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PREFACE

This is the first of *Pacific Linguistics'* Series A volumes to appear under our new policy whereby volumes are edited by members of the Editorial Board or other invited persons. This policy has been adopted to make cataloguing, bibliographic referencing, and finding volumes in libraries simpler. In the past these features were complicated by the facts that (i) there were many subseries under Series A, and (ii) all contributors to a Series A volume were listed as its authors so that anyone wishing to consult an article in a volume had to know under which author the volume was catalogued in order to find the volume. Now volumes will be listed under the editor's name. In adopting this policy, however, it should be pointed out that the editor's duties will vary from one volume to another. In some cases the editor will have little more to do with the production of the volume than a member of the editorial board would do in connection with the publication of volumes in our other series. In other cases the editor will play a major role in the production of the volume, by soliciting papers and reworking contributors' articles. In any event, the editor will be a specialist in the field represented by the volume, and his/her role will be indicated in its preface or introduction. In the case of the present volume, the editor's tasks have in general been limited to those of an editorial board member.

Series A volumes will not be on specific themes. They will remain as they have always been – collections of individual papers. Any special thematic volumes will be published in Series C. We hope that this new policy will make life easier for our contributors, readers and other users.

TOM DUTTON

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A QUANTITATIVE PHONOLOGY OF MAI BRAT[1]

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Fonologi kuantitatif bahasa Mai Brat

Bahasa Mai Brat adalah salah satu bahasa yang terbesar di Irian Jaya. Bahasa itu digunakan oleh sekitar 22.000 orang. Kebanyakan tinggal di keliling danau Ayamaru di Kabupatan Sorong. Ucapan bahasa Mai Brat gampang bisa dijelaskan dengan teori *CV Phonology* yang diajari oleh Clements dan Keyser (1983) dan Clifton (1987). Menurut teori ini, hanya ada sembilan fonem Kontoid dan lima fonem vokoid. Tidak ada fonem /w/ atau /y/ karena bunyi itu bisa termasuk fonem /u/ dan /i/.

1. INTRODUCTION

This paper is a tentative description of the phonological structure of Mai Brat, a Papuan language in the West Papuan Phylum and Central Bird's Head Family. Ayamaru and Brat are other names commonly used for this language (Grimes 1984:398). This paper focuses on the dialect of Mai Brat spoken in the village of Kambuaya, subdistrict of Ayamaru, district of Sorong, province of Irian Jaya, Indonesia.

Currently there are approximately 22,000 speakers of Mai Brat, about 17,000 of whom live around the Ayamaru Lakes. Many other Mai Brat speakers now reside in the urban areas of Sorong, Teminabuan, Manokwari and Jayapura. Voorhoeve (1975) has described Mai Brat as having nine dialects, although we have so far only been able to determine four. The boundaries of these four generally coincide with the subdistrict boundaries of Ayamaru, Aitinyo, Aifat and Mare.

As indicated by the title, this analysis is a quantitative analysis. Beyond qualitative statements of the phonological structure of Mai Brat, frequencies for many aspects of the structure are provided with discussion. It is hoped that the quantitative aspect will provide additional validity for the analysis and potentially provide new objective tools for use in comparative linguistics. The analysis is based on a subset of the 23,945 words which occur in recorded Mai Brat texts, excluding Indonesian loan words and proper names. The texts come from a variety of discourse types including folklore, narrative and hortatory. The resulting lexical database consists of 1,911 unique words. Frequencies provided for any given phenomena in this paper represent the total number of occurrences of that phenomena in the entire database of unique lexical items.

Tom Dutton, ed. *Papers in Papuan linguistics,* No.1, 1-27.
Pacific Linguistics, A-73, 1991.

Brown, W.U. "A quantitative phonology of Mai Brat". In Brown, W., Fields, P., Jarvinen, L., Jones, L., Laycock, D., Roberts, J., Shelden, D., Shelden, H., Steinhauer, H., Watuseke, F. and Whitehead, C. editors, *Papers in Papuan Linguistics No. 1.*
A-73:1-27. Pacific Linguistics, The Australian National University, 1991. DOI:*10.15144/PL-A73.1*

2. STRESS AND THE PHONOLOGICAL WORD

The phonological word (also referred to as the lexical word in this paper) in Mai Brat is the domain of one stress. A word may consist of one to four phonetic syllables. Two-syllable words predominate, as may be seen in Table 1.

TABLE 1

SYLLABLES PER WORD	OCCURRENCE TOTAL	PERCENT
1	235	12.3%
2	1323	69.2%
3	327	17.1%
4	26	1.4%
	1911	

Stress is phonemic and can occur on any syllable of the word. The following contrastive examples demonstrate that stress is phonemic in Mai Brat. Glosses are given in English and Indonesian. Stress is indicated by ' before the stressed syllable.

/'nasom/	['nasom]	you carry	*engkau memikul*
/na'som/	[na'som]	your name is	*engkau bernama*
/'maru/	['maru]	she cuts	*dia (perempuan) memotong*
/ma'ru/	[ma'ru]	lake	*danau*
/'ana/	['anə]	they	*mereka*
/a'na/	[a'na]	fence	*pagar*
/mo'o/	[mo'o]	she itches	*dia (perempuan) gatal*
/'moo/	['moo]	she takes	*dia (perempuan) mengambil*

3. PHONOLOGICAL SYLLABLE

Figure 1 below gives phonemes found in Mai Brat. These segments will be justified later, in section 4.

	CONSONANTALS (C)				NON-CONSONANTALS (V)		
	Bilabial	Alveolar	Velar		-Back -Round	+Back -Round	+Back +Round
Stops	*b*	*t*	*k*	+High	*i*		*u*
Fricatives	*p*	*s*	*x*	-High	*e*		*o*
Nasals	*m*	*n*				*a*	
Flap		*r*					

FIGURE 1

The following syllable analysis uses the model presented by Clements and Keyser (1983). Central to that model is the claim that syllable structure is predictable, once syllable peaks (Vs) and non-peaks (Cs) are identified. In this section, following Clifton (1987), I will claim that all Vs and

Cs are predictable from surrounding segments and stress. The rigorous application of this model will show that there is no need to posit the semivowels /y/ and /w/ as separate underlying phonemes in Mai Brat since their occurrence is completely predictable under CV Phonology. This model also provides an excellent framework for understanding Extrasyllabic and Ambisyllabic segments, both of which are found in Mai Brat as will be discussed later in this section. Mai Brat has the following core phonetic syllable types: CV, V, CVC and VC. Vb sequences are not allowed in Mai Brat syllables as symbolised by the Negative Syllable Structure Condition (NSSC) given below, where the Greek sigma σ represents a single syllable and the distinctive features are those described in section 4.1 below.

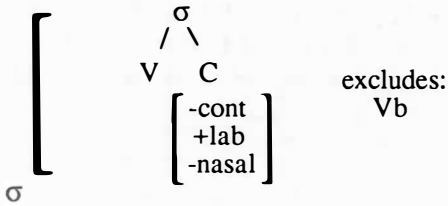
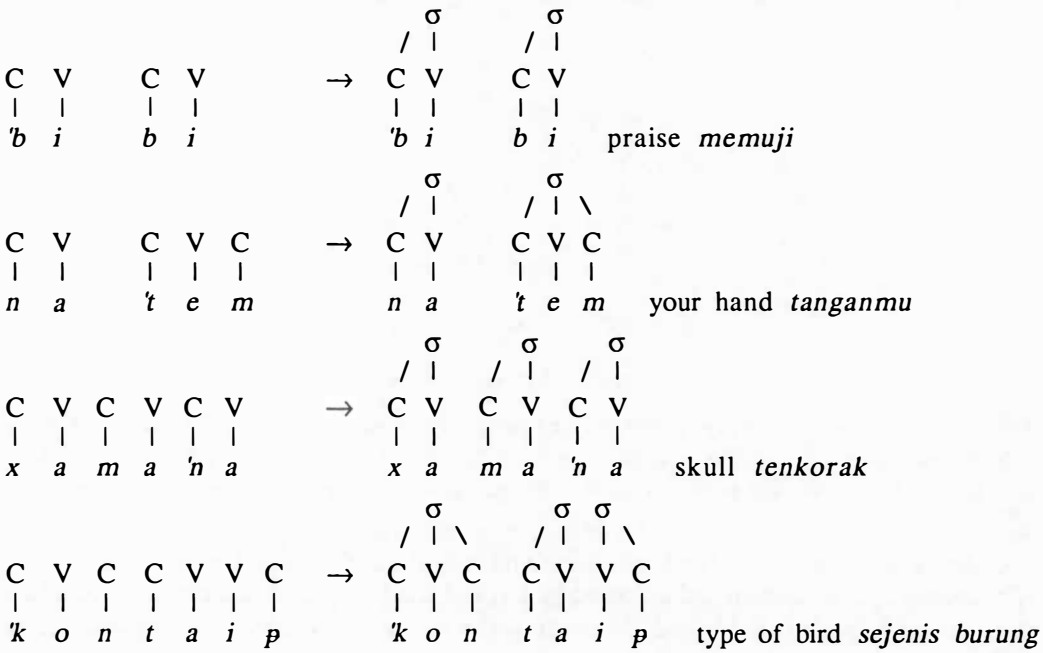


FIGURE 2

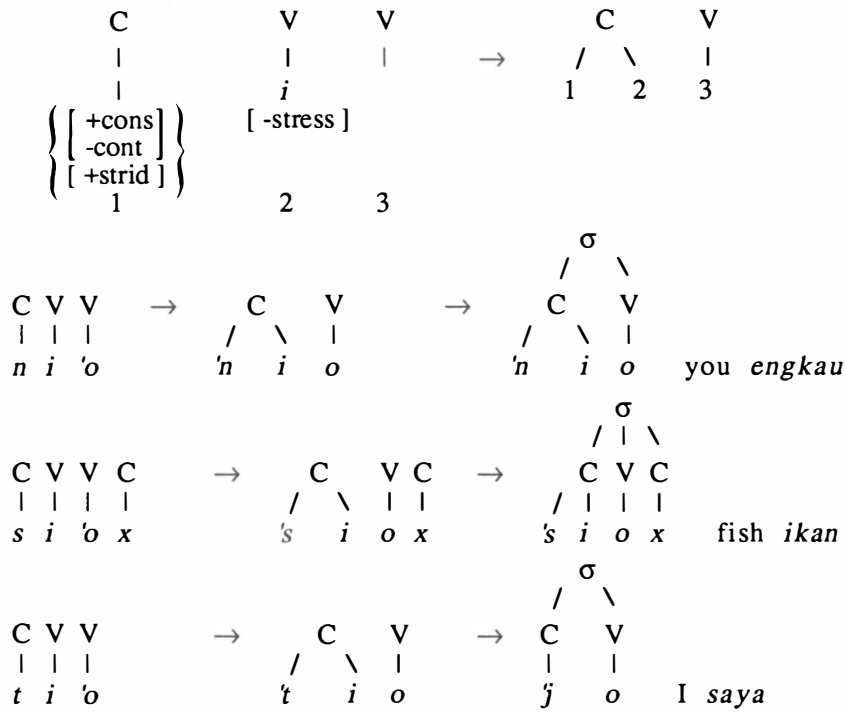
Using Clements and Keyser's interpretation of the 'Onset First Principle' the following examples show that syllabification in Mai Brat is predictable. To begin the process of identifying syllable peaks and non-peaks, all consonantals are assumed to be Cs and all non-consonantals Vs. Each V is then linked to a σ, that is, it forms a syllable peak. C elements to the immediate left of the V are linked to σ which is then followed by C elements that are contiguous on the right side of the V and that do not violate the NSSC in Figure 2. This procedure results in the syllable shapes found in Mai Brat.



The above syllabification procedure works well as long as the underlying phonemes (lexical representation) have a one-to-one correspondence with the phonetic segments and all non-consonantals correspond to V elements. However, this is not always the case in Mai Brat. CV Phonology gives a framework for dealing with many-to-one and one-to-many correspondences between phonemes and phonetic segments. I will now describe those exceptional cases, which are completely predictable, and give those additional rules that provide proper syllabification. Numbers following rule names indicate the number of times the rule was applied in the syllabification of the data set.

The first three cases have to do with the high segment /i/. These three rules must be applied in the order given. To begin with, in the sequence C V1 V2 where C is either a non-continuant consonantal or a strident /b/, /t/, /k/, /m/, /n/, /s/ and V1 is /i/ and unstressed, C V1 becomes C. Phonetically, the two phonemes coalesce to a palatalised form of the consonant. This rule is symbolised below and is followed by examples.

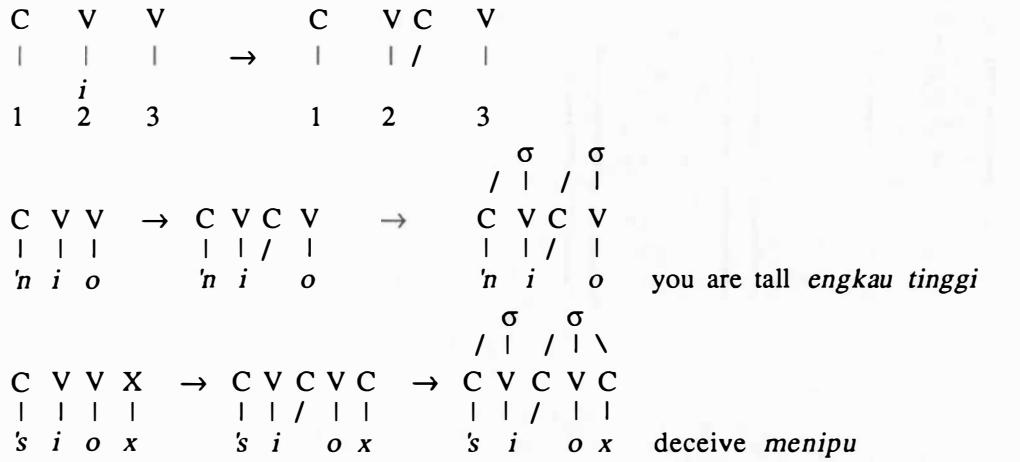
PALATALISATION (123):



Palatalisation does not apply to forms like /'ririon/ because the /iV/ combination is not preceded by a non-continuant or a strident. It also does not apply in forms like /'nio/ since the /i/ is stressed. It should also be mentioned at this point that the palatalised /t/ frequently becomes the affricate [j].

In the second case, the high segment /i/ is interpreted as an ambisyllabic segment. Clements and Keyser define a segment to be 'ambisyllabic if and only if it is dominated by two nodes σ' (p.58). If /i/ is preceded by a consonant and followed by a vowel it is interpreted as ambisyllabic and functions both as the peak of its syllable and the onset of the following syllable. Phonetically, it becomes [CiyV].

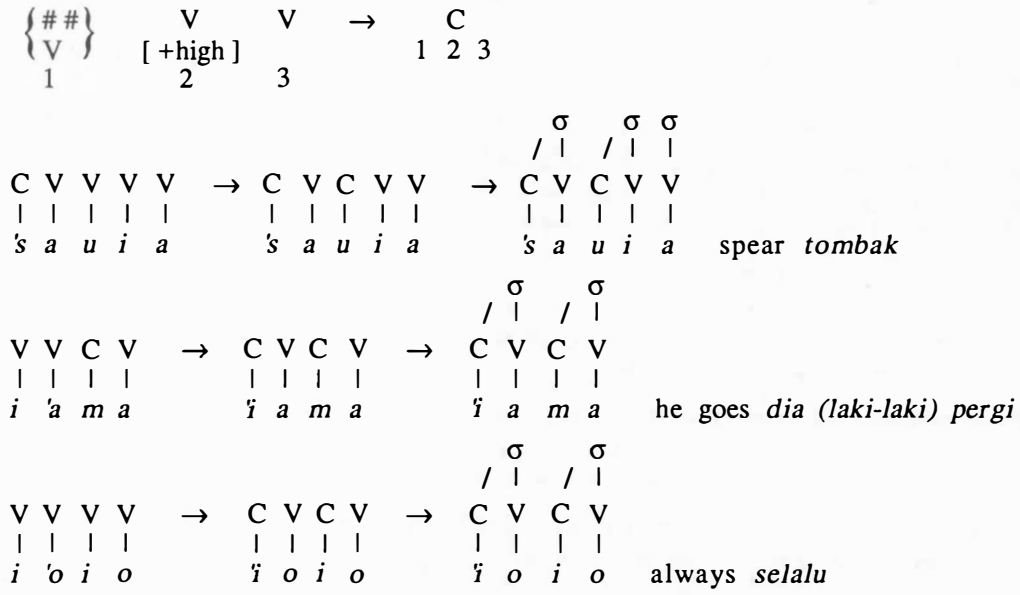
SEMIVOWEL INSERTION (67):



Notice that palatalisation does not occur in these cases since it is blocked by the stress.

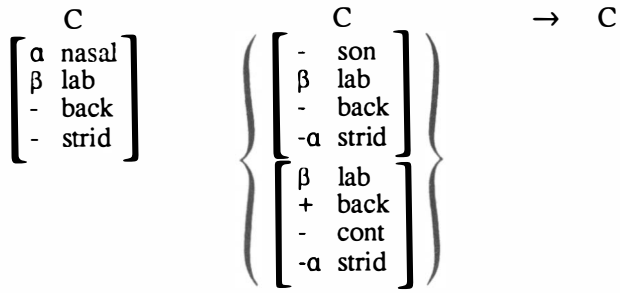
The third case involving the high segment /i/ also involves the other high segment /u/. If a high non-consonantal /i/ or /u/ is not preceded by a consonantal and is followed by a non-consonantal it becomes a C.

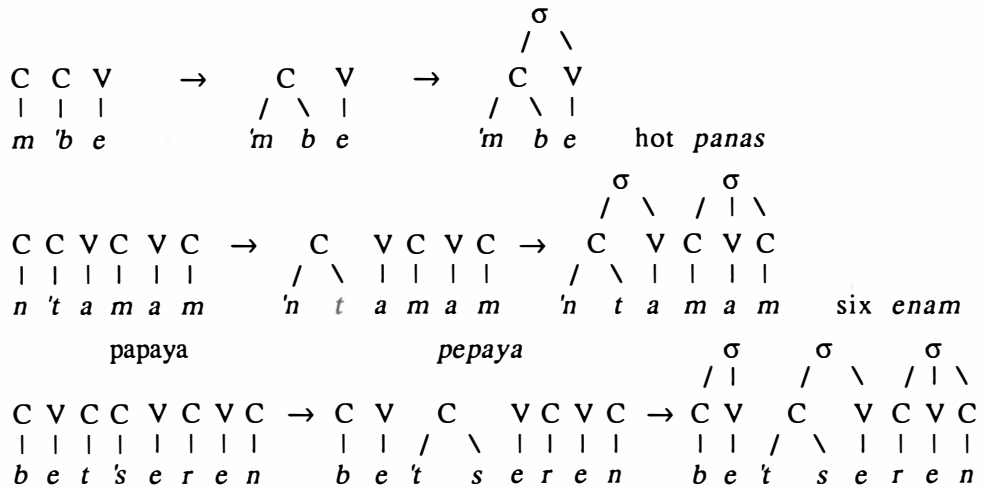
SEMIVOWEL CREATION (330):



The next group affects consonant sequences. The following three rules are ordered and must be applied in the order given. First, some lexical consonantal sequences (CC) predictably regroup to form a single C. The sequences /mb/, /mf/, /nt/, /nk/ and /ts/ undergo this regrouping before syllabification. This is symbolised below.

CONSONANT REGROUPING (182)





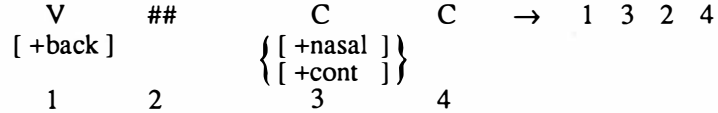
Another process affects 'extrasyllabic consonants'. Clements and Keyser define extrasyllabics in the following way: 'a segment P is extrasyllabic if and only if it is dominated by no node σ' (p.58). In a discussion of extrasyllabics in Turkish and Klamath they state:

> Typically, such (extrasyllabic) consonants are separated from neighboring consonants by short neutral or voiceless vowels and are historically susceptible to processes which either eliminate them or incorporate them into well formed syllables by means of processes such as vowel epenthesis...

