.

8. Clues to the grammatical structure of the forms in paradigm 58 were gained from the analysis of dependent transforms of those forms and the analysis of forms of similar structure involving *ot-* in *rpt* or other verbs commutable with *ot-*. These transforms and the other forms have phonological characteristics of units larger than words.

<i>ari-we sâ-m ot-mâ</i>	( <i>go-must I, say-ing, do-ing</i> ) 'Wanting to go...' (actor in singular number)
<i>ne-be sâ-m ga-a-an</i>	( <i>eat-must I, say-ing, come-ipt-I</i> ) 'I came wanting to/in order to eat.'

9. See note 3.

10. See note 6. The occurrence of  $\emptyset$  and *-n* marking plural is also found in the nominal possessive-marking suffixes:

*-ne-n- $\eta$ e* 'ours(pl.)', *-ye- $\emptyset$ - $\eta$ e* 'yours/theirs(pl.)'.

11. The Mape language is 19 percent lexically related to Selepet (McElhanon 1969). The meaning of the morpheme **-go** occurring as a third-order suffix is not clear. A possible meaning is **non-past tense**.

12. For the technique of structure statistics, see Capell, 1962.

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