These descriptions of extrasyllabic consonants describe a common phenomenon in Mai Brat. There are many consonants that remain unsyllabified upon the application of the preceding syllabification procedure. Those consonants undergo one of two ordered processes.

In the first possible process, word-initial nasal or fricative extrasyllabics tend to shift to form the closure of preceding words ending in back vowels /a/, /o/ or /u/.

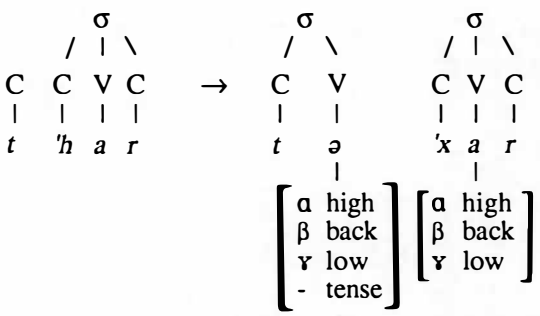
CODA CREATION:



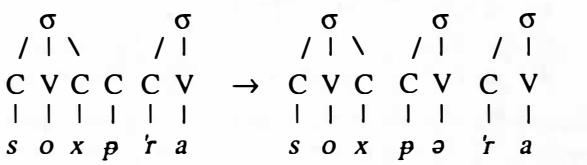
plank *papan*

In the second process, extrasyllabics before a syllabified C become separated from that C through the epenthesis of a short neutral vowel [ə], [ɪ] or [ɛ]. Although this lax epenthetic vowel is phonetically most frequently [ə] it may reflect the vowel quality of the next vowel in the word resulting in [ɪ] or [ɛ]. A new syllable is then formed with the previously extrasyllabic consonant becoming the onset and the epenthetic vowel the peak.

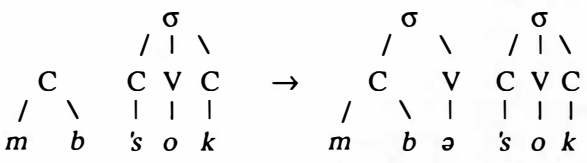
EPENTHESIS (472):



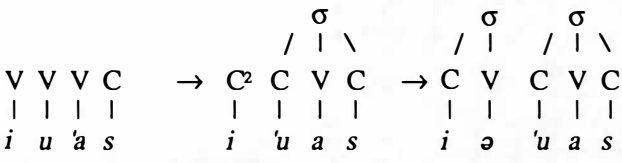
I know *saya tahu*



traditional house for skulls
rumah adat untuk tengkorak[2]



slippery *licin*



he is making a fence
ia (laki-laki) memagari

See sections 3.1 and 4.2.1 for information on CCC clusters.

There remain three additional phenomena in Mai Brat syllabification that need to be presented. Like Coda Creation, each of these operate across word boundaries and may be viewed as resyllabification rules. Resyllabification, in this context, implies that after a segment is added or shifts across a word boundary the words involved need to go through the syllabification process again. These three rules all result in providing a C onset for words beginning with a vowel.

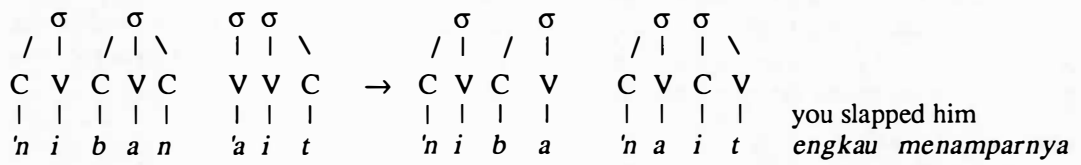
In the first rule, a word-final non-continuant /m/, /t/, /n/ or /k/ shifts to the beginning of the following word beginning with a Vowel.

NON-CONTINUANT ONSET CREATION:

V C ## V → 1 3 2 4

[-cont]

1 2 3 4



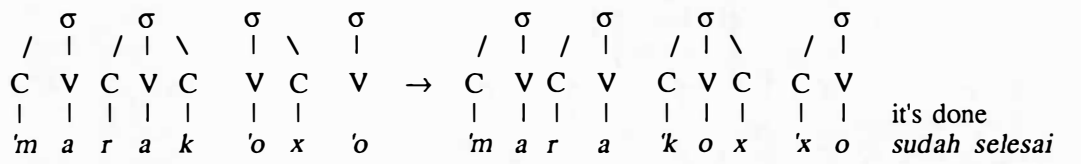
In the second rule, a word-final continuant /p/, /s/, /r/ or /x/ reduplicates with the new C becoming the onset of the following word beginning with a V.

CONTINUANT ONSET CREATION:

V C ## V → 1 2 3 2 4

[+cont]

1 2 3 4



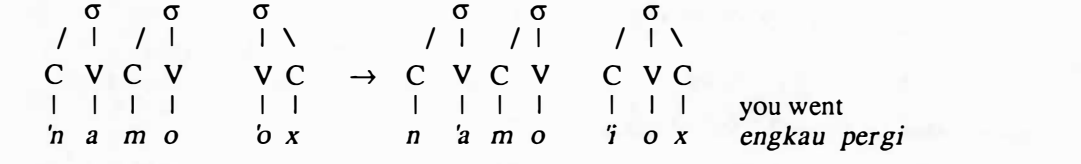
In the third and final rule, when a word beginning with /o/ is preceded by a word ending in an /o/ the second word receives a C onset filled by an /i/. This phenomenon does not occur with any other V combination.

SEMIVOWEL ONSET CREATION:

V ## V → 1 2 C 3

[- high, +round] [- high, +round] [- cons, +high, - back]

1 2 3



3.1 LEXICAL SHAPES

In the following discussion, the term 'lexical shape' corresponds to the phonological representation of words or portions of words prior to the application of the preceding syllabification rules. As was seen above, the lexical shapes of words in Mai Brat often do not coincide with phonetic syllable structure. It does appear, however, that all lexical words may be constructed from one or more combinations of basic lexical shapes. Those basic shapes include V, VC, CV, CVC, CCV, CCVC, CCCV and CCCVC. See section 4.2.1 for a discussion of restrictions on CCC sequences. Each of these shapes may occur in isolation as demonstrated below or in combination with other shapes, up to five shapes per lexical word.

V	/'a/	['a]	interrogative	*kah*
VC	/'ax/	['ax]	frog	*kodok*
CV	/'ɒe/	['ɒe]	not	*tidak*
CVC	/'max/	['max]	difficult	*sulit*
CCV	/ɒ'ra/	[ɒə.'ra]	rock	*batu*
	/m'ɒe/	['^{m}ɒe]	no	*tidak*
CCVC	/m'bin/	['^{m}bin]	dull	*tumpul*
	/t'har/	[tə.'har]	I know	*saya tahu*
CCCV	/nk'mo/	[^{ŋ}kə.'mo]	you're angry	*engkau marah*
CCCVC	/mɒ'rok/	[^{m}ɒə.'rok]	she came out	*dia (perempuan) keluar*

The Tables 2-6 give the number of times each lexical shape was found in the database by position and word length. Table 7 gives the total frequencies of all basic lexical shapes independent of position or word length.

TABLE 2
WORDS HAVING ONE LEXICAL SHAPE
(547 words or 28.6% of the database)

LEXICAL SHAPE	OCCURRENCE TOTAL	PERCENT
V	3	0.5%
VC	10	1.8%
CV	34	6.2%
CVC	101	18.5%
CCV	119	21.8%
CCVC	236	43.1%
CCCV	20	3.7%
CCCVC	24	4.4%
Total shapes	547	

TABLE 3
WORDS HAVING TWO LEXICAL SHAPES
(879 words or 46.0% of the database)

LEXICAL SHAPE	S1	S2	OCCURRENCE TOTAL	PERCENT
V	84	112	196	11.1%
VC	8	202	210	11.9%
CV	539	290	829	47.2%
CVC	25	256	281	16.0%
CCV	213	5	218	12.4%
CCVC	4	5	9	0.5%
CCCV	5	8	13	0.7%
CCCVC	1	1	2	0.1%
Total shapes			1758	

TABLE 4
WORDS HAVING THREE LEXICAL SHAPES
(398 words or 20.8% of the database)

LEXICAL SHAPE	S1	S2	S3	OCCURRENCE TOTAL	PERCENT
V	153	220	109	482	40.4%
VC	4	10	108	122	10.2%
CV	197	161	107	465	38.9%
CVC	11	4	74	89	7.5%
CCV	30	3	0	33	2.8%
CCVC	1	0	0	1	0.1%
CCCV	2	0	0	2	0.2%
CCCVC	0	0	0	0	0.0%
Total shapes				1194	

TABLE 5
WORDS HAVING FOUR LEXICAL SHAPES
(82 words or 4.3% of the database)

LEXICAL SHAPE	S1	S2	S3	S4	OCCURRENCE TOTAL	PERCENT
V	36	68	55	41	200	61.0%
VC	0	3	0	26	29	8.8%
CV	37	11	27	11	86	26.2%
CVC	1	0	0	4	5	1.5%
CCV	8	0	0	0	8	2.4%
CCVC	0	0	0	0	0	0.0%
CCCV	0	0	0	0	0	0.0%
CCCVC	0	0	0	0	0	0.0%
Total shapes					328	

TABLE 6
WORDS HAVING FIVE LEXICAL SHAPES
(5 words or 0.3% of the database)

LEXICAL SHAPE	S1	S2	S3	S4	S5	OCCURRENCE TOTAL	OCCURRENCE PERCENT
V	5	4	4	5	3	21	84.0%
VC	0	1	0	0	1	2	8.0%
CV	0	0	1	0	1	2	8.0%
CVC	0	0	0	0	0	0	0.0%
CCV	0	0	0	0	0	0	0.0%
CCVC	0	0	0	0	0	0	0.0%
CCCV	0	0	0	0	0	0	0.0%
CCCVC	0	0	0	0	0	0	0.0%
Total shapes						25	

TABLE 7
ALL WORDS COMBINED
Total number of words = 1911
Average number of shapes per word = 2.0

LEXICAL SHAPE	OCCURRENCE TOTAL	OCCURRENCE PERCENT
V	902	23.4%
VC	373	9.7%
CV	1416	36.8%
CVC	476	12.4%
CCV	378	9.8%
CCVC	246	6.4%
CCCV	35	0.9%
CCCVC	26	0.7%
Total shapes	3852	

A number of observations concerning basic lexical shapes in Mai Brat may be made from Tables 2-7. To begin with, CV shapes predominate comprising 36.8% of the shapes, followed next by V shapes at 23.4%. Lexical shapes beginning with CCC are rare, totalling less than 2% of the database.

Next, there is a correlation between the frequency of occurrence of some shapes and word length. For example, the percentage of occurrence of the shape V steadily increases as word length increases. Also, with the exception of CV and VC in single shape words, the occurrence percentage of all non-V shapes tends to steadily decrease as word length increases.

Finally, some generalisations may be made concerning lexical shapes and their position within words. Table 8 summarises the occurrence of lexical shapes initially, medially and finally for non-single shape words. In general, shapes having a final C occur considerably more frequently word finally than in other positions. The percentage of medial slots filled by a V is three times that of initial

or final positions. Lastly, shapes beginning with a C and ending with a V tend to occur more frequently initially than in other positions.

TABLE 8

LEXICAL	INITIALLY		MEDIALLY		FINALLY	
SHAPE	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT
V	278	20.4%	356	61.7%	265	19.4%
VC	12	0.9%	14	2.4%	337	24.7%
CV	773	56.7%	200	34.7%	409	30.0%
CVC	37	2.7%	4	0.7%	334	24.5%
CCV	251	18.4%	3	0.5%	5	0.4%
CCVC	5	0.4%	0	0.0%	5	0.4%
CCCV	7	0.5%	0	0.0%	8	0.6%
CCCVC	1	0.1%	0	0.0%	1	0.1%
Total shapes	1364		577		1364	

3.2 PHONETIC SYLLABLES

Section 3.1 discussed the basic lexical shapes found in Mai Brat lexical words, and their distribution. Section 3.2 will in turn discuss the phonetic syllables that result upon applying the syllabification procedures given in Section 3 to the lexical word database. As mentioned in Section 3, there are four phonetic syllable types in Mai Brat V, VC, CV and CVC. Phonetically a word may have from one to four syllables. Examples of single syllable words for each of these types are given below.

V	/'o/	['o]	and/or	*dan/atau*
VC	/'ox/	['ox]	past tense marker	*sudah*
CV	/'si/	['si]	needle	*jarum*
	/i'u/	['yu]	woven bag	*noken*
	/ni'o/	['nʸɨ]	you	*engkau*
	/m'ƥi/	['ᵐƥi]	like	*seperti*
CVC	/'ƥos/	['ƥos]	wind	*angin*
	/u'er/	['wɛr]	very	*sekali*
	/bi'ox/	['bʸox]	enemy	*musuh*
	/m'box/	['ᵐbox]	white	*putih*

The Tables 9-12 give the number of times each syllable was found in the database by position and word length. Table 13 gives the total frequencies of all phonetic syllables independent of position or word length.

TABLE 9
ONE SYLLABLE WORDS
(235 words or 12.3% of the database)

SYLLABLE SHAPE	OCCURRENCE TOTAL	PERCENT
V	3	1.3%
VC	10	4.3%
CV	62	26.4%
CVC	160	68.1%
Total	235	

TABLE 10
TWO SYLLABLE WORDS
(1323 words or 69.2% of the database)

SYLLABLE SHAPE	S1	S2	OCCURRENCE TOTAL	PERCENT
V	69	66	135	5.1%
VC	8	93	101	3.8%
CV	1210	537	1747	66.0%
CVC	36	627	663	25.1%
Total			2646	

TABLE 11
THREE SYLLABLE WORDS
(327 words or 17.1% of the database)

SYLLABLE SHAPE	S1	S2	S3	OCCURRENCE TOTAL	PERCENT
V	15	11	59	85	8.7%
VC	4	0	72	76	7.7%
CV	291	309	122	722	73.6%
CVC	17	7	74	98	10.0%
Total				981	

TABLE 12
FOUR SYLLABLE WORDS
(26 words = 1.4% of the database)

SYLLABLE SHAPE	S1	S2	S3	S4	OCCURRENCE TOTAL	PERCENT
V	0	1	7	3	11	10.6%
VC	0	0	1	6	7	6.7%
CV	26	25	18	11	80	76.9%
CVC	0	0	0	6	6	5.8%
Total					104	

TABLE 13
ALL WORDS COMBINED
Total number of words = 1911
Average number of syllables / word = 2.1

SYLLABLE SHAPE	OCCURRENCE TOTAL	PERCENT
V	234	5.9%
VC	194	4.9%
CV	2611	65.8%
CVC	927	23.4%
Total	3966	

Tables 9-13 provide objective data for several observations concerning the distribution of phonetic syllables in Mai Brat. First, from Table 13 CV syllables predominate filling 65.8% of the syllable slots. The second most common syllable is CVC at 23.4%.

Second, Tables 9-12 show a correlation between word length and the distribution of syllables. The percentage of open syllables (V and CV) increases as the number of syllables in the words increase. Then also, the percentage of CVC syllables steadily decreases as word length increases. From this data there seems to be no direct correlation between frequency of VC syllables and word length.

Third, Table 14 below shows the quantitative relationship between syllable type and relative position in non-monosyllabic words. CV syllables overwhelmingly dominate initial and medial positions filling over 90% of each. It may also be significant that the entire distribution of the various syllable types for initial syllables is almost identical to that found for medial syllables. However, final syllables have a very different distribution than that found in non-final syllables. Closed syllables (VC and CVC) are much more frequent in final syllables than other positions. These facts indicate that for Mai Brat a three way distinction for syllable positions is not necessary. The two way distinction between final and non-final syllables better represents the generality presented in Table 14.

TABLE 14

SYLLABLE SHAPE	INITIALLY TOTAL	PERCENT	MEDIALLY TOTAL	PERCENT	FINALLY TOTAL	PERCENT
V	84	5.0%	19	5.0%	128	7.6%
VC	12	0.7%	1	0.3%	171	10.2%
CV	1527	91.1%	352	92.9%	670	40.0%
CVC	53	3.2%	7	1.8%	707	42.2%
Total	1676		379		1676	

Fourth, comparing Table 13 with Table 7 demonstrates some net effects of the syllabification procedures. Primarily, the totals for V initial units decreased while the totals for C initial units increased. The average number of units per word increased only slightly from 2.0 lexical shapes per word to 2.1 phonetic syllables per word.

4. PHONEMIC SEGMENTS

The dialect of Mai Brat spoken in Kambuaya has nine consonantal phonemes /b/, /t/, /k/, /ɒ/, /s/, /x/, /m/, /n/ and /r/ and five non-consonantal phonemes /i/, /e/, /u/, /o/ and /a/. The following table gives the phoneme counts for the data used in this analysis:

TABLE 15

Consonant	*b*	*ɒ*	*m*	*t*	*n*	*s*	*r*	*k*	*x*
Count	369	257	774	695	574	485	468	401	326
Vowel	*i*	*e*	*u*	*o*	*a*				
Count	935	537	519	712	1244				

Total consonants	= 4349	Total vowels	=	3947
Total phonemes	= 8296	Ratio of C:V	=	1.1:1
Total words	= 1911	Average phonemes per word	=	4.3
Total phonemes				

4.1 DISTINCTIVE FEATURES

	b	*ɒ*	*m*	*t*	*n*	*s*	*r*	*k*	*x*
Sonorant	-	-	+	-	+	-	+	-	-
Consonantal	+	+	+	+	+	+	+	+	+
Continuant	-	+	-	-	-	+	+	-	+
Nasal	-	-	+	-	+	-	-	-	-
Labial	+	+	+	-	-	-	-	-	-
High	-	-	-	-	-	-	-	+	+
Back	-	-	-	-	-	-	-	+	+
Strident	-	-	-	-	-	+	-	-	-

CHART 1

The feature labial was chosen in place of the two features anterior and coronal since only a binary point of articulation feature is needed in Mai Brat. The feature high is not needed to distinguish consonant phonemes, however it is included for use in the phonological rules.

	i	*e*	*a*	*u*	*o*
High	+	-	-	+	-
Back	-	-	+	+	+
Round	-	-	-	+	+

CHART 2

4.2 CONSONANT DESCRIPTION

The following is a list and description of all the consonants with representative examples.

NON-CONTINUANT NON-NASALS

/b/ Labial non-continuant non-nasal (voiced bilabial stop):

/bu'ba/	[bu'ba]	fly	*lalat*
/m'box/	['ᵐbox]	white	*putih*
/a'bit/	[a'bit]	banana	*pisang*
/bomb'ra/	[boᵐbə'ra]	all things	*segala sesuatu*

It is of interest to note that there is not a voiceless allophone of the voiced bilabial stop in the dialect of Mai Brat used in Kambuaya.

/t/ Non-back non-labial non-continuant non-nasal (voiceless alveolar stop):

/'tuƥ/	['tuƥ]	three	*tiga*
/'maat/	['maat]	five	*lima*
/'titia/	['tijə]	when?	*kapan?*
/t'ƥo/	[tə'ƥo]	knife	*pisau*
/'betrot/	['bɛtərot]	to straighten	*meluruskan*

Alveolar stop /t/ become voiced [d] following /n/:

/n'tamam/	['ⁿdamam]	six	*enam*
/nt'rot/	[ⁿdə'rot]	straight	*lurus*
/kon'taiƥ/	[ko'ⁿdaiƥ]	type of bird	*semacam burung*

/k/ Back non-continuant non-nasal (voiceless velar stop):

/ku'kek/	[ku'kɛk]	children	*anak anak*
/k'bor/	[kə'bor]	lower back	*belakan*
/m'kek/	[mə'kɛk]	red	*merah*

Velar stop /k/ becomes voiced [g] before /i/ or after /n/:

/'ki/	['gi]	echidna (small anteater)	*landak*
/kini'ax/	[gi'nʸax]	small	*kecil*
/so'ki/	[so'gi]	machete	*parang*
/boki'as/	[bo'gʸas]	story	*cerita*
/n'kat/	['ŋgat]	wild nutmeg tree	*pala hutan*
/nk're/	[ŋgə're]	stem	*tangkai*
/unk'nu/	[uŋgə'nu]	sky	*langit*

NASALS

/m/ Labial nasal (voiced bilabial nasal):

/'mam/	['mam]	in	*di*
/a'max/	[a'max]	house	*rumah*
/ta'bam/	[ta'bam]	land	*tanah*
/m'bin/	['ᵐbin]	dull	*tumpul*
/'kombox/	['koᵐbox]	small lizard	*cicak kecil*

/n/ Non-labial nasal (voiced alveolar nasal):

/n'tamam/	[ⁿdamam]	six	*enam*
/maui'an/	[maui'an]	hair	*rambut*
/kon'taiɸ/	[ko'ⁿdaiɸ]	type of bird	*semacam burung*
/ka'nes/	[ka'nɛs]	type of bamboo	*bambu jawa*
/kini'ax/	[gi'nʸax]	small	*kecil*

Non-labial nasal /n/ becomes velar [ŋ] before velar /k/:

/n'karu/	[ᵑgaru]	erase	*menghapuskan*
/nk'ro/	[ᵑgə'ro]	follow	*mengikuti*
/'sankaf/	['saᵑgaf]	sky	*langit*

CONSONANTAL CONTINUANTS

/ɸ/ Labial consonantal continuant (voiceless bilabial fricative):

/ɸa'ne/	[ɸa'ne]	pig	*babi*
/'moɸ/	['moɸ]	good	*baik*
/'saɸto/	['saɸto]	rob	*rampas*
/'saɸom/	['saɸom]	green	*hijau*
/m'ɸe/	['ᵐɸe]	no	*tidak*
/soxɸ'ra/	[soxɸə'ra]	skull house	*rumah tengkorak*

/s/ Strident non-labial consonantal continuant (voiceless alveolar grooved fricative):

/'sasu/	['sasu]	sweet potato	*petatas*
/'ɸos/	['ɸos]	wind	*angin*
/s'rot/	[sə'rot]	quickly	*dengan cepat*
/isi'ar/	[i'sʸar]	flood	*banjir*

/r/ Non-back non-strident lingual consonantal continuant (voiced alveolar flap):

/'raa/	['raa]	person	*orang*
/'rir/	['rir]	lightning	*kilat*
/re're/	[re're]	later	*sebentar*
/m'kair/	[mə'kair]	bad, dirty	*jelek, kotor*
/sor'ni/	[sor'ni]	forget	*lupa*
/b'ron/	[bə'ron]	bamboo	*bambu*
/'sentri/	['sentəri]	disagree	*bertanding*

/x/ Back consonantal continuant (voiceless velar fricative):

/'xox/	['xox]	short of breath	*sesak napas*
/soxɸ'ra/	[soxɸə'ra]	skull house	*rumah tengkorak*
/'xaue/	['xawe]	don't want to	*tidak mau*
/x'ri/	[xə'ri]	day	*hari*

4.2.1 CONSONANT SEQUENCES

The following four tables give the number of occurrences of all consonant clusters found initially and medially in the data. The rows specify the first consonants in the clusters and the columns specify the second consonants. Asterisks mark those clusters which undergo consonant regrouping. All other clusters involve epenthetic vowels. See section 3 for a discussion of these phenomena. No final consonant clusters are found in Mai Brat.

TABLE 16

INITIAL CLUSTERS OF TWO CONSONANTS

	b	*ƥ*	*m*	*t*	*n*	*s*	*r*	*k*	*x*	Total
b	0	6	7	5	2	6	12	4	5	47
ƥ	0	0	0	3	1	0	10	1	0	15
m	46 *	20 *	8	23	12	24	14	13	16	176
t	7	5	5	2	10	7 *	9	7	7	59
n	9	8	10	41 *	2	32	8	17 *	13	140
s	9	1	10	1	7	0	13	6	1	48
r	0	0	0	0	1	0	0	1	0	2
i[2]	14	9	7	6	6	17	8	11	14	92
k	5	0	3	1	5	1	6	0	0	21
x	0	0	1	1	1	0	8	0	0	11
Total	90	49	51	83	47	87	88	60	56	611

TABLE 17

MEDIAL CLUSTERS OF TWO CONSONANTS

	b	*ƥ*	*m*	*t*	*n*	*s*	*r*	*k*	*x*	Total
b	0	0	0	1	0	0	7	0	0	8
f	0	0	0	1	1	0	8	0	0	10
m	6 *	1 *	0	2	0	1	0	1	0	11
t	3	1	7	0	2	5 *	11	2	1	32
n	0	0	0	7 *	0	3	1	2 *	1	14
s	5	0	2	1	5	0	5	4	2	24
r	2	2	4	1	3	0	0	2	0	14
k	3	0	3	1	3	3	14	0	0	27
x	0	2	3	0	4	2	5	0	0	16
Total	19	6	19	14	18	14	51	11	4	156

TABLE 18

INITIAL CLUSTERS OF THREE CONSONANTS

	b	*f*	*m*	*t*	*n*	*s*	*r*	*k*	*x*	Total
bx	0	0	0	0	0	0	1	0	0	1
bt	0	0	0	0	0	1 *	0	0	0	1
*mb**	0	0	0	1	0	0	5	0	0	6
*mf**	0	0	0	0	0	0	3	0	0	3
mt	1	0	0	0	0	0	0	0	0	1
mk	0	0	0	1	0	0	0	0	0	1
mx	0	0	0	0	0	0	1	0	0	1

Table 18 continued...

...Table 18 continued

	b	*f*	*m*	*t*	*n*	*s*	*r*	*k*	*x*	Total
tf	0	0	0	0	0	0	1	0	0	1
*ts**	0	0	0	0	2	0	0	0	0	2
tk	0	0	0	0	0	0	2	0	0	2
tx	0	0	0	0	0	0	1	0	0	1
nf	0	0	0	0	0	0	1	0	0	1
*nt**	2	1	1	0	1	0	4	2	0	11
ns	0	0	0	0	1	0	0	4	1	6
*nk**	0	0	2	0	2	1	8	0	0	13
kt	0	0	1	0	0	0	0	0	0	1
Total	3	1	4	2	6	2	27	6	1	52

TABLE 19

MEDIAL CLUSTERS OF THREE CONSONANTS

	n	*r*	Total
*mb**	0	2	2
*mf**	0	1	1
*ts**	0	2	2
*nt**	0	3	3
*nk**	1	0	1
xf	1	1	2
Total	2	9	11

Tables 16 and 17 demonstrate that all Mai Brat consonants may appear in the initial or final position of two-consonant sequences. However, in word-initial sequences of three consonants (Table 18) there appear to be restrictions on which consonants may fill certain positions. To begin with, only non-continuants are found in the initial consonant position. Secondly, only non-sonorants are present in the second consonant position. Thirdly there are no positional restrictions on which consonants may fill the sequence final slots as all consonants are found in that position. Finally, the non-nasal sonorant /r/ is predominant in the final position of both initial and medial sequences of three consonants. /r/ fills 57% of these positions while only accounting for 11% of all consonants.

Table 20 gives all two-consonant sequences that never occur in Mai Brat in any position.

TABLE 20

	b	*p*	*s*	*r*	*k*	*x*
b	X					
p	X	X	X			X
s			X			
r			X	X		X
k		X			X	X
x	X				X	X

4.2.2 CONTRASTIVE SETS OF CONSONANTS

The following contrastive sets are presented with sample minimal pairs from the data. The total number of minimal pairs found for each consonant pair is given in parenthesis following the heading

for that pair. The consonant pairs themselves are grouped by the single distinctive feature that distinguishes them. Statistics of this kind may give an objective measure of the functional load for each distinctive feature in a given language. These statistics as well as others presented in this paper may also be helpful in language and dialectal comparisons.

CONTINUANT VERSUS NON-CONTINUANT (145)

/ɸ/ and /b/ (36):

/'ɸox/	['ɸox]	quickly	*dengan cepat*
/'box/	['box]	ashes	*abu*
/a'ɸan/	[a'ɸan]	termite	*rayap*
/a'ban/	[a'bən]	snake	*ular*

/r/ and /t/ (68):

/'ru/	['ru]	bird	*burung*
/'tu/	['tu]	must	*harus*
/'marak/	['marak]	there isn't any	*tidak ada*
/'matak/	['matak]	solid, hard	*kuat, keras*
/'bur/	['bur]	bee	*lebah*
/'but/	['but]	leach	*lintah*

/x/ and /k/ (41):

/'xox/	['xox]	short of breath	*sesak napas*
/'kox/	['kox]	soil	*tanah*
/'kok/	['kok]	chicken	*ayam*
/'naxox/	['naxox]	you hit	*engkau memukul*
/'nakox/	['nakox]	you carry things in a woven bag hung on your head	*memikul noken diatas kepalamu*
/m'kax/	[mə'kax]	they work on	*mereka mengerjakan*
/m'kak/	[mə'kak]	all gone	*habis*

NASAL VERSUS NON-NASAL (228)

/m/ and /b/ (93):

/'mun/	['mun]	time	*kali*
/'bun/	['bun]	squash	*labu*
/'ramu/	['ramu]	our	*kami punya*
/'rabu/	['rabu]	morning	*pagi*

/n/ and /t/ (135):

/na'a/	[na'a]	your leg	*kakimu*
/ta'a/	[ta'a]	my leg	*kakiku*

/na'na/	[na'nə]	your head	*kepalamu*
/na'ta/	[na'tə]	you drink	*engkau minum*
/a'ban/	[a'ban]	snake	*ular*
/a'bat/	[a'bat]	non-decorated (woven bag)	*(noken yang) tidak berhinas*

STRIDENT VERSUS NON-STRIDENT (58)

/s/ and /r/ (58):

/'si/	['si]	needle, nail	*jarum, paku*
/'ri/	['ri]	glue used to catch birds	*getah untuk menangkap burung*
/i'so/	[i'so]	road, trail	*jalan*
/i'ro/	[i'ro]	wrong doing	*dosa*
/m'ras/	[mə'ras]	they pound a sharp edge on a machete	*mereka mengetuk parang sampai tajam*
/m'rar/	[mə'rar]	chin	*dagu*

LABIAL VERSUS NON-LABIAL (172)

/m/ and /n/ (172):

/'nam/	['nam]	you are jealous	*engkau iri hati*
/'mam/	['mam]	in	*di*
/'nan/	['nan]	connect	*memasang*
/'anu/	['anu]	we (inclusive), you (pl)	*kita, kamu*
/'amu/	['amu]	we (exclusive)	*kami*
/'ꝑon/	['ꝑon]	thinly woven string	*tali kecil*
/'ꝑom/	['ꝑom]	type of insect	*semacam serangga*

BACK VERSUS NON-BACK (64)

/k/ and /t/ (64):

/'kait/	['kait]	to him	*kepadanya*
/'tait/	['tait]	centipede	*kaki seribu*
/m'ki/	[mə'gi]	it scrapes	*menggores*
/m'ti/	[mə'ti]	night, dark	*malam, gelap*
/a'buk/	[a'buk]	small lizard	*cecak*
/a'but/	[a'but]	suddenly	*tiba-tiba*

OTHER CONTRASTS

/t/ and /s/ (88):

/'tan/	['tan]	wood used to burn a garden	*kayu yang dipergunakan untuk membakar kebun*
/'san/	['san]	type of food	*semacam makanan*

/'nato/	['nato]	your liver	*hatimu*
/'naso/	['naso]	you plant taro	*engkau menanam keladi*
/'kaut/	['kaut]	mouse	*tikus*
/'kaus/	['kaus]	boil	*bisul*

4.3 VOWEL DESCRIPTION

The following is a list and description of all the vowels with representative examples. See also section 3 for a discussion of the non-syllabic allophones of the high syllabics /i/ and /u/.

NON-BACK SYLLABICS

/i/ High non-back syllabic (high front unrounded vowel):

/'iɒo/	['iɒo]	today	*hari ini*
/'iis/	['iis]	yesterday	*kemarin*
/'bisir/	['bisir]	drunk	*mabuk*
/s'ki/	[sɪ'gi]	build (a house)	*membangun (rumah)*
/ma'bi/	[ma'bi]	old, large	*tua, besar*

/e/ Non-high non-back syllabic (mid front unrounded vowel):

/'euok/	['ewok]	two	*dua*
/'et/	['ɛt]	warning sign	*tanda bahaya*
/re're/	[re're]	later	*sebentar*
/sa'ɒe/	[sa'ɒe]	black	*hitam*
/'tee/	['tee]	I give	*saya memberi*

The vowel /e/ becomes lax [ɛ] as the peak of word-final closed syllables:

/'men/	['mɛn]	blood-letting	*mengiris kulit untuk keluarkan darah mati*
/'romen/	['romɛn]	animal trail	*jalan binatang*
/m'ber/	['ᵐbɛr]	she teaches	*dia (perempuan) mendidik*
/s'xex/	[sə'xɛx]	type of fungal skin disease	*kaskado*

BACK SYLLABICS

/a/ Non-high back unrounded syllabic (low central unrounded vowel):

/a'ta/	[a'ta]	crayfish	*udang karang*
/a'ken/	[a'kɛn]	canoe	*perahu*
/'ɒakot/	['ɒakot]	yawn	*menguap*
/'mam/	['mam]	in	*di*
/'maam/	['maam]	edge	*pingir*
/'tatia/	['tajə]	my father	*ayahku*

Word-final /a/ becomes lax [ə] in unstressed syllables:

/'auia/	['auiə]	who	*siapa*
/su'ara/	[su'arə]	tapioca root	*kasbi*
/'ana/	['anə]	they	*mereka*
/'tatia/	['tajə]	my father	*bapakku*

/u/ High back syllabic (high back rounded vowel):

/'u/	['u]	above	*di atas*
/'uu/	['uu]	again	*lagi*
/'tuƥ/	['tuƥ]	three	*tiga*
/'kaus/	['kaus]	boil	*bisul*
/'namu/	['namu]	your uncle	*pamanmu*
/'rabu/	['rabu]	morning	*pagi*

/o/ Non-high rounded back syllabic (mid back rounded vowel):

/'oot/	['oot]	saliva	*ludah*
/'soon/	['soon]	coconut	*kelapa*
/'kombox/	['kombox]	type of lizard	*cecak kecil*
/'to/	['to]	specifying article	-
/'too/	['too]	I itch	*saya rasa gatal*

Word-final /o/ becomes /i̯/ following an /i/ or palatalised consonant:

/ai'o/	[a'yi̯]	sun	*matahari*
/si'o/	['sʸi̯]	faeces	*tai*
/'mio/	['miyi̯]	long	*panjang*

4.3.1 VOWEL SEQUENCES

The following tables give the vowel sequences found in the Mai Brat data. Tables are given for initial, medial and final positions.

TABLE 21
INITIAL VOWEL CLUSTERS

	i	*e*	*a*	*u*	*o*	Total
i	12	12	75	11	9	119
e	0	1	0	1	0	2
a	4	1	3	5	1	14
u	6	15	31	3	20	75
o	0	0	0	0	2	2
Total	22	29	109	20	32	212

TABLE 22
MEDIAL VOWEL CLUSTERS

	i	*e*	*a*	*u*	*o*	Total
i	11	23	61	22	61	178
e	13	3	4	9	1	30
a	81	1	14	68	2	166
u	36	11	25	15	9	96
o	12	0	4	10	11	37
Total	153	38	108	124	84	507

TABLE 23
FINAL VOWEL CLUSTERS

	i	*e*	*a*	*u*	*o*	Total
i	5	16	51	4	48	124
e	0	3	4	4	0	11
a	26	1	9	34	5	75
u	2	15	15	5	2	39
o	0	0	0	3	13	16
Total	33	35	79	50	68	265

It may be observed from Tables 21-23 that the vowel sequence /oe/ never occurs in Mai Brat. All other sequences occur medially at least.

4.3.2 CONTRASTIVE SETS OF VOWELS

HIGH VERSUS NON-HIGH (128)

/i/ and /e/ (68):

/'min/	['mɪn]	difficult	*sulit*
/'men/	['mɛn]	blood-letting	*mengiris kulit untuk keluarkan darah mati*
/'nari/	['nari]	you hear	*engkau mendengar*
/'nare/	['nare]	your thigh	*pahamu*

/o/ and /u/ (60):

/'mormor/	['mormor]	star	*bintang*
/'murmur/	['murmur]	diligent	*rajin*
/m'so/	[mə'so]	she gathers	*dia mengumpulkan*
/m'su/	[mə'su]	she drowned	*dia tenggelam*

ROUND VERSUS UNROUNDED (137)

/a/ and /o/ (137):

/'ax/	['ax]	frog	*kodok*
/'ox/	['ox]	past tense marker	*sudah*
/n'sam/	[nə'səm]	you run away	*engkau melarikan diri*
/n'som/	[nə'som]	you play	*engkau bermain*
/t'na/	[tə'na]	then	*kemudian*
/t'no/	[tə'no]	I make	*saya membuat*

BACK VERSUS NON-BACK (157)

/i/ and /u/ (73):

/a'bit/	[a'bit]	banana	*pisang*
/a'but/	[a'but]	suddenly	*tiba-tiba*
/'mai/	['mai]	language, voice	*bahasa, suara*
/'mau/	['mau]	(pig) roots	*(babi) menyungkur*

/o/ and /e/ (84):

/'mos/	['mos]	well	*sumur*
/'mes/	['mes]	blood	*darah*
/'nako/	['nako]	you don't want	*tidak mau*
/'nake/	['nake]	your fine	*dendamu*

A minimal set:

/'ri/	['ri]	glue used to catch birds	*getah untuk menangkap burung*
/'re/	['re]	so that	*supaya*
/'raa/	['raa]	person	*orang*
/'ru/	['ru]	bird	*burung*
/'ro/	['ro]	who, which	*yang*

4.4 VOWEL AND CONSONANT CO-OCCURRENCE

All syllabics are found before and after all non-syllabics in all positions with the following exceptions. /xi/ is only found word initially. /fu/ and /ux/ never occur in word-final position. And finally, /xe/ and /ix/ never occur medially.

5. SUGGESTED ORTHOGRAPHY

The following chart summarises the phonemes of the dialect of Mai Brat found in Kambuaya, and a suggested orthography. The suggested orthography was heavily influenced by three factors.

First, where phonetic units found in Mai Brat were also present in Indonesian, the national language, the corresponding Indonesian orthographic symbol was used. For example, the high vowels /i/ and /u/ are written as the semivowels *y* and *w* respectively when syllabified as a C (see Section 3 for the syllabification procedures). This corresponds to the use of the semivowels in Indonesian. Also, the phonetic affricates resulting from the phoneme sequences /ts/ and palatalised /t/ are written orthographically as *c* and *j* respectively as they are in Indonesian. Palatalised consonants are written as the consonant followed by a *y* as the *ny* in Indonesian. Stress is predictable in Indonesian and not written. Most stress pairs in Mai Brat are differentiated by semantic context. We have rarely observed any confusion when stress is not written in Mai Brat using the suggested orthography.

Second, reading difficulties observed when a previous test orthography was used were influential in these orthographic decisions. This was especially important in the treatment of extrasyllabics. In the test orthography the epenthetic [ə] was written as an *e*. That also coincided with the Indonesian treatment of the [ə] in the same position. However, Mai Brat speakers who were very literate in Indonesian read the epenthetic [ə] when symbolised by *e* in their own language as a stressed [e]. This mispronunciation also was accompanied by backtracking, indicating a lack of comprehension. On the other hand, writing the extrasyllabics without symbolising the epenthetic [ə] not only resulted in the proper pronunciation and less backtracking, but has also been well received by those who have encountered it.

Third, data collected from 28 teenagers and adults, literate in the national language, when asked to write words and phrases in Mai Brat, their mother tongue, were also extremely helpful. The majority of extrasyllabics were written without symbolising the epenthetic [ə] even though this frequently resulted in consonant sequences not found in Indonesian. The *j, c, ny* and other C*y* sequences were frequently used.

The last two factors were also very influential in the preceding phonological analysis, as they gave evidence to the psychological reality of the posited phonemes and syllabification procedures.

PHONEME	SUGGESTED ORTHOGRAPHY
b	*b*
p	*f*
m	*m*
t	*t*
n	*n*
s	*s*
r	*r*
k	*k*
x	*h*
i	*i* (when syllabified as a V)
	y (when syllabified as a C)
e	*e*
u	*u* (when syllabified as a V)
	w (when syllabified as a C)
o	*o*
a	*a*
' (stress)	(not written)
CLUSTERS	
t (palatalised)	*j*
n (palatalised)	*ny*
s (palatalised)	*sy*
b (palatalised)	*by*
m (palatalised)	*my*
k (palatalised)	*ky*
ts	*c*

NOTES

1. Research for this paper was carried out under the auspices of the Universitas Cenderawasih – Summer Institute of Linguistics Project beginning in March 1984. Of great assistance to my wife and myself in our research were Julianus Bosawer and Petrus Kambuaya. The use of portable microcomputers was also invaluable in the creating, confirming and editing of the preceding analysis. Comments on this paper, provided by Dr David Payne, Dr Doris Payne, Dr John Clifton and Duane Clouse, were invaluable in producing this phonology. Of course all remaining faults remain the author's responsibility.

2. There is one set of forms that the rules accounting for the syllabicity of /i/ above do not account for, in which a word initial /i/ before a C may also be an extrasyllabic C. For example, /i'tax/ [yə'tax] 'he sharpens' *dia (laki-laki) mempertajam* contrasts with /i'ta/ [i'ta] 'leaf' *daun*. In all cases this extrasyllabic /i/ is the third person masculine singular morpheme. This morpheme occurred 95 times in the database including three times before /u/s which syllabify as consonants.

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A PHONOLOGY OF THE ORYA LANGUAGE

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Fonologi bahasa Orya

Bahasa Orya digunakan oleh sekitar 1600 penutur yang berada di Kecamatan Urunum-Guay, Kabupaten Jayapura, Propinsi Irian Jaya, Indonesia. Bahasa Orya merupakan salah satu tipe khusus dari bahasa-bahasa Non-Austronesia karena bahasa ini mempunyai banyak akhiran yang ditambahkan pada kata kerja dan akar kata-kata benda. Satu ciri yang menarik dari bahasa ini, yaitu terdapat banyaknya perubahan suara yang terjadi baik pada akar kata maupun pada imbuhan apabila ditempatkan dalam lingkungan yang berbeda. Contohnya:

a. Huruf /l/ berubah menjadi huruf [ɾ] apabila ada huruf vokal frontal *(i, a, æ)* atau konsonan frontal *(t, d, s, z, j, n, l, y)* yang mendahuluinya. Jadi, kata il diucapkan [iɾ], dan kata *tlanak* diucapkan [tranak].

b. Huruf konsonan /g/ hilang lenyap apabila mengikuti satu akar suku kata tunggal, kalau suku kata itu tidak berakhir dengan huruf konsonan. Jadi, huruf konsonan /g/ pada kata *wë-gun* hilang ketika diucapkan.

c. Keharmonisan huruf vokal menambah banyak perubahan yang kompleks. Dalam kata *wë-gun* di atas, keharmonisan huruf vokal merubah pengucapan huruf vokal pertama untuk lebih dekat menyesuaikan dengan tingginya huruf vokal kedua. Kata itu diucapkan [weⁱun].

Oleh sebab itu perubahan-perubahan seperti ini dapat bersatu, kata-kata yang sebenarnya beraturan menurut jadinya dapat berbunyi seperti tidak beraturan.

/hla-gul-n/	see her	/hla-ta-n/	see him
→ /hlauln/			
→ /hlaᵘln/			
→ /hlaᵘn/			
→ [hlãᵘn]		[hlátãn]	

1. INTRODUCTION

The Orya language is spoken by approximately 1600 people in the Indonesian province of Irian Jaya. Most of these people live in the Unurum-Guay district (Kecamatan), 44 nautical miles west of

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Pacific Linguistics, A-73, 1991.

the major provincial airport, Sentani. There are four larger population groupings within this district: Guryad (which includes the village of Guay), Garusa, Beneik and Santosa, and seven smaller settlements. Orya speakers also live in two villages in the neighbouring Lereh district, and one in the Bonggo district.

Government records and Voorhoeve (1971:51, 1975:40) list the name of this language as Uria. Local speakers, however, call their language Orya, after the village of the same name in the Lereh district where legends say they originated. They also sometimes call themselves Yap Zi 'interior people' and refer to their language as Yap Zi Ol, 'the language of the interior people'. The dialect of Orya described in this paper is that of Guay, where linguistic analysis began in June 1984.

Orya is a Non-Austronesian language within the Tor-Lake Plain Stock (Wurm & Hattori 1981).[2] This group also includes Sause, Mander and Berik. Of these, Berik (described by Peter and Sue Westrum 1975) appears historically to be the closest, with a cognate count, calculated on basic vocabulary, of 45%.[3] The cognate similarity between Orya and Sause is only 10%, and between Orya and Mander, 26%.[4] Oesterwal (1961) claims that the Berik people migrated from what is now the Orya speaking area, and the Orya and Berik legends would support the idea.[5] Commercial and geographical contact now, however, is with the Sause and Mander groups, and some Orya are bilingual in Sause.

This analysis will start with broad characteristics of Orya phonology (sentence intonation, stress, syllable structure) and proceed to particular allophonic and morphophonemic rules. Preceding the allophonic rules is a chart of Orya phonemes (section 7). An understanding of the Orya phoneme feature chart is crucial for understanding the rules that follow. This chart gives the key distinguishing features of Orya phonemes, and the allophonic and morphophonemic rules that follow it are based on *those features only*.[6] Some readers may wish to examine the appendix showing contrast among phonemes before reading the last two sections. In this paper, a prose summary of the phonological rules (in italic print) precedes the fully specified symbolisation of the rule.[7]

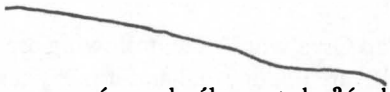
2. SENTENCE INTONATION

The pitch of most sentences in Orya starts higher and gradually descends to the end. There is often a rise on the stressed syllable (which is usually penultimate) and a greater degree of fall between the last two syllables of a sentence.

/á.sa man balk.gúl.la.da Bú.ji/[8]
I was just caught by Buji!

Orya questions and statements are both spoken with falling intonation. The question status of a sentence is obvious without special intonation because of the interogative morphemes /san/ and /we/ which occur early in a question.

/em san í.ni hom/
Don't you have ears? (Can't you hear?)



/ém we wé.a sal.sál.sa ot.de.ʔán.ka/
Would you like to drink tea?

Question words like 'who', 'what' and 'why' are highlighted by raised intonation.

/an bá.hap za.u é.no wé.nya ni.kí.ʔan/
this why there your wife sitting
Why is your wife sitting there?

The one-syllable question below has rising intonation.

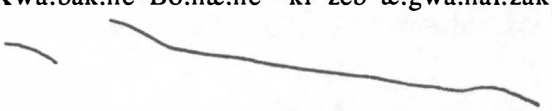
/wa/
What (did you say)?

This same pattern of sentence penultimate stress and rise and fall is also found at the end of any pause group, but to a lesser degree. It can be seen in lists, in clause chaining, and especially after the head of head-tail linkage:

/twé.lan nin kó.la wá.leŋ wá.ŋil dan lan.blan.dá.ka/
edible meat sugar cane areca nuts betel pepper picked-for-him
They picked out meat, sugar cane, areca nuts and betel pepper to give him.

/nu.hú.lek...hu.lé.na tab.ʔul.so.ne.ká.ye...éil.zi yá.wal

Kwa.bák.ne Bo.nǽ.ne ki zeb æ.gwa.hál.zak he.tya.tyaŋ.gwé.zak



kɨ̌.tak a.há.ʔen mae hom zǽ.we gwǽ.ka/

They tied her (TAIL)...Having tied her, (HEAD)...the two big brothers, Kwabak and Bonæ, they then went off, fled, all of them, not even one stayed there.

3. WORD LENGTH

It is hard to say how many syllables may occur in an Orya word. The following are examples of six to ten syllable words. Words of up to eight syllables are not unusual and it is expected that other words can be made even longer than ten syllables. Verb and noun roots usually consist of no more than three syllables.

/dwam.gwe.bil.la.da.ʔan/ I want them	(6 syllables)
/he.tyan.gwi.ne.hal.za.ka/ he fled coming down this direction	(7 syllables)
/ta.ken.si̱.bil.la.da.ʔan.la/ he is asking them	(8 syllables)
/en.bwan.gwe.bil.la.da.gwe.ʔan.la/ he repeatedly intensely pities them	(9 syllables)
/ta.hal.ha.gwe.bil.la.da.gwe.ʔan.la/ he lacks anything to give them	(10 syllables)

4. STRESS

Stress in Orya is non-phonemic and has the function of highlighting word roots and endings in the stream of speech. Stress may be accompanied by a little length as well, especially on word roots.

4.1

Primary stress occurs on the penultimate syllable of a word root. When the root is followed by a one-syllable suffix, the original stress does not change. When two or more syllables are suffixed to a root, the penultimate syllable receives primary stress and the root retains secondary stress.[9]

$$S \text{ -----> } [+str] \text{ / } \left\{ \begin{array}{llllll} \underline{\text{ROOT}} & & & & & \\ \textbf{PRIMARY} & (S) & + & (S) & \# & \\ \underline{\text{ROOT}} & & & & & \\ \text{Secondary} & (S) & + & (S_{\emptyset}) & \underline{\quad\quad} \textbf{PRIMARY} & S \quad \# \end{array} \right\}$$

(To make the examples in this paper clearer, syllable boundaries are marked (.) and roots are separated from affixes by hyphens. Other morpheme boundaries are marked (+), where this clarifies the operation of a rule. Primary stress is underlined in examples in this section, but in the rest of the paper is marked by an acute accent on the stressed vowel.)

/bó.ton/	false
/bó.ton-.gwek/	she lied
/bó.ton-.gwé.ka/	he lied
/en.lá.la/	thought (NOUN)
/en.lá.la-.gwek/	I thought

/en.lá.la-.gwé.ʔan/	I'm thinking
/en.lá.la-.gwe.bíl.nan/	I've been thinking about it

4.2

Primary stress always precedes two sonorant consonantals (/n/, /m/, /ŋ/ and /l/) if these occur on the penultimate or antepenultimate syllables.

$$V \text{ -----> } [+str] \; / \; \underline{\quad} \; \begin{bmatrix} +son \\ +cons \end{bmatrix} \begin{bmatrix} +son \\ +cons \end{bmatrix} C_{ø} \; (S) \; \#$$

According to the first stress rule, primary stress will not change if a single-syllable suffix is added to a root. This second rule, however, will cause a change in primary stress if the adding of the suffix results in two sonorant consonantals coming together.

/túmbuŋ-na/ ----->	[tũmbṹŋnu]	round (FOC)
/sóŋgwen-na/ ----->	[sõŋgwẽ́n:ə]	the going (GER)
/yóhan-mo/ ----->	[yohã́nmo]	Yohan's

This rule also causes normal penultimate stress to become antepenultimate. (Note that a subsequent rule reduces /ll/ to [l] (9.7.2.), and /l/ may be changed to [ɾ] (8.1.2., 8.1.3.):)

/bálk-gul.lá.da/ ----->	[balkgúluda]	he caught her
/hlí-kul.lí.dak/ ----->	[hlikúlidak]	they (dl SUBJ) left them
/en.lá.la-gwe.bil.lá.dak/ ---->	[ẽnlalagwibíɾidak]	she thought about them

When the two front sonorants are farther from the end of the word than the antepenultimate syllable, the stress is not changed.

/ták.e-n.sɨ.bil.la.da.gwé.ka/	[takẽnsibiridagwékə]	he asked them repeatedly

5. SYLLABLE SHAPES

Syllables by definition have one [+syllabic] nucleus, a vowel. The syllable nucleus may be preceded or followed by one or two consonants, but the maximum expansion of CCVCC does not occur. (In Orya, a vowel plus glide may also phonetically be a syllable nucleus, the result of rule 9.6 (vowel glides). These are two syllables in their underlying form.) The phonemic shapes of Orya syllables are:

$$\begin{Bmatrix} C^2_{ø} & V & C^1_{ø} \\ C^1_{ø} & V & C^2_{ø} \end{Bmatrix}$$

The following shows various expansions of the syllable. The number following the heading is the number of one-syllable words with this form in a word list of 1650 words.

V (7)

/i/	[i]	ear
/e/	[e]	I
/æ/	[æ]	village
/a/	[a]	this

/o/	[o]	rain
/u/	[u]	faeces
/ɨ/	[ɨ]	vulva

VC (16)

/in/	[ĩn]	that
/em/	[ẽm]	you
/æk/	[æk]	teeth
/on/	[õn]	sago grub

VCC (2)

/alb/	[alp̚]	edge
/olk/	[olk̚]	under

CV (19)

/de/	[de]	to, of
/hi/	[hi]	salt
/ho/	[ho]	water
/ku/	[ku]	palm rib

CVC (94)

/bot/	[bot]	sago pudding
/dob/	[dop]	large rattan
/hen/	[hẽn]	too
/zeb/	[zɛp]	then

CCV (3)

/bli/	[bli]	frog
/ŋlɨ/	[ŋlɨ]	sky

CCVC (17)[10]

/hlal/	[hlal̚]	axe
/slak/	[sɾak]	type of thin leaf used for rolling cigars

CVCC (4)

/kals/	[kals]	fireplace
/gulk/	[gulk̚]	above

6. CONSONANT CLUSTERS

There are two types of consonant clusters in Orya, those which contain a sonorant, and those in which a semivowel is the second member.[11] Semivowel clusters are the most frequent.

6.1 SONORANT CLUSTERS

Liquid sonorants always fill the second slot of onset or internal sonorant clusters. A nasal sonorant may also occur first in onset sonorant clusters.

Onset Sonorant Clusters:

/bli/	[bli]	frog
/dlason/	[dɾásõn]	to strike (match)
/glætasibiln/	[glætasíbĩn]	to wash
/hlal/	[hlal̆]	axe
/hlagun/	[hlãᵘn]	to see
/mlin/	[mlĩn]	loop
/ŋlɨ/	[ŋlɨ]	sky
/klakatna/	[klakátnə]	narrow
/slæn/	[sɾæ̃n]	different
/tligulk/	[tɾíuk]	I dug
/tlugwen/	[tɾúwẽn]	to sleep (PLUR)

Internal Sonorant Clusters:

/blæble/	[blǽble]	wet
/blostablan/	[blóstablãn]	to bother him
/basglam/	[básglãm]	ant
/boklena/	[bóklẽnə]	knee
/goltlæblan/	[gol̆tɾæblãn]	to show him

The sonorant always occurs first in coda position clusters.

/olk/	[ol̆k]	below
/golzimk/	[gólzĩmk]	she gave it to them
/bwasomk/	[bwásõmk]	at Bwasom
/kals/	[kals]	fireplace
/alb/	[al̆p]	edge

6.2 SEMIVOWEL CLUSTERS

Semivowel clusters occur very frequently in Orya words. These could be interpreted as labialisation or palatalisation, but since there are other unambiguous consonant clusters, and since /w/ and /y/ occur by themselves as consonants, they are also analysed as consonants here. (See Appendix, Contrast Among Phonemes.)

All consonants may be followed by /w/ or /y/ except /j/, /ŋ/, /z/, /ʔ/, /w/ and /y/, therefore

tw, kw, bw, dw, gw, mw, nw, hw, sw, lw

ty, ky, by, dy, --[12]*, my, ny, hy, sy, ly* occur.

The following examples illustrate:

w-clusters:

/twenblan/	[twɛ̃́nblãn]	to eat (meat)
/kwaki/	[kwáki]	tree kangaroo
/bwi/	[bwi]	cooking banana
/dwenzim/	[dwĩ́nzĩm]	they eat them (dl OBJ)
/gwægwen/	[gwǽgwẽn]	to live
/mwanak/	[mwã́nak]	inside
/nwe/	[nwe]	eye

/hwæna/	[hwǽnə]	but
/swe/	[swe]	deceased
/lwa/	[lwa]	dog

y-clusters:

/aptyo/	[áptyo]	arrow shaft
/kyaŋguln/	[kyáŋgūn]	to tighten
/dæbya/	[dǽbyə]	part of arrow shaft
/hæbdyak/	[hǽbdyak]	they cursed him
/myækmyækson/	[myǽkmyæksōn]	to jiggle it
/anyan/	[ǎnyān]	mother
/hyagwesɨka/	[hyagwesɨ́kɨ]	he finished
/syok/	[syok]	fire
/walyak/	[wályak]	young

7. ORYA PHONEME FEATURE CHART

Labial	Lingual			Glottal			
(-fr)	+fr	-fr -bk	+bk	(-bk)			
	t		*k*		-vd	-cont	+cons
b	*d*		*g*		+vd		
	j				+dl rel	-syll	
m	*n*		*ŋ*		+nas, +son		
				ʔ[13]	-vd, -son		-cons
				h		+cont	
	s						+cons
	z				-son, +vd		
	l				+son		
	y		*w*				-cons
	i	*ɨ*	*u*		+hi	+syll	
	e		*o*		-hi,-lo		
	æ	*a*			+lo		

Stress, height and fronting are of prime importance to Orya phonology, as these three features often work together to cause complex changes such as vowel harmony. The changing shape of the /l/ phoneme is also a salient characteristic of the Orya language. Complete definitions for the phonemes are given in the appendix.

8. ALLOPHONIC RULES

8.1 RULES INVOLVING /l/

According to Foley (1986:10) it is common for Non-Austronesian languages to have a single liquid consonant. Orya is typical in this regard in that [l̆] and [ɾ] are allophones of /l/.

8.1.1

/l/ in Orya is dark in pronunciation and is almost 'flapped' like an [ɾ]. The 'flapping' of the /l/ causes a slight echo of the preceding vowel to be heard following it. More precisely,

*/l/ is released before **[-continuant]** consonants and at the end of single-syllable words.*

$$l \text{ -----> } \check{l} \; / \; \left\{ \begin{array}{ccc} \_\_\_\_ & C & \\ & [\text{-cont}] & \\ \# \; C_{\emptyset} & V & \_\_\_\_ \; \# \end{array} \right\}$$

In the phonetic transcription below, an echo vowel is shown as a raised vowel.

/gol-bwa+l/ ----->	[gól̆ᵒbwal]	I gave it to him
/tɨl-k+a/ ----->	[tɨɾ̆ⁱkɨ]	he died
/bul/ ----->	[búl̆ᵘ]	boat

8.1.2

/l/ changes to [ɾ] between two vowels, except where one of the vowels is separated from the /l/ by a morpheme boundary.

$$l \text{ -----> } ɾ \; / \; + \; S_{\emptyset} \; C_{\emptyset} \; V \; \_\_\_\_ \; V \; C_{\emptyset} \; S_{\emptyset} \; +$$

/kala-gwe/ ----->	[káɾagwe]	gaze (IMP)
/ola/ ----->	[óɾə]	road

Note that change is prevented in examples like the following because of the presence of morpheme boundaries:

/kal-na/	[kálə]	blood FOC
/ol-na/	[ólə]	language FOC
/bul-nak/	[búluk]	boat LOC
/take-n+sɨ+bil+lada+l+a/	[takɛ̃nsibiɾidálə]	he asked them

8.1.3

In sonorant clusters with /l/, the /l/ occurs as [ɾ] when it follows a consonant with the same point of articulation (namely, alveolar). [dl], for instance, is hard to say without an intervening vowel, so becomes [dɾ]. This process, however, is even more pervasive, because it extends to /l/ following front vowels as well.

/l/ changes to [ɾ] after front vowels, (/i/, /e/ and /æ/), and after front consonants.

l -----> *ɾ* / [+fr] ____

Unlike the previous rule, this rule is not sensitive to morpheme boundaries.

Examples of /l/ after front consonants:

/dla-son/ ----->	[dɾásõn]	strike (match)
/slæn/ ----->	[sɾæ̃n]	different
/tli-gulk/ ----->	[tɾíuk]	she dug
/tlu-gwen/ ----->	[tɾúwẽn]	they sleep

The /n/ which motivates the change in the next forms is subsequently deleted by front sonorant deletion (9.7.2).

/gu-ʔan+l+a/ --->	[guʔúɾə]	he is saying
/gwile-n+sɨ+ʔan+l+a/ --->	[gwiɾẽnsɨʔɨ̰ɾə]	he is holding it
/take-n+sɨ+bil+lada+ʔan+l+a/ --->	[takẽnsibiɾidaʔáɾə]	he is asking them

This rule works iteratively, and so will have varied output in instances of /ll/, depending on whether the /ll/ is preceded by a front vowel.

/ton-bil+lada+k+a/ ----->	/tonbiɾladaka/		he spoke to them
	/tonbiɾɾadaka/		
	[tõnbiɾidáka]	(9.7.2)	
/gol-l+a/ ------>	/golɾa/		he took her
	[góla]	(9.7.2)	

(/l/ has not been found following the other front consonants, /j/ and /z/.)

Examples of /l/ after front vowels:

/il/ ------>	[iɾ]	yesterday
/soŋ-gwel/ ------>	[sṍŋgwɛɾ]	she went
/take-nsonela/ ------>	[takẽnsõnérə]	he called out
/gwæ-l/ ----->	[gwæɾ]	she will live
/gwæ-la/ ----->	[gwǽɾə]	he will live

Compare the preceding forms with those with **[-front]** vowels:

/ol/	[oɬ̆]	language
/gu-la/	[gúlu]	he said
/gwile-nsɨl/	[gwírẽnsɨl]	she held it
/take-nsɨbilladala/	[takẽnsibiɾidálə]	he asked them

8.2 NASALISATION

*Vowels become **[+nasal]** before nasal consonants.*

$$V \quad \text{-----} > \quad [+nas] \quad / \quad \underline{\quad} \quad \begin{matrix} C \\ [+nas] \end{matrix}$$

/em/ ----->	[ẽm]	you
/nen/ ----->	[nẽn]	we
/in/ ----->	[ĩn]	that
/nin/ ----->	[nĩn]	meat
/ŋan-gulsun/ ----->	[ŋãngúlsũn]	to wash
/bla-gulnsɨn/ ----->	[blã́^{u}nsũn][14]	to cut it

8.3 VOWEL LAXING

8.3.1

*Final /a/ becomes **[-low]** ([ə]) when word final in an unstressed syllable.*

$$a \quad \text{----} > \quad [-low] \quad / \quad \begin{matrix} \underline{\quad\quad} \\ [-str] \end{matrix} \quad \#$$

/mam-na/ ----->	[mã́mnə]	big FOC
/bokle-na/ ----->	[bóklẽnə]	knee FOC
/bose-sa/ ----->	[bósesə]	name OBJ
/ba-sa/ ----->	[básə]	what OBJ

One syllable words are stressed, so do not change:

/ba/	[ba]	what
/ta/	[ta]	centipede

8.3.2

In a process that is similar to the above,

/e/ is lowered to [ɛ] before voiced consonants within closed syllables. The change also takes place if /e/ is followed by final [rə], the result of rules 8.1.2 and 8.2.

$$e \quad \text{-----} > \quad \varepsilon \quad / \quad \left\{ \begin{matrix} \underline{\quad\quad} & C & . \\ & [+vd] & \# \\ \underline{\quad\quad} & r & ə \quad \# \end{matrix} \right\}$$

/em/ ----->	[ẽm]	you
/soŋ-gwen/ ----->	[sṍŋgwẽn]	go (INF)
/soŋ-gwen.na/ ----->	[sõŋgwẽ́n:ə]	the going (GER)
/soŋ-gwel/ ----->	[sṍŋgwəɾ]	she will go
/soŋ-gwe.la/ ----->	[sõŋgwéɾə]	he will go
/bel/ ----->	[bɛɾ]	platform
/leŋ-leŋ-na/ ----->	[lẽŋlẽ́ŋnə]	yellow

This rule is ordered before the devoicing rule, 8.4.

/zeb/ ----->	[zɛ́p]	then, therefore

In the next forms, /e/ is not followed by a word or syllable final voiced consonant, so no change occurs:

/soŋ-gwe/	[sṍŋgwe]	go (IMPER)
/soŋ-gwe.ʔan/	[sõŋgwéʔãn]	she is going
/soŋ-gwek/	[sṍŋgwek]	she went
/soŋ-gwe.ka/	[sõŋgwékə]	he went

Although all sonorants operate in similar ways in other areas of the language (see 9.7.1, 9.7.3), it is not the case here. Other sonorants followed by final /a/ do not cause a change similar to that caused by final [rə].

/bokle-na/	[bóklẽnə]	knee FOC
/e.ma/	[ẽ́mə]	(2sg PRES AUX)

8.4 DEVOICING

This rule is both an allophonic and a morphophonemic rule. It accounts for the presence of [p] as an allophone of /b/. As a morphophonemic rule, it gives the reason why there are no final /d/, /g/ or /j/ in Orya, as these would also be devoiced by the rule to become /t/ and /k/.[15] The discontinuing rule (9.1) below is similar to this rule.

Word-final non-sonorant consonants (those other than nasals, /l/, /w/ or /y/) lose their voicing. Syllable-final non-sonorant consonants lose their voicing when followed by another consonant. Orya syllable-final non-sonorant consonants maintain their voicing only in a word-medial intervocalic position.

$$\begin{matrix} C \\ [\text{-son}] \end{matrix} \quad \text{-----} > \quad [\text{-vd}] \quad / \quad \underline{\quad} \quad \left\{ \begin{matrix} \# \\ . \quad C \end{matrix} \right\}$$

This rule explains all the occurences of /p/ in Orya (except for some borrowed words):

/hæb-tan/ ----->	[hǽptyãn]	curse him to die
/ab-denak/ ----->	[ápdẽnak]	together
/abe-hab/ ----->	[ábehap]	for me
/ab/ ----->	[ap]	for me (contracted)

Compare:

[hæb-osókə]	two men cursed each other to die
[ondoápi]	chief (exception: borrowed from Sentani language family)
[ábla-l]	two women crossed
	(/b/ does not change because /bl/ is a cluster beginning the next syllable.)

9. MORPHOPHONEMIC RULES

9.1 DISCONTINUING

In a process similar to the above:

/l/ is realised as [t] when it occurs before a word or morpheme boundary and a /d/. /s/ is realised as [t] only when it occurs before a morpheme boundary and another /s/.[16]

l -----> *t* / ____ $\begin{Bmatrix} \# \\ + \end{Bmatrix}$ *d*

s -----> *t* / ____ + *s*

/æs-sɨblaka/ ----->	[eⁱtsɨblɨ̌kə]	he waited for him until he came
/ol dawem/ ----->	[ot dáwɛ̄m]	good news
/doal-doal/ ----->	[doatdóal]	demons REDUP
/waŋil dan/ ----->	[wā́ŋit dān]	betel pepper

9.2 VOWEL HARMONY

Orya vowel harmony reflects the tendency of the language to keep the tongue high. While there is some interplay between high vowels, most of the assimilation occurs when mid and low vowels are raised to agree with adjacent high vowels. This change can be caused by both **pro**ceding and **pre**ceding vowels, i.e. right to left or left to right. The position of stressed syllables is an important controlling factor in most of these situations.

LEFT TO RIGHT HARMONY:

9.2.1

/u/ and /ɨ/ will assimilate when one is preceded by the other.

u -----> *ɨ* / *ɨ* C_1^2 ____

ɨ -----> *u* / *u* C_1^2 ____

Diagrammed another way:

$$V \text{ -----> } V \text{ / } V \; C_1^2 \text{ ____}$$

$$\begin{bmatrix} +hi \\ -fr \\ -\alpha bk \end{bmatrix} \quad [\alpha bk] \quad \begin{bmatrix} +hi \\ -fr \\ \alpha bk \end{bmatrix}$$

/oto-gulsɨn/ ----->	[otogú$^{(1)}$lsũn][17]	to fix it
/ɨk-gulk/ ----->	[ɨ̌kgɨ$^{(1)}$k]	she planted it
/zɨnɨ-gulk/ ----->	[zɨ̌nɨgɨ$^{(1)}$k]	she visited her

9.2.2

/a/ (or [ə], the result of 8.3.1) will assimilate in position to a preceding high stressed vowel. This rule does not re-apply to its own output.

$$\begin{bmatrix} V \\ -hi \\ -fr \\ -bk \end{bmatrix} \text{ -----> } \begin{bmatrix} V \\ +hi \\ \alpha fr \\ \beta bk \end{bmatrix}^{18} / \begin{bmatrix} \acute{V} \\ +hi \\ \alpha fr \\ \beta bk \\ +str \end{bmatrix} \quad C_{\emptyset} \_\_\_\_$$

Non-iterative rule

(The stressed vowel may have either primary or secondary stress, and may be in a single-syllable root or in the affixes (rule 4.1).)

Following are examples of primary stress triggering vowel harmony:

/gu-ka/ ----->	[gú$^{(2)}$ku]	he said
/ɨk-lal/ ----->	[ɨ̌klɨ$^{(2)}$l]	two women planted it
/ŋein-nak/ ----->	[ŋ$\acute{\text{e}}^{\text{i}}$n:i$^{(2)}$k]	in front
/lop-ta.bil.ka/ ----->	[loptabí$^{(2)}$ɾki]	he took them
/hili-gul.ka/ ----->	[hiɾigú$^{(2)}$lku]	he threw it
/hɨl-gul.ka/ ----->	[hɨ$\check{\text{l}}^{(1}$gɨ$\check{\text{l}}^{2)}$kɨ]	he untied it
/ɨk-gul.ka/ ----->	[ɨkgɨ$\check{\text{l}}^{(1}$k$^{2)}$ɨ]	he planted it
/ɨlɨk-gul.ka/ ----->	[ɨɾɨkgɨ$\check{\text{l}}^{(1}$k$^{2)}$ɨ]	he held it, ruled it

Roots retain secondary stress, and this also triggers vowel harmony when the root is only one syllable. It can be seen that the rule does not work on its own output, so [gublúkə] is not changed to *[gublúku].

/gú-blaka/ ----->	[gub$^{(2)}$lúkə]	he told him
/gú-blahaeka/ ----->	[gubluhá^{e}$^{(2)}$kə]	he came and called him away
/hít-taka/ ----->	[hit:í$^{(2)}$kə]	he stabbed him
/ɨ̌k-taka/ ----->	[ɨktɨ̌$^{(2)}$kə]	he planted it

Roots of more than one syllable have stress on their penultimate syllable. This prevents them from influencing the syllable following the root:

/zɨnɨ-tala/	[zɨnɨtálə]	he visited him
/æ-ɨtɨ-tak/	[e$^{\text{i}}$ɨ̌tɨtak]	they cowered
(/ɨtɨ/ is the root)		

RIGHT TO LEFT HARMONY:

9.2.3

In a rule similar to 9.2.1 in L-R harmony,

/ɨ/ changes to /i/ before stressed /i/.[19]

$$\text{ɨ} \quad \text{-----} > \quad i \quad / \quad \underline{\quad} \quad \underset{[+\text{str}]}{C_{ø}} \quad i$$

/oto-gwesɨbilnan/ ----->	[otogwesibí(3)rí(2)rĩn]	I am satisfied with it
/lake-nsɨzimda/ ----->	[lakɛ̃nsizí(3)mdi(2)]	they asked them (dl OBJ)

9.2.4

A mid vowel (/e/ or /o/) will raise to a high vowel when preceding a stressed high vowel. A stressed mid vowel will be raised to a high vowel when preceding a high vowel in the final syllable. In both cases the position (fronting and backing) stays the same as the mid vowel.

$$\begin{bmatrix} V \\ -hi \\ -lo \\ \alpha fr \\ -\alpha bk \end{bmatrix} \text{-----} > \begin{bmatrix} +hi \\ \alpha fr \\ -\alpha bk \end{bmatrix} \; / \; \left\{ \begin{array}{llll} \underline{\quad} & C_{ø} & V & \\ & & \begin{bmatrix} +hi \\ +str \end{bmatrix} & \\ \underline{\quad} & C_{ø} & V & C_{ø} \; \# \\ [+str] & & [+hi] & \end{array} \right\}$$

Non-iterative rule

Following are examples of vowel change before a stressed syllable:

/ka.e-gwe.bin.hap/ ---->	[kagwi(4)bí(2)nhip]	in order to share it
/zon-gul.la/ ----->	[zũngú(4)lu(2)]	he escorted her
/ŋop-gul.ka/ ----->	[ŋupgú(4)lǔ(2)ku]	he hung it

Compare:

/zon-ta.la/	[zõntálə]	he escorted him
/ŋop-tan.da.ka/	[ŋoptãndákə]	he hung them

This rule also feeds 9.2.1, (which feeds 9.2.2):

/bal.k-o.so.sɨ.ka/ ----->	[baǔko(4)su]/sɨka/	two men caught and released two men
	[baǔkosusú(1)]/ka/	
	[baǔkosusú(2)ku]	

Below are examples that show raising of mid vowels on stressed penultimate syllables:

/ho.le-gwe.bik/ ----->	[holegwíbik] (4)	she desired it
/gol-hlun/ ----->	[gúlhlũn] (4)	shut it (door)
/oto-to.no.so.sɨk/ ----->	[ototonosúsuk] (4, 1)	they fixed it (chair, DUAL OBJ)
/hit-no.so.sɨk/ ----->	[hitnosúsuk] (4, 1)	they finished stabbing the two (men)

9.2.5

/æ/ will raise to an [e^{i}] glide to harmonise with any high vowel in the next syllable.

æ -----> e^{i} / ____ $C_{ø}$ V
[+hi]

/tahal-hanæbilladak/ ----->	[tahalhãne^{i}bíɾidak] (5)	they were in need of them
/wæ-guln/ ----->	[wé^{i}ũn] (5)	carry her
/tæ-bilʔan/ ----->	[te^{i}bíʔĩn] (5)	look for her
/glæ-sosɨka/ ----->	[gle^{i}susúku] (5) (4, 1, 2)	he finished washing it (DUAL: shirt or pants)

9.3 /y/ EPENTHESIS

The importance of high vowels and stress in vowel harmony has already been seen above. The Orya language prefers that the tongue stay high and front, so that when the tongue encounters the low vowel /a/ after several stressed front sounds, it takes some time to make the transition down. This slow transition results in /y/ being added before the low vowel. This is the first of three rules that deal with single-syllable roots, which always retain at least secondary stress.

If a single syllable root contains a front vowel, and if an adjacent consonant is also [+front], /y/ will be added in transition from a front consonant to /a/ in the suffix following. The high vowel and front consonant of the root may be flanked by any consonant.

$$\#\ (C)\left\{\begin{matrix}\overset{1}{\underset{}{C}}\ \overset{[+str]}{\overset{\mathbf{2}}{V}}\ \overset{\mathbf{3}}{C} \\ \overset{1}{\underset{}{C}}\ \overset{2}{\underset{[+fr]}{V}}\ \overset{3}{\underset{}{C}}\end{matrix}\right\}\ (C)\ +\ \overset{4}{\underset{[+fr]}{C}}\ \overset{5}{a}\ \overset{6}{}\ \Longrightarrow\ \#\,1\,2\,3\,4+5\,y\,6$$

/gwe-sa/ ----->	[gwésyə]	pig OBJ
/we-na/ ----->	[wɛ́nyə]	woman FOC
/te-na/ ----->	[tɛ́nyə]	tree FOC
/deŋ-tan/ ----->	[dɛ́ŋtyãn]	cut them (weeds)
/wet-tasɨka/ ----->	[wet:yasɨ́kɨ]	change it
/lek-taka/ ----->	[lektyákə]	he hit him
/hæb-dak/ ----->	[hǽpdyak]	they cursed him

The following forms are not changed by this rule:

/lek-lek-taka/	[leklektákə]	he hit him repeatedly
	(The root stress is on the first syllable of the reduplicated root.)	
/keŋ-tan/	[kɛ́ŋtãn]	submerge him
	(Both /k/ and /ŋ/ are **[+back]**.)	

9.4 /l/ TO SEMIVOWEL SHIFT

Indirect objects are marked on verbs with /-bil/ (FEMALE) and /-bla/ (MALE).

When /-bla/ is preceded by the front vowels /e/ or /æ/ and a front consonant in a one-syllable root, the /-bla/ changes to /-bya/. When /-bla/ is preceded by /o/ and a front consonant in a one-syllable root, the /-bla/ changes to /-bwa/.

$$\#\ \overset{1}{C^{2}_{\emptyset}}\ \overset{2}{\acute{V}}\ \begin{bmatrix}-hi\\ \alpha fr\\ -\alpha bk\\ +str\end{bmatrix}\ \overset{3}{C}\ [+fr]\ +\ \overset{4}{b}\ \overset{5}{l}\ \overset{6}{a}\ \Longrightarrow\ \#\,1\,2\,3+4\ \overset{6}{\begin{bmatrix}-syl\\ +cont\\ -cons\\ \alpha fr\\ -\alpha bk\end{bmatrix}}$$

This change is triggered by the occurrence of three consecutive front consonants, the last consonant of the root and the /-bl/. The results are similar to /y/ epenthesis above.

/gol-blal/ ----->	[gólbwal]	I gave it to him
/hwæn-blal/ ----->	[hwǽ̃nbyal]	I missed seeing him
/zel-blaka/ ----->	[zɛɾbyákə]	he gave him to him
/æs-blaʔanla/ ----->	[æsbyaʔárə]	he is waiting for him

(/zel/ and /æs/ receive secondary root stress)

The following three forms do not undergo this rule because they do not meet the structural requirements.

/gwæ-blaka/	he did it to him (This word does not have rule element number 3.)
/soŋ-gweblala/	he went to him (The change must occur after a stressed syllable.)
/blal-blal-a/	very tall (The first syllable vowel cannot be /a/, [-fr,-bk].)

9.5 /g/ DELETION RULE

When an affix beginning with /gw/ or /gu/ is suffixed to an open ($C^2_{ø}V$) single-syllable verb stem, the /g/ is dropped.

	VERB						
	1	2		3	4		
#	$C^2_{ø}$	V [+str]	+	*g*	*u* *w*	=====>	# 1 2 + Ø 4

The two affixes involved are the Female/Inanimate Direct Object marker /-gul/, and the activity/achievement verb marker /-gwe/.

/e-gweʔan/ ----->	[ewéʔãn]	she has a fever
/hli-guln/ ----->	[hlíũn]	to leave her
/hla-guln/ ----->	[hlãᵘn]	to see her
/tli-gulka/ ----->	[tɾiúl̆ku]	he dug
/wæ-gulk/ ----->	[wéⁱuk]	she carried her
/do-gwehanak/ ----->	[dowehã́nak]	she was sad
/du-gweblala/ ----->	[duweblálə]	he went to see him

Multi-syllable roots, nouns and verbs derived from nouns do not participate in this rule.

/hili-guln/	[híɾigũn]	to throw it
/bae-gwela/	[baᵉgwɛ́ɾə]	he doesn't want to
/dugwa/	[dúgwə]	cassowary
/so- gwek/ weeds ACHIEVEMENT (PAST2)	[sógwek]	it has become weedy
/u -gwek/ stomach ACHIEVEMENT	[úgwek]	she became pregnant

Compare the following with /e-gweʔan/ ([ewéʔãn]) above:

/e.i -gweʔan/ fruit ACTIVITY (PRES)	[eⁱgwéʔãn]	it is bearing fruit

9.6 VOWEL GLIDES

Vowel clusters in Orya have been analysed as nuclei of separate syllables, rather than as complex nuclei such as a vowel plus a glide. Complex syllable nuclei do in fact occur phonetically in Orya.

As seen above, /hla-guln/ becomes [hlãᵘn] because of the /g/ deletion rule. The /a.u/ also loses its two-syllable timing to become the [aᵘ] glide. In Orya, there are three other vowel glides, but unfortunately, the /au/ combination is the only one where morphological evidence has been found that the vowel glide started as two separate syllables.

The /au/, /ae/, /aɨ/ and /ei/ combinations coalesce to become complex syllable nuclei, vowel glides.

a u	=====>	a^u
a e	=====>	a^e
a ɨ	=====>	$a^ɨ$
e i	=====>	e^i

/bla-gulnsɨla/ ----->	[blãᵘnsúlu]	he cut it off

There is an additional line of evidence supporting the status of these vowel glides as being different from vowel phonemes. They do not participate in the /g/ deletion rule above, but rather follow the pattern of two-syllable roots.

/ba.e-gwela/	[baᵉgwérə]	he doesn't want to
/e.i-gweʔan/	[eⁱgwéʔãn]	it is bearing fruit

Other vowels may occur together without intervening consonants, but they retain two-syllable timing. The /ai/ combination has a similar low-high pattern as /au/ and /aɨ/, but retains its two-syllable timing.

/tak-ta+i+lin/	[tak.ta.ír.ĩn]	to throw out and down
/teha-bla+ine+k+a/	[te.ha.bla.ĩ.né.kə]	he placed (hands) down on him
/wea/	[wé.ə]	water
/bian/	[bí.ãn]	father
/boa/	[bó.ə]	lime
/hli-guln/	[hlí.ũn]	to leave
/tlu-gwen/	[tɾú.wẽn]	to sleep (PLUR)
/wæ-guln/	[wéⁱ.ũn]	to carry her

9.7 FRONT SONORANT DELETION

9.7.1

A morpheme final /l/ or /n/ will delete before /ʔ/ or word-final /k/.

$$C \begin{bmatrix} +fr \\ +son \\ +cons \end{bmatrix} \text{-----> } \emptyset \; / \; \left\{ \begin{array}{lll} \_\_\_\_ & + & k \; \# \\ \_\_\_\_ & (+) & ʔ \end{array} \right\}$$

/gol-k/ ----->	[gok]	she took it
/nol-k/ ----->	[nok]	they took it
/hɨl-gul+k/ ----->	[hɨ̆lğɨk]	she untied it
/hɨl-gul+k+a/	[hɨlğɨk̆ɨ]	he untied it
/hɨl-gul+ʔan/ ----->	[hɨlğɨ̆ʔĩn]	she is untying it

/zel-bil+k/ ----->	[zíɾbik]	she gave him to her
/zel-bil+k+a/	[ziɾbíɾki]	he gave it to him
/zel-bil+ʔan+k/ ----->	[ziɾbíʔik]	when she gave it to her
/zel-bil+ʔan+k+a/ ----->	[zɛɾbiʔĩ́nkə]	when he gave it to her

There are two location words where /lk/ is not reduced to [k]. These words lack the morpheme break in the rule above:

/gulk/	[guǐk]	above
/olk/	[oǐk]	underneath

9.7.2

/ln/ and [lɾ] simplify to [l] word medially. [ɾɾ] and [nɾ] simplify to [ɾ] word medially. (The [ɾ] is the result of rule 8.1.3.)

l n =====> *l*
l ɾ =====> *l*
ɾ ɾ =====> *ɾ*
n ɾ =====> *ɾ*

/ol-na/ ----->	[ólə]		language, voice
/gol-na/ ----->	[gólə]		house FOC
/sal-sal-na/ ----->	[salsálə]		hot ADJ
/gol-la/ ----->	/golɾa/	(8.1.3)	
	[gólə]		he took it
/ton-bil+lada+k+a/ ----->	/tonbiɾɾadaka/	(8.1.3)	
	[tõnbiɾidákə]		he spoke to them
/gwile-n+sɨ+ʔan+l+a/ ----->	/gwiɾensɨʔanɾa/	(8.1.3)	
	[gwiɾẽnsɨʔɨ́ɾə]		he is holding it

/nn/ is not affected by this rule.

/san-na/	[sa̋ǹːə]	mosquito FOC
/tolan+na/	[toɾa̋ǹːə]	speech

9.7.3

When /ln/ or /ll/ occur word finally, the first of the two is deleted.

1 2
C C # =====> Ø 2 #
[+fr +son +cons] [+fr +son +cons]

/gol-n/ ----->	[gõn]	take INF
/gol-l/ ----->	[goǐ]	she took it
/hɨl-gul+n/ ----->	[hɨ̃ǐgɨ̃n]	untie it INF

10. ORDERING RELATIONS BETWEEN RULES

8.1.3	/l/ ------>	[ɾ] and			
8.3	/a/ ------>	[ə]	/soŋ-gwela/	----->	/soŋgweɾə/
8.3.2	/e/ ------>	[ɛ]		----->	[soŋgwéɾə]
	(The stress rule is not in ordered relation here.)				

8.3.2	/e/ ------>	[ɛ]	/zeb/	----->	/zɛb/
8.4	Devoicing			----->	[zɛp]
	8.4 would potentially bleed 8.3.2.				

4.1	Stress	/wæ-gullagwek/	---->	/wægullágwek/
4.2	Double Sonorant Stress		----->	/wægúllagwek/
9.2.2	/a/ ------> [+hi]		----->	/wægúllugwek/
9.7.2	Front Sonorant Deletion		----->	[we^{i}úlugwek]
	(9.5 + /g/ Deletion,			
	9.2.5 /æ/ ------> [e^{i}])			
	9.7.2 would potentially bleed 4.2.			

4.1	Stress	/glæ-sosɨka/	----->	/glæsosɨ̌ka/
9.2.4	/e,o/ -----> [i,u]		----->	/glæsusɨ̌ka/
9.2.1	/u,ɨ/ -----> [ɨ,u]		----->	/glæsusúka/
9.2.2	/a/ ------> [+hi]		---->	/glæsusúku/
9.2.5	/æ/ ------> [e^{i}]		----->	[gle^{i}susúku]

4.1	Stress	/deŋ-tan/	----->	/déŋtan/
9.3	/y/ Epenthesis		----->	[déŋtyãn]
	(+8.2 Nasalisation,			
	8.3.2 /e/ ------> [ɛ])			

4.1	Stress	/gol-blal/	----->	/gólblal/
9.4	/l/ ------> [y,w]		----->	[gól̆bwal]
	(+8.1.1. /l/ ------> [l̆])			

4.1	Stress	/hla-guln/	----->	/hláguln/
9.5	/g/ Deletion		----->	/hláuln/
9.6	Vowel Glides		----->	/hlá^{u}ln/
9.7.3	Front Sonorant Deletion		----->	/hlá^{u}n/
8.2	Nasalisation		----->	[hlã́^{u}n]

8.1.3	/l/ ------> [ɾ]	/gwile-nsɨʔanla/	----->	/gwiɾensɨʔanɾa/
9.7.2	Front Sonorant Deletion		----->	/gwiɾensɨʔaɾa/
				[gwiɾẽnsɨʔɾ̃ɾə]
	(+Stress, Nasalisation,			
	8.3.2 /e/ ------> /ɛ/,			
	9.2.2 /a/ ------> [+hi],			
	8.3.1 /a/ ------> [ə])			

8.1.3	/l/ ------>	[ɾ]	/zel-bilk/	----->	/zeɾbilk/
9.7.1	Front Sonorant Delete				/zerbik/
8.1.1	/l/ ------>	[ĭ]			-Ø--Ø-
				----->	[zíɾbik]

(+Stress, Front Sonorant Delete,
9.2.4 /e,o/ ------> [i,u],)
Rules 8.1.3 and 9.7.1 bleed /l/ ------> [ĭ].

9.7.2	Front Sonorant Delete	/kal-na/	----->	[kálə]
8.2	Nasalisation			-Ø-

(+Stress)
Rule 9.7.2 bleeds Nasalisation.

9.1	Discontinuing	/waŋil dan/	----->	[wā̆ŋit dān]
8.1.3	/l/ ------> [ɾ]			-Ø-

Rule 9.1 bleeds /l/ ------> [ɾ].

No ordering constraints have been found for the following rules:

8.1.2	/l/ ------>	[ɾ] (morpheme internal)			
			/ola/	----->	[oɾə]
8.3.1	/a/ ------>	[ə]	/asa/	----->	[asə]
9.2.3	/ɨ/ ------>	[i]	/take-nsɨbilki/	----->	[takẽnsibírki]

APPENDIX

CONTRAST AMONG PHONEMES

CONSONANT CONTRASTS:

/t/ and /d/, voiced and voiceless alveolar stops:

/ta-n/	[tãn]	SING SUBJ kill him IMPER
/da-n/	[dãn]	PLUR SUBJ kill him IMPER
/ab-tanda/	[aptā́ndə]	they came
/ab-denak/	[ápdẽnak]	together

There is no contrast between /t/ and /d/ word finally.
(See devoicing rule, 8.4.)

/d/, voiced alveolar stop, and /l/, voiced alveolar lateral:

/dan-dan/	[dā́ndān]	two
/la-n/	[lān]	shave IMPER
/da-k/	[dak]	they (PLUR SUBJ) killed him
/la-ka/	[lákə]	they (DUAL SUBJ) killed him

/k/, voiceless velar stop, and /ʔ/, glottal stop:

/ake-n/	[ákẽn]	to see them (DUAL OBJ)
/aha-ʔen/	[aháʔẽn]	one

/akan-gwebiln/	[akāngwíbĩn]	to try it
/a-ʔan/	[áʔān]	this one (close)
/karek-na/	[kárekna]	bad
/soŋ-æk/	[sóŋæk]	they (DUAL fem SUBJ) walked

/ʔ/ is not found in word initial or final positions.

/h/, voiceless glottal fricative, and /ʔ/, glottal stop:

/hen/	[hẽn]	also
/ahan/	[áhān]	by itself
/a-ʔan/	[áʔān]	this one (close)
/ohol/	[óhol]	it cooled
/aho-ʔanla/	[ahoʔárə]	he is acting treacherously to her

/h/ and /ʔ/ are not found word finally, and /ʔ/ does not occur word initially.

/k/ and /g/, voiced and voiceless velar stops:

/kol-na/	[kólə]	sugar cane FOC
/gol-na/	[gólə]	house FOC
/boge/	[bóge]	snake
/bokæ/	[bókæ]	close relative; brother
/æk/	[æk]	teeth

/g/ is not found word finally (see rule 8.4.).

/s/ and /z/, voiceless and voiced grooved fricatives.

/san/	[sān]	mosquito
/za-n/	[zān]	to fall INF
/asa/	[ásə]	AUX 1sg. FUT
/aza/	[ázə]	grandfather
/as/	[as]	snake

/z/ is not found word finally.

/j/, voiced alveopalatal grooved affricate, and /z/, voiced alveolar grooved fricative:

/ja-gulk/	[jaᵘk]	she deflected it
/za-gulk/	[zaᵘk]	she stood
/eijan/	[éʲjyān]	war
/aza/	[ázə]	paternal grandfather

/j/ and /z/ are not found word finally.
/j/ and /z/ are in free variation in a few words:
/zi walas/, /ji walas/ (boy).

/j/, voiced alveopalatal grooved affricate, and /y/, voiced palatal semivowel:

/ja-gulk/	[jáᵘk]	she deflected it
/ya-gulk/	[yáᵘk]	we (DUAL SUBJ) stood

/bæjen/	[bǽjɛ̃n]	never
/iye/	[íye]	relative

/j/ and /y/ are not found word finally.

/m/ and /n/ voiced bilabial and alveolar nasals:

/men/	[mɛ̃n]	which
/nen/	[nɛ̃n]	us
/tama-l/	[tã́mal]	I dug up (PLUR OBJ, potatoes)
/tana/	[tãnə]	foot
/kam/	[kãm]	night
/ta-n/	[tãn]	to kill him INF

/n/ and /ŋ/, voiced alveolar and velar nasals:

/nɨzɨ-k/	[nɨ̌zɨk]	they killed them (DUAL OBJ)
/ŋɨ/	[ŋɨ]	thorn
/hanan-gwek/	[hã́nãngwek]	it became swollen
/haŋ-gwek/	[hã́ŋgwek]	it broke
/boton/	[bótõn]	false
/beteŋ/	[bɛ́tɛ̃ŋ]	small

/b/, voiced bilabial stop is not considered suspect with any other.

/babbab/	[bápbap]	bird name
/blæble/	[bláble]	damp
/ŋæb-na/	[nápnə]	waves FOC

Word-final and syllable-final /b/ occur as [p] by the devoicing rule, (8.4).

VOWEL CONTRASTS:

/u/ and /o/, high close and mid close back rounded vocoids:

/u/	[u]	faeces
/o/	[o]	rain
/gol-ka/	[gǒlkə]	he married her
/gulk/	[gŭlk]	above

/i/, /ɨ/ and /u/, voiced high close front, central, and back unrounded vocoids:

/i-na/	[ĩ́ni]	ear FOC
/ɨ-na/	[ɨ̃́nɨ]	vulva FOC
/u-na/	[ṹnu]	faeces FOC
/sin-gwen/	[sĩ́ngwɛ̃n]	to become weak
/sɨŋɨ-gweʔanla/	[sɨŋɨgweʔárə]	it is spitting rain
/sul-sɨn/	[súlsũn]	pour out

/e/, voiced mid close front unrounded vocoid, /æ/, voiced low close front unrounded vocoid, and /a/, voiced low open central unrounded vocoid:

/e-ʔen/	[éʔɛ̃n]	you alone
/æ-ʔen/	[ǽʔɛ̃n]	me alone
/a-ʔan/	[áʔãn]	this one
/e/	[e]	I
/æ/	[æ]	village
/a/	[a]	this

SEMIVOWELS:

As /y/ and /w/ appear regularly at the onset of syllables, they are in contrast with /i/ and /u/, which occur only as the nucleus of syllables.

/y/, voiced palatal nonsyllabic vocoid:

/yaye/	[yáye]	male name
/aya/	[áyə]	father
/yu-n/	[yũn]	sew INF
/auyan/	[áʷyãn]	great grandfather

/w/, voiced labiovelar nonsyllabic vocoid:

/wawe/	[wáwe]	crocodile
/awa-ʔan/	[awáʔãn]	I am bathing
/wewal/	[wéwal]	wife
/hwa-næk/	[hwã́næk]	it exploded

NOTES

1. Program Kerja Sama UnCen-SIL (UnCen-SIL Cooperative Program), September 1988.

2. Anceaux (1965) and Voorhoeve (1971, 1975) include 'Uria' in the Nimboran Group. Orya, however, bears little similarity in cognates or structure to Kemtuk-Gresi or Nimboran.

3. Forty-five percent of 200 words were found to be cognates, and these cognates were 84% similar. The following lists some of the shifts in sounds between Orya and Berik in order of frequency:

Orya	Berik	Orya	Berik
h	*f*	*a/i* alternation	
e	*i*	*z*	*j*
n	*r*	*b*	*bl*
ng	deleted	e^i	*i*
a/o alternation		*æ*	*a*
a	*i*	*z*	*g*

4. These percentages were also based on a list of 200 common words.

5. The Orya legend of Kwa and Bonæ is the story of two brothers who run to the Berik area to escape an evil spirit and become two mountains. The Berik people say they originate from two brothers who came from those two mountains.

6. Phonological features used in this paper:

Major Class Features:

cons	consonantal
son	sonorant
syll	syllabic

Features relating to position of:

Tongue:

bk	back
fr	front
hi	high
lo	low

Lips:

lab	labial	(labial is also [-front])

Other features:

cont	continuant
dl rel	delayed release
nas	nasal
str	stress
vd	voiced

7. List of symbols and abbreviations used in phonological rules and examples:

1sg	first singular subject
ACHIEVEMENT	Achievement verb form
ACTIVITY	Activity verb form
AUX	auxiliary
C	consonant
$C_{ø}^{2}$	upper limit of 2 consonants, no lower limit
$C_{ø}$, $S_{ø}$	Ø or more consonants, syllables
DUAL SUBJ/OBJ	dual subject/object
fem	feminine
FOC	focus
FUT	future
GER	gerund
IMPER	imperative
INF	infinitive
LOC	locative
MALE SUBJ/OBJ	male subject/object
PAST	past
PLUR SUBJ/OBJ	plural subject/object
PRES	present
RECENT	recent past
S	syllable

SING SUBJ/OBJ	singular subject/object
SUBJ	subject
REDUP	reduplicated
V	vowel
#	word boundary
+	morpheme boundary
.	syllable boundary
----->	'changes to'
/	'in the environment of'
____	position of change, (____ C means 'before a consonant')
( )	optional element
{ }	choice of elements enclosed
[ ]	enclose phonological features in rules or phonetics in text (phonological rules are all in phonetics)
/ /	enclose phonemics

8. Stress (') is shown here even though it is not phonemic in Orya.

9. Almost all Orya roots are of one or two syllables. Those that are longer show signs of compounding or reduplication. An example is the root for 'think' (/en-lala/), which can be analysed as 'liver-pure'. Such frequently used compounds have gained the status of roots as far as stress is concerned.

10. The four words below do not fit the syllable pattern of virtually all other Orya words. They contain [swɾ], [dwɾ] and [kwɾ], which may have been borrowed from another language or from an earlier form of Orya. The [kwɾ] word is an onomatopoeic word. These could be analysed as labialisation or as CCCV syllables, but because they are so rare, they are simply regarded as anomalous. Since /w/ is clearly a consonant in Orya, we are analysing all of the other consonant-w combinations as two consonants. (The /l/ to [ɾ] shift is discussed in 8.1.)

/swla/	[sʷɾa]	vacant lot
/swlæ-taka/	[sʷɾætaka]	he laughed at him
/dwlik/	[dʷɾik]	female demon
/kwlet-ʔnan/	[kʷɾétʔnān]	evening (frog sound time)

(The Orya word for the sound made by a frog is [kʷɾét].)

11. The consonant clusters being analysed here are those which occur within a single syllable. When looking across syllable boundaries, many more combinations exist. One deserving mention is /n/ + /g/. As there is no nasal assimilation in Orya, this combination does not change to /ŋ/ or /ŋg/.

Words containing alveolar nasals followed by [g]:

/en.en.gwen/	to make a commotion
/ta.ken.gwe.ka/	he shouted
/ŋan.gul.sun/	wash

12. Even though a thorough search has been made, no examples of /gy/ have been found.

13. Following Schane (1973:26), '[consonantal] refers to a *narrowed constriction* in the *oral cavity* – either total occlusion or frication' (emphasis Schane's). Therefore, the glottal stop is [-consonantal].

14. Nasalised glides are noted with the nasalisation on the syllabic vowel only. The nasalisation extends through the glide as well.

15. There is no [č] in Orya.

16. It is predicted that this would be true before /z/ as well, but no examples have been found.

17. Numbers above examples in section 9.2 refer to the number of the rule within this section that has caused the change. That is, (1) refers to rule 9.2.1, (2) to rule 9.2.2 etc.

18. The two alpha values must be the same (- and -, or + and +), as must the two beta values. [α] and [β] have no required relation to each other. Opposite relations are shown by [α] and [-α] in other rules.

19. No examples have been found where this rule could apply iteratively.

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THE PRONOUN SYSTEM OF MAUWAKE[1]

LIISA JÄRVINEN

1. INTRODUCTION

1.1 GENERAL

The purpose of this paper is to describe the pronouns and their use in the Papuan language of Mauwake (also called Ulingan). There is a heavy emphasis on the personal pronouns, both because they are the most prototypical of all the pronouns and because the system of personal pronouns in Mauwake is quite extensive.

In the group of personal pronouns, of special interest are the two sets of nominative pronouns as well as the fact that three different kinds of pronouns can be used to express possession. The dative possessive, although attested in various languages in the world, is a rare phenomenon in Papuan languages. The study of the use of pronouns in discourse in section 4 shows that pronouns are often used as a topicalising device. And contrary to a common tendency in languages, Mauwake quite frequently uses subject pronouns with imperatives.

Mauwake belongs to the Pihom Stock,[2] Madang-Adelbert Range Super-stock, Trans-New Guinea Phylum (TNGP). Usan is the only language in the stock of whose pronoun system there is published material available (Reesink 1984), but I have also used an unpublished grammar description of three languages of the Kaukombaran family (Loeweke & May 1982), which is closely related to Mauwake.

The database for this study consists of about 100 pages of varied text material in Mauwake, collected during my residence in Moro village from 1978 to 1980 under the auspices of the Summer Institute of Linguistics. Some of the texts were given by residents of other Mauwake-speaking villages. In addition to the texts, elicitation was also used, and checking done based on texts obtained later. Besides the many people who have provided texts, Mr Saror Aduna from Moro village also assisted in checking the material.

A description of the personal pronouns in Mauwake follows in section 2. The primary and secondary references of the personal pronouns are dealt with in section 3, and their discourse use in section 4. Other pronouns are treated in section 5.

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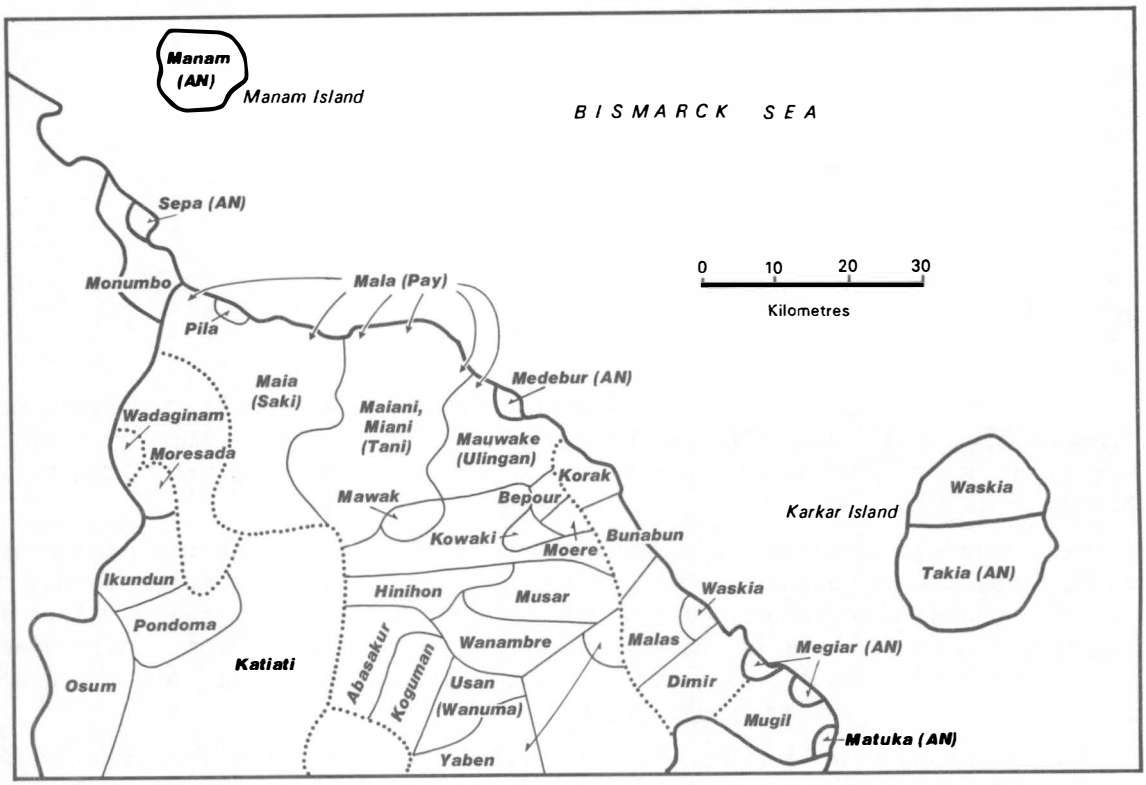

LANGUAGES OF THE NORTH COAST OF MADANG

1.2 FEATURES OF PAPUAN/TRANS-NEW GUINEA PHYLUM PRONOUNS

For Papuan languages in general, Wurm (1982) posits three typological sets of personal pronouns. Of these, set I is predominant among TNGP languages, but the Madang province is mentioned as an area where set III occurs very strongly. The basic forms of set III pronouns are (Wurm 1982:40-42):

	sg	pl
1	*da~ta~ya*	*ki~ti*
2	*na*	*nik*[3]
3	*nu*	

Correlation between plurality and fronting of vowels is a feature common to all three sets (Wurm 1982:78), the non-singular forms in Papuan languages being derived from the singular forms (Franklin 1979:361).

For different functions in the clause Papuan languages often have one or two classes (or functional sets – not to be confused with Wurm's 'sets' above), with or without prepositions or suffixes to mark the appropriate cases. Amele (Roberts 1987), Hua (Haiman 1980), Weri (Boxwell 1967), Waskia (Ross & Paol 1978), Manggang (Hynum, personal communication)[4] and Bargam (Hepner 1986) have only one basic set each, to which postpositions or suffixes are added. Usan (Reesink

1984) and Siroi (Wells 1979) each have a nominative and a possessive set, the latter having been derived from the former. Most Finisterre-Huon languages have a set of regular versus emphatic pronouns (McElhanon 1973); this is also true of Telefol, an Ok family language (Franklin 1979:358). Fasu has three sets of free pronoun forms, namely nominative, ergative and referential (Franklin 1979:361).

Although person is the more basic category than number in the pronoun systems of Papuan languages (Foley 1986:69), singular and plural are not the only number alternatives in many languages. Dual forms of pronouns are quite widespread in TNGP languages, and trial forms are also present in some areas. Inclusive-exclusive distinction in the first person plural form is rare (Wurm 1982:60). Some widely separated and divergent languages use demonstratives for the third person singular free pronoun (Franklin 1979:360). It is questionable, however, if this could be considered a typological feature of Papuan languages.

Coreferentiality of free pronoun forms with certain verb affixes, most commonly subject markers, is typical of Papuan languages, and it is also a fairly widespread phenomenon to have morphological resemblance between at least some of the corresponding free and bound forms (Franklin 1979). One interesting feature in many Papuan languages is that they may make different person/number distinctions in different parts of the grammar, especially between free pronouns and verbal affixes (Foley 1986:67).

Object is often marked on the verb through bound person markers rather than free object pronouns (Wurm 1982:60; Z'graggen 1980:160-165). Possessive pronouns are usually personal pronouns modified by affixes or postpositions. Some languages that are close to Austronesian languages show Austronesian-like differentiation between alienable and inalienable possession (Wurm 1982:61).

In the following respects Mauwake manifests general typological features of set III of the TNGP pronouns (Wurm 1982:40-42). There is no gender or noun class system that would be indicated through concord and marking with nouns and/or pronouns. Also, the morphology tends to use suffixes rather than prefixes all the way through. There is no inclusive-exclusive distinction in Mauwake. Possession is marked by personal pronouns in modified form, through suffixation. These characteristics, as well as the correlation between the morphological category of plurality and the phonological feature of fronting and raising of vowels, show that basically the pronoun system in Mauwake is Papuan.

There are some features in the Mauwake pronoun system that point to a possibility of Austronesian influence. These include the variety of pronoun forms for different functions in the clause, the alienable versus inalienable possession system, and possibly also the division into genitive and dative possessive pronouns.

Papuan languages often have only one, sometimes two basic sets of pronouns. If suffixes or postpositions are added to mark the appropriate case, the pronoun hardly undergoes any morphophonological change. Thus in many languages it is enough to describe the basic pronoun set plus the ways of indicating the case, if any. Mauwake pronouns seem to stem from two basic sets (which have some similarities between them), but have developed so that in some cases the relationship between the basic form and the derivation is somewhat opaque. Morphophonological changes are more common in the pronouns than in the rest of the vocabulary.

Dative pronouns are exceptional in a Papuan language, in their function as possessives. Some Austronesian languages also use dative possessives, but not in quite the same way as Mauwake

(Bugenhagen, personal communication). It is possible that the existence of dative possessives in Mauwake is due to Austronesian influence. Some Austronesian languages distinguish between topical and subject pronouns (D'Jernes 1983:18) and this is what may be happening with the two sets of nominative pronouns in Mauwake. The focal pronouns are not used as ordinary nonfocal subjects in sentences, but instead they are used with different topicalising and focus markers as well as in isolation and in lists.

So far I have not attempted to locate possible sources of Austronesian influence on the Mauwake pronoun system. Medebur right in the middle of the Mauwake language area, and Manam about 100 kms away, are the closest present-day Austronesian neighbours. As there are no strong Austronesian influences in other parts of Mauwake grammar or in the lexicon, the suggestion of Austronesian influence on the pronouns is very tentative at best.

2. PERSONAL PRONOUNS

The primary distinction in the category of person is that between the first and non-first person (Lyons 1968:278). The first and second person are defined in terms of the participant roles as the speaker (+others) and addressee (+others) respectively, whereas the definition of the third person is essentially negative, it being non-first and non-second (Lyons 1977:368). The plural of the first person pronoun differs semantically from all other plurals in that it does not refer to several simultaneous speakers (except in very rare cases) but to the speaker plus some other person or persons who individually would be referred to by either the second or third person pronouns.

The personal pronoun forms in Mauwake include the first, second and third persons both singular and plural. The dual number is only marked in one group of the personal pronouns (see section 2.6); normally the plural can also be used for the dual. Since the dual is not marked in the verbal inflection either, with the exception of first person imperative, it can be concluded that in the category of number, 'dual' is rather insignificant in Mauwake and may well be a borrowing from other languages.

TABLE 1: PRONOUNS IN MAUWAKE

	Nominative		Accusative	Genitive	Dative	Isolative	Reflexive/ Recipient	Comitative
	Basic	Focal						
1sg	*yo*	*yo-s*	*efa*	*y-ena*	*efa-r*	*ya-isow*	*y-ama*	*efa-m-iya*
2sg	*no*	*no-s*	*nefa*	*n-ena*	*nefa-r*	*na-isow*	*n-ama*	*nefa-m-iya*
3sg	*(w)o*	*(w)o-s*	*Ø*	*o-na*	*wia-r*	*wa-isow*	*w-ama*	*wama-iya*
1pl	*(y)i*	*(y)i-s*	*yia*	*yi-ena*	*yia-r*	*(y)i-isow*	*yi-am*	*yiam-iya*
2pl	*ni*	*ni-s*	*nia*	*ni-ena*	*nia-r*	*ni-isow*	*ni-am*	*niam-iya*
3pl	*wi*	*wi-s*	*wia*	*wi-ena*	*wia-r*	*wi-isow*	*wi-am*	*wiam-iya*

The semantic features of inclusion versus exclusion, gender/class and spatial deixis are not marked in the personal pronoun system in Mauwake. The case is marked to some extent, as will be seen in the discussion below.

Mauwake is a pro-drop language: a complete sentence can consist of a verb alone. The person of the subject is marked fully in the inflection of the final verbs and to some extent in the medial verbs, so that besides the pragmatic clues there are also grammatical ones for tracing the participants. But this does not mean that the pronouns are completely optional; instead, the use of pronouns is rather strictly dictated by textual factors (see section 4).

It is a fairly common feature in languages that pronouns can either modify a noun in a NP or take the place of a full NP, but cannot be the head of a NP taking modifiers (e.g. Hakulinen & Karlsson 1979; Saari 1985; Roberts 1987). In Mauwake the personal pronouns usually occur without modifiers, but they *can* be modified by an adjective or a demonstrative, provided there is no collocational clash between the demonstrative and the personal pronoun.

(1) ***Ni*** ***fain-ke*** *ekap-e-ka!*
2PL.NM this-CF come-IMP-2PL
You here (or This group of you), come!

(2) ***wi*** ***panewowa*** *nain*
3PL.NM old that
the old ones

An alternative analysis for the above would be to say that the personal pronoun is in an appositional relationship to a noun which has subsequently been deleted. Two factors speak against this analysis, however. Firstly, in some cases the recovery of the 'missing' noun would be quite difficult, there being several possible candidates, and secondly, the structure discussed conforms to the normal form of a noun phrase in Mauwake.

The use of a pronoun copy after a full NP in the same clause is not used in Mauwake for the subject (see section 2.3 for pronoun copy of the genitive). This may be related to the fact that a pronoun is very common in the Topic position, thus preceding a coreferential noun if there is any. Even (3) is not a genuine case of a pronoun copy, since the pronoun *wiena* adds the emphasising-meaning 'themselves':

(3) ***Wi*** *iperowa* ***wi-ena*** *ekap-e-mik.*
3PL.NM middle.aged 3PL-GEN come-PA-3PL
The middle-aged themselves came.

2.1 NOMINATIVE PRONOUNS

2.1.1 BASIC FREE PRONOUNS

Like a large number of languages in the Madang province,[5] Mauwake uses pronoun forms from set III in Wurm's classification, as can be seen below. It is uncertain whether the third person singular form *(w)o* in Mauwake comes from third singular feminine form of set III with *w* as the basic consonant, or from set II third person singular *wa* (Wurm 1982:40). Also, the first person plural form may come from set X *yi* (Wurm 1982:44).

The short forms of the nominative pronouns are:

	sg	pl
1	*yo*	*(y)i*
2	*no*	*ni*
3	*(w)o*	*wi*

All the nominative pronouns are used for humans only; in legends also spirits can be referred to by these pronouns, since they can take human form. This same restriction applies to accusative and comitative pronouns, but not to genitive and dative pronouns, nor to reflexive/reciprocal or isolative pronouns. There is no third person singular pronoun for non-humans that could be used like the

personal pronouns (cf. English *it*). The demonstrative pronoun *nain* 'that' is used for this function, or sometimes a mere zero:

(4) *Maa* ***nain*** *uruf-ap kookal-e-k.*
thing that see-SS like-PA-3SG
He saw the thing and liked it.

(5) *Mik-ap, aaw-ep, aasa-pa wu-a-m...*
spear-SS get-SS canoe-LOC put-PA-1SG
I speared (it), got (it) and put (it) in the canoe...

The basic free pronouns are used for non-focused subjects[6] (6,7). They can also occupy the clause-initial Topic position when they are not subjects but rather topicalise a pronoun with other than subject function (8, 9). Especially in spoken language, they are also used instead of genitive pronouns to indicate possession, mainly with kinship terms and body parts (10, 11). The reason for this may be the inalienable possession marking[7] which in Mauwake extends to kinship terms and in most of the related languages to body parts as well.[8] When used to indicate possession, the basic free pronouns often receive a heavier stress than when used as subjects. In text the genitive use accounts for about 15% of the independent short form nominative pronouns as against 85% used as subject. (The short forms used as non-subject Topic were not included in this count.)

(6) *Irakowa-ke kerer-era* ***wi*** *puk-omak-e-mik.*
fight-CF start-DS 3PL.NM disperse-DIS-PA-3PL
When the fight started they all dispersed.

(7) ***O*** *koora-pa naap ik-ok um-o-k.*
3SG.NM house-LOC thus be-SS.SIM die-PA-3SG
Thus being in the house she died.

(8) ***Yo*** ***efa*** *uruf-e!*
1SG.NM 1SG.ACC look-IMP
Look at me!

(9) ***I*** ***yiena*** *mua opora* ***yia*** *asip-owa ekap-e-mik nain...*
1PL.NM 1PL.GEN men talk 1PL.ACC help-NOM come-PA-3PL that
Our men who have come to help us with the language...

(10) ***Yo*** *emeria nan ik-ua.*
1SG.NM wife there be-3SG
My wife is there.

(11) *Moram* ***yo*** *eremena emeria* ***yo*** *koora-pa*
Why 1SG.NM nephew wife 1SG.NM house-LOC
efar ik-era aaw-ep purup-e-man?
1SG.DAT be-DS take-SS take.up-PA-2PL
Why did you take my nephew's wife up when she was in my house?

There is a tendency to have the pronominal form as the first element in a sentence, which in some cases results in the restructuring of the sentence so that the medial clauses appear in the middle of the final clause, instead of occurring before it, as would be normal. In (12, 13) the medial clauses are enclosed in square brackets:

(12) ***Yo*** *eka yoowa [Magidar-ke kirip-ap* ***yi-era]*** *en-e-m.*
1SG.NM water hot Magidar-CF mix-SS give.me-DS eat-PA-1SG
Magidar made tea and gave it to me, and I drank it.[9]

(13) ***No*** *[um-era] or-o-****n****.*
2SG.NM die-DS go.down-PA-2SG
After he died you went down.

The basic free pronouns are used as the basic form for focal, genitive, reflexive and isolative pronouns.

2.1.2 FOCAL PRONOUNS

These pronouns are similar to the short forms but have final -s: *yos, nos, (w)os, (y)is, nis, wis.* They are used in isolation and in lists (14), as well as with Topic marker *-na* (15), contrastive focus marker *-ke* (16), Question marker *-i* (17), *pun* 'also' (18) and the limiter *-iw* 'only'.[10] They are never used for a neutral, non-focused subject.

(14) ***Yos,*** *yena emeria, ne Yoli gelemuta...*
1SG.FC 1SG.GEN wife and Yoli little
I, my wife and little Yoli...

(15) ***Nos-na,*** *nena neke mera ene-mi...*
2SG.FC-TOP 2SG.GEN grandfather fish eat-SS.SIM
You know, when your grandfather was eating fish...

(16) ***Is-ke*** *me kuum-e-mik.*
1PL.FC-CF not burn-PA-1PL
We didn't burn it.

(17) ***Yos-i?***
1SG.FC-QM
I?

(18) ***Os*** ***pun*** *opora kuisow naap-iw ma-e-k.*
3SG.FC too talk one thus-INS say-PA-3SG
He too said the same thing.

2.2 ACCUSATIVE PRONOUNS

The accusative pronouns may have been derived from the basic free pronouns, but because at present there is little overt similarity in the singular forms of the two sets, the accusative pronouns are treated as a set of their own. This seems legitimate also because these forms are used as the basis for some other pronoun forms with different functions.

The accusative pronouns are:

	sg	pl
1	*ef-a*	*yi-a*
2	*n-ef-a*	*ni-a*
3	Ø (zero)	*wi-a*

Greenberg (1966:96) maintains that languages where the verb follows both the nominal subject and the nominal object almost always have a case system. In Mauwake, the 'case system' is very restricted, the accusative, genitive and dative only showing in the pronouns, and the oblique cases like locative and instrument in non-human NP's. According to Mallinson and Blake (1981:62), the restriction of object marking to nominals that are human, definite etc. is so widespread that it is difficult to find a language in which every instance of object bears an accusative marker. In Mauwake, only human NP objects are marked, the marking consisting of the accusative pronoun preceding the verb. The lack of accusative marking in non-humans shows in the plural forms. Actually even the third person singular, being zero in the accusative case, belongs to the non-marked group. Zero pronoun for the third person singular is not exceptional across languages: in Classical Latin there was no third person singular pronoun in nominative (Lyons 1968:278), and in many Bantu languages the third person singular pronouns are mere zeros (Givón 1976:166).

The position of the accusative pronouns in Mauwake is immediately preceding the verb. This is probably the reason why Z'graggen (1971) treats them as verbal prefixes. But the fact that they have two syllables and follow the normal stress pattern of the language points towards their being independent words, although very closely bound with the verb. They could also be called clitics, since they have both affix-like and word-like characteristics. The status of the accusative pronouns and the process of cliticisation are discussed below (2.2.1); for the time being the accusative pronouns are treated as independent words.

These pronouns are used for encoding Patient (19), Beneficiary (20) and occasionally Recipient (21). The only syntactic difference between the semantic roles of Patient and Beneficiary is in the verb, which can incorporate the benefactive suffix; and there is no syntactic difference between Patient and Recipient. There is the following hierarchy in the use of the accusative pronoun: if there is a Recipient (which is not incorporated in the verb), the accusative refers to it; if no Recipient but Beneficiary, the accusative pronoun refers to the latter. If there is neither Recipient or Beneficiary, it refers to the Patient.

(19) *Irakowa-pa* ***wia*** *war-e-mik.*
fight-LOC 3PL.ACC kill-PA-3PL
In the fight they killed them.

(20) *Aite maa* ***yia*** *por-**om**-a-k.*
Mother food 1PL.ACC take.down-BEN-PA-3SG
Mother took food to us.

(21) *Opora nain* ***wia*** *maak-e-k.*
talk that 3PL.ACC tell-PA-3SG
He told them the story.

Transitive verbs in Mauwake usually require an overt object, and ditransitive verbs like 'teach', 'tell', 'ask' require the presence of at least the human object, or Recipient (22, 23). In rare cases the human object may be left out (24).

(22) *Inglis* ***wia*** *ofakow-i-ya.*
English 3PL.ACC teach-PR-3SG
He teaches English. (or He teaches them English.)

(23) ***Nefa*** *nokar-i-yem.*
2SG.ACC ask-PR-1SG
I am asking you.

(24) *Oram nokar-i-yem.*
just ask-PR-1SG
I am just asking (nobody in particular, and for no particular reason).

Transitive verbs with human objects require pronouns even when the object is mentioned as a noun (25, 26). Since third person singular form is zero, all the cases with [+human] object noun without overt pronoun by default indicate third person singular (27). This is important since there is no distinction of number or case in the nouns; without this indication by pronouns it would often be ambiguous whether the NP was subject or object, or whether the object was singular or plural. Also, it must be clearly indicated if the speaker or hearer is included in the object (25, 26, 28).[11]

(25) *Emeria* ***wia*** *amukar-e-k.*
woman 3PL scold-PA-3SG
He/She scolded the women.

(26) *Emeria* ***nia*** *amukar-e-k.*
woman 2PL scold-PA-3SG
He/She scolded (you) women.

(27) *Emeria amukar-e-k.*
woman scold-PA-3SG
He scolded his wife.

(28) *Mua* ***yia*** *aaw-o-k.*
men 1PL.ACC take-PA-3SG
He took us men.

In theory (27) could also mean 'the woman scolded him/her', but in practice it does not. For when the subject is old/known information it is usually left out rather than marked by a NP, and when it is new information, it is marked by the contrastive focus marker *-ke.*

Reesink (1984:51) mentions that in Usan, another Pihom Stock language, a free third person singular pronoun may also fill the object position although it is not a verbal prefix as such. If only affirmative clauses are considered this could be claimed to be the case in Mauwake, too (29), but negative clauses disprove it. The free third person singular pronoun does not come in the object position immediately preceding the verb but before the negative like other basic free pronouns that are used for emphasising other pronouns (30, 31).

(29) *Wi teeria papako* ***o*** *asip-a-mik.*
3PL group other 3SG.NM help-PA-3PL
The other group helped him.

(30) ***O*** ***me*** *aaw-e-mik.*
3SG.NM not take-PA-3PL
They didn't take him.

(31) ***Yo*** ***me efa*** *aaw-e-mik.*
1SG.NM not 1SG.ACC take-PA-3PL
They didn't take me.

There is one case where the third person free pronoun *can* occur after the negative marker and immediately before the verb, like the accusative pronouns. This is when the object is heavily focused (32). But here it is the negative marker that moves to precede the focused word, as can also be seen in (33) where the negative marker has moved in front of the whole object NP.

(32) ***Me o*** *uruf-a-m.*
not 3SG.NM see-PA-1SG
It wasn't him that I saw.

(33) ***Me wi*** *owowa* *mua* ***wia*** *arew-a-mik...*
not 3PL.NM village men 3PL.ACC wait-PA-3PL
It wasn't the village people that they were waiting for...

There are also cases where it is impossible to determine whether the overt pronoun is marking a Topic/subject or an emphatic object (34). Sometimes the context would disambiguate between the slightly different meanings.

(34) ***O*** *me uruf-a-k.*
3SG.NM not see-PA-3SG
He didn't see him.

2.2.1 CLITICISATION OF ACCUSATIVE PRONOUNS

As mentioned above (2.2), there is some uncertainty as to the status of accusative pronouns as independent words in Mauwake. Z'graggen (1971) calls them prefixes, and so does Reesink (1984) when describing the corresponding elements in Usan. Reesink remarks that compared with other prefixes they have a loose status and can be detached from the verb. My claim is that they are free pronouns undergoing the process of cliticisation.

The borderlines between full words and clitics on the one hand, and between clitics and affixes on the other, are somewhat indeterminate. The clitics are morphemes with a mixed morphosyntactic status, having some word-like and some affixal characteristics (Nevis 1985). Zwicky (1985) suggests that instead of strict definitional criteria one should look for characteristic symptoms when trying to decide what is a clitic and what is not.

Clitics are similar to affixes in that they are bound elements, unable to occur in isolation, and they are strictly ordered in respect to adjacent morphemes. Clitics and affixes normally have a simpler distribution than full words, and they are also morphologically simpler. They are accentually dependent, forming a phonological unit with a full word. Unlike words, clitics are immune to syntactic processes, and they cannot be deleted under identity as words can (Zwicky 1985).

Although there are a number of differences between clitics and affixes, the two groups are sometimes confused with each other. Clitics show a lower degree of selection with respect to their hosts than affixes to their stems. Morphophonological and semantic idiosyncracies are more common in affixed than cliticised words. Syntactic rules can affect affixed words but not clitic groups. Also, clitics may attach to words already containing clitics, whereas affixes cannot (Zwicky and Pullum 1983). Klavans (1983) considers clitics to be always extra-inflectional to the host, and she comes to the conclusion that cliticisation is actually affixation on the phrasal level (Klavans 1985; see also Nevis 1985).

It is often assumed that if a clitic is associated with a host syntactically, it is also phonologically attached to the same host. But Klavans (1985) shows that the phonological and syntactic hosts may be separate, and she lists a few parameters relevant in the choice of the host. In Yagua, for example, the object clitics form a syntactic constituent with the following direct object, but they attach phonologically to the nearest preceding word (Payne 1983).

According to Givón (1976), the morphological binding of the object pronoun to the verb through the process of cliticisation is an inevitable natural phenomenon. This is due to the unstressed status of pronouns, their decreased information load and subsequent loss of resistance to phonological attrition. He goes on to add that these clitic pronouns may eventually develop into verb agreement inflection. There is an implicational hierarchy predicting what kind of NP is most likely to develop agreement with verbs: Ag > Dat/Ben > Pat > others (Givón 1984).

Duranti and Ochs (1979) show that in Italian there is an ongoing grammaticalisation process in the pronoun system, and a rise of new verb agreement through clitic pronouns coreferential with certain kinds of NP. And Klavans (1985) notes that in Romance languages the pronominal clitics are becoming affixes, having inserting requirements resembling those of affixes.

Considering the criteria mentioned above, the accusative pronouns in Mauwake can be regarded as full words on the grounds that they are bisyllabic and may have stress of their own (35). Native speakers treat them as independent words: those who have learnt to write never hesitate to write them separate from the verb, although there is some variation in the writing of the postclitics, which are 'true' clitics.

(35) ***Ef'a*** *ur'uf-a-mik.*
1SG.ACC see-PA-3PL
They saw me.

But the accusative pronouns are unlike ordinary independent words: they have very restricted distribution, attaching to verbs and verbal nouns only; they do not occur in isolation; they are not affected by syntactic processes; and they cannot be deleted under identity (36).[12] Also, there are cases where the accusative pronoun loses its own stress and becomes one phonological word with the following verb (37).

(36) ***Nefa*** *uruf-ap* ***nefa*** *amukar-ep* ***nefa*** *aruf-a-k-i?*
2SG.ACC see-SS 2SG.ACC scold-SS 2SG.ACC hit-PA-3SG-QM
When he saw you, did he scold and hit you?

(37) ***Ef-'uruf-a-mik.***
1SG.ACC-see-PA-3PL
They saw me.

The accusative pronouns in Mauwake can hardly be called prefixes. Although they are very selective as to their hosts, they are less selective than the subject agreement suffixes. No true affixes in the language can have a stress of their own, as the accusative pronouns can have. Moreover, Mauwake is a suffixal language and thus the accusative pronouns would constitute the only case of verbal prefixes, if they were considered affixes.[13]

Zwicky and Pullum (1983) offer a plausible solution to the problem of the status of the clitics. They maintain that simple clitics are optional variants of full forms, occurring in the same position in the sentence as the full form (see also Zwicky 1985). Thus in Mauwake there would be two morphs of the accusative pronoun, one a word and the other a clitic, instead of a single morpheme which

would have to be either one. Since the word-like characteristics of the accusative pronouns are rather few, it is quite possible that with time they may develop first into true clitic morphemes without full word variants, and later into object agreement prefixes.

Mauwake follows quite closely Givón's (1984) implicational hierarchy, given above. The subject agreement is marked by suffixes. The benefactive agreement is mainly through benefactive suffixes, but an accusative pronoun may also be used as a disambiguating device, since there is only two-way distinction in the benefactive suffixes (38, 39). Givón's 'dative' marking is taken care of in Mauwake by recipient-incorporating verbs (see 2.2.2 below), benefactive suffix or in some cases by dative pronouns. And the patient agreement is marked by free pronouns which are in the process of becoming clitics.

(38) *Maa enowa* ***nia*** *pekap-**om**-a-k-i?*
thing food 2PL.ACC bring-BEN-PA-3SG-QM
Did he/she bring food to you?

(39) *Maa enowa* ***wia*** *pekap-**om**-a-k-i?*
thing food 3PL.ACC bring-BEN-PA-3SG-QM
Did he/she bring food to them?

2.2.2 PATIENT- AND RECIPIENT-INCORPORATING VERBS

There are a few verbs in Mauwake that incorporate the Patient or Recipient in the verb stem (40, 41). These verbs do not allow a separate accusative pronoun for the particular function that is already expressed by the verb stem, but it is possible to have a separate accusative pronoun for the Patient where the verb incorporates the Recipient (42). When non recipient-incorporating verbs require both human Recipient and human patient, the verb has to split into two, the first verb taking one argument and the second one taking the other (43).

(40) *Ipia-ke* ***yiar-era*** *ekap-e-mik.*
rain-CF 1PL.hit-DS come-PA-1PL
The rain was hitting us and we came.

(41) *Ufia-ko* ***enak-e.***
betel.pepper-IF give.me.to.eat-IMP
Give me betel pepper to eat.

(42) *Iiriw nefa* ***wi-e-mik.***
already 2SG.ACC give.them-PA-1PL
We have already given you to them.

(43) *Uuriw akena* ***wia*** *aaw-ep* ***nia*** *pekap-om-iyan.*
morning very 3PL.ACC take-SS 2PL.ACC bring-BEN-FU.1PL
Early in the morning we will bring them (=people) to you.
(literally: ...we will take them and bring to you.)

2.3 GENITIVE PRONOUNS

Since possession in Mauwake can be expressed by means of three different kinds of personal pronouns, to avoid confusion of terms I will call the *function* 'possessive' and the different

grammatical *forms* used for this function 'genitive, dative and basic free pronoun'. All these forms have other functions besides possessive, as has already been shown in the case of the basic free pronoun (10, 11).

The genitive pronouns are derived from the basic free pronouns, with the ending *-ena:*

	sg	pl
1	*y-ena*	*yi-ena*
2	*n-ena*	*ni-ena*
3	*o-na*[14]	*wi-ena*

The main function of the genitive pronoun is to indicate the possessor in a NP. Unlike most other modifiers of the noun, the genitive pronoun precedes the head noun. In this respect Mauwake does not follow Greenberg's (1966) prediction about the word order, according to which an OV language should have all the modifiers preceding the noun in the NP. But it is in accord with Givón's (1984:202) implicational hierarchy of conformity to basic word order. Only the nominal and genitive modifiers and noun complements, which are at the top of Givón's hierarchy, precede the head noun in Mauwake NP's; all the other modifiers follow the head noun.

The genitive pronoun must be used when the possessor is coreferential with the subject, and then its meaning is very close to English 'own' (44). In descriptive or equative clauses genitive pronouns can modify both the subject NP and the non-verbal predicate NP, whereas the dative pronouns can modify neither (45, 46). It is also possible for genitive pronouns to co-occur with dative pronouns in the same clause to modify NP's that are non-coreferential with the subject (47). (See section 2.4 for discussion on the differences between genitive and dative possessives.) Like possessives in many other languages, the genitive pronoun often occurs as the subject of a nominalised clause, whether a relative clause or one with a nominalised form of a verb (48).

(44) ***Niena*** *unuma maifa feeke siisim-e-ka.*
2PL.GEN name paper here write-IMP-PL
Write your names on the paper here.

(45) ***Yena*** *koora maneka akena.*
1SG.GEN house big very
My house is very big.

(46) *Mua fain me* ***nena*** *ni-awi akena-ke.*
man this not 2SG.GEN your-father true-CF
This man is not your real father.

(47) ***Yena*** *koora* ***efar*** *aw-o-k.*
1SG.GEN house 1SG.DAT burn-PA-3SG
My house burned.

(48) ***Yiena*** *owowa maneka ikiw-e-mik nain ma-i-yem.*
1PL.GEN village big go-PA-1PL that say-PR-1SG
I am telling about that when we went to town. (or ...about our going to town.)

The genitive pronouns are also used as subjects of ordinary clauses, in which position they are more emphatic than the basic free pronouns (49). Usan (Reesink 1984:53) and Siroi (Wells 1979:20) have this same function for their possessive pronouns, whereas Waskia (Ross and Paol 1978) has not. The Kaukombaran languages Miani and Mala require the addition of an intensifier suffix to the

genitive for this function (Loeweke and May 1982:12). In Mauwake the pronunciation also reflects the emphasis: these pronouns receive a stronger stress than basic free pronouns when used as subject.

(49) *Aasa enuma* ***yena*** *me suuw-i-yem.*
canoe new 1SG.GEN not push-PR-1SG
I don't take a new canoe down myself.

Even when the possessor is expressed by a noun, the genitive pronoun is sometimes explicit, occurring either between the possessor and possessed NP (50) or, quite frequently, preceding both (51). The reason for this addition of a pronoun may be the lack of case marking on nouns, which makes the processing of possessed NP's more difficult when there are modifying nouns in the NP. But it is also possible, and in fact quite common, for a possessive NP to occur without a genitive pronoun (52).

(50) *Omem-ik-era sawur* ***emeria ona*** *wi-awi*
cry-be-DS.2/3SG spirit woman 3SG.GEN her-father

onak-ke ekap-emi maak-e-mik...
her.mother-CF come-SS.SIM tell-PA-3PL
While she was crying, the spirit woman's father and mother came and told her...

(51) ***Wiena mia kia*** *maa-iw on-a-mik.*
3PL.GEN skin white thing-INS do-PA-3PL
They did it with the Europeans' things.

(52) ***Mua oko miira*** *inawera-pa uruf-ap ma-i-mik...*
man other face dream-LOC see-SS.SEQ say-PR-1PL
When we see another man's face in a dream we say...

In those cases where the possessed NP lacks an overt head noun, three different strategies may be used. These do not seem to have much difference in meaning. The genitive pronoun may occur by itself, without a head noun, which can be either deleted completely (53) or substituted by *nain* 'that'[15] (54); or the NP can be expressed by a genitive pronoun (or sometimes by a basic free pronoun) plus a special form of the dative pronoun (55). In all these cases the head noun occurs earlier in the sentence, or occasionally in the preceding sentence.

(53) *Ikiwosa* ***yena,*** *wapena* ***yena...***
head 1SG.GEN hand 1SG.GEN
The head is mine (to eat), the hands are mine...

(54) *Fikera pun* ***wiena nain-ke.***
kunai.grass too 3PL.GEN that-CF
The kunai grass is theirs too.

(55) *Maa nain* ***yena/yo efarik.***
thing that 1SG.GEN/NM 1SG.DAT
That thing is mine.

2.4 DATIVE PRONOUNS

The dative pronouns in Mauwake are formed by adding *-r* to the accusative forms, with the exception of the third person singular, which is identical with the plural:

	sg	pl
1	*efa-r*	*yia-r*
2	*nefa-r*	*nia-r*
3	*wia-r*[16]	*wia-r*

The dative pronouns are used for the semantic roles of Source (56), Goal (57) and Possessor (58), as well as for the 'have' construction (59). The dative occurs immediately preceding the verb, and never co-occurs with the accusative in the same clause. In the rare occasion where there would be rivalry for the position immediately preceding the verb, the accusative is chosen (60a) rather than the dative (60b).

(56) *Naap* ***wiar*** *miim-a-m.*
thus 3p.DAT hear-PA-1SG
I heard that about him/them.

(57) *Mia kokas-owa-ke* ***wiar*** *kerer-e-k.*
skin itch-NOM-CF 3p.DAT appear-PA-3SG
Her skin started to itch. (literally: Skin itch appeared to her.)

(58) *No muuka nain yo wiipa* ***efar*** *aaw-inok.*
you son that 1SG.NM daughter 1SG.DAT get-3SG.IMP
Let your son get (marry) my daughter.

(59) *I sira naap* ***yiar*** *ik-ua.*
1PL.NM custom thus 1PL.DAT be-3SG.PA
We have a custom like that.

(60a) *Yena muuka erup* ***wia*** *aaw-o-k.*
1SG.GEN son two 3PL.ACC take-PA-3SG
He took my two sons.

(60b) **Yena muuka erup* ***efar*** *aaw-o-k.*
1SG.GEN sons two 1SG.DAT take-PA-3SG

It is often difficult to distinguish between the semantic roles of Possessor and Source: in (58) *efar* can be either 'my' or 'from me'. Sometimes it is hard to distinguish even between the Possessor and the Goal. In (61) *efar* can be either 'to me' or 'to my place/house' with the noun deleted. Of all the datives observed, only 15 per cent are clear possessives, that is cases that cannot be analysed as Goal or Source.

(61) *Yo me* ***efar*** *ekap-e!*
1SG.NM not 1SG.DAT come-2SG.IMP
Do not come to me (or my house)!

When describing the possessive use of the dative in Latin, Bolkestein (1983) mentions that semantically the difference between the dative and the genitive is that of temporary (or contingent) ownership versus essential (or permanent) ownership. Apparently the same holds for other

Indo-European languages that have these two different kinds of possessives (Watkins 1966) and is even true of the Austronesian language of Mangap-Mbula (Bugenhagen, personal communication).

In Mauwake, however, coreferentiality with the subject (or sometimes Recipient) is a crucial factor determining the use of the genitive and dative possessives. The dative possessive is *only* used when the possessor is non-coreferential with the subject or recipient of the clause.[17] There are also some restrictions as to the function of the possessed NP where the possessive pronoun is in the dative: the NP cannot be the subject of an equative or a descriptive clause, or the non-verbal predicate of an equative clause.

The use of the genitive possessive pronoun is much less restricted. Besides being used where the possessor is coreferential with the subject (62) or Recipient (63), it is also used where the possessive NP itself is the subject or non-verbal predicate of an equative clause or the subject of a descriptive clause (examples 45 and 46 above). It can co-occur with the dative pronoun in the same person, thus emphasising the possessive function of the dative (64). It seems that all this is also true of the Kaukombaran languages of Miani, Maiani and Mala.[18]

(62) *Eema-ke* ***ona*** *kolos Garamin iw-o-k.*
Eema-CF 3SG.GEN dress Garamin give.her-PA-1SG
Eema$_i$ gave her$_i$ dress to Garamin.

(63) *Eema-ke Garamin* ***ona*** *kolos iw-o-k.*
Eema-CF Garamin 3SG.GEN dress give.her-PA-3SG
Eema$_i$ gave Garamin$_j$ her$_j$ dress.

(64) ***Ona*** *koora-pa* ***wiar*** *wu-a-mik.*
3SG.GEN house-LOC 3SG.DAT put-PA-3PL
They put it in his house.

Example (65) shows how the genitive and dative possessives, in *different* person forms, can also occasionally modify the same noun. The dative pronoun can here be interpreted as either a possessive 'your wives' or as a source dative 'wives from you'.

(65) *Emeria ikoka Yapan* ***wiena*** ***niar*** *aaw-ikuan.*
women later Japanese 3PL.GEN 2PL.DAT take-FU.3PL
Later the Japanese will take your wives as their own.

While it is basically true that genitive pronouns refer to possessors coreferential with the subject and datives to possessors non-coreferential with the subject, there are cases where the situation is more complicated. In (66) both the genitive pronouns *ona* are coreferenced with the subject in the first clause of the sentence, regardless of the change of subject in the following clauses; the dative pronoun is coreferenced with the immediately preceding human NP in the same clause.

(66) *Ikiw-ep-ik-era* ***ona*** *soma emeria nain kukusa nain-ke*
Go-SS-be-DS.SEQ 3SG.GEN lover woman that spirit that-CF

ekap-ep ***ona*** *emeria maa* ***wiar*** *wafufur-a-k.*
come-SS.SEQ 3SG-GEN wife things 3SG.DAT throw-PA-3SG
When he had gone, his mistress' spirit came and threw around his wife's things.

Dative pronouns are also used in Mauwake for 'have' constructions:

(67) *Aaya* ***efar*** *ik-ua, ifera wia.*
sugar 1SG.DAT be-3SG.PA salt no
I have sugar, but no(t) salt.

Dative pronouns also have a longer form, with a suffix *-ik: efarik, nefarik* etc. The pronoun is possibly a contracted form of the 'have' construction, with just the stem left of the verb *ik-* 'be'. The text frequency of these longer datives is extremely low. They are used in the same way as the shorter datives, but they are usually accompanied by either the basic free pronoun or the genitive pronoun (68, 69). This form has to be used when the dative pronoun is clause final (69, 70).

(68) *Yo mesa up-owa fain* ***ni niarik*** *aaw-ep isak-e-m.*
1SG.NM bean plant-NOM this 2PL.NM 2PL.DAT get-SS.SEQ plant-PA-1SG
I got these bean seeds from you and planted them.

(69) *Miiwa ara gelemuta nain* ***yiena yiarik.***
land piece small that 1PL.GEN 1PL.DAT
That small piece of land is ours.

(70) *Ne wiawi-ke amapor-o-k-i, weke* ***wiarik?***
and her.father-CF take.down-PA-3SG-QM her.grandfather 3SG.DAT
And did her father take her down to her grandfather (or grandfather's (house))?

2.5 ISOLATIVE PRONOUNS

The isolative pronouns have developed from the nominative pronouns and the numeral 'one', *kuisow*, and the meaning is roughly 'alone' or 'by -self'. In the singular forms the stem vowel /o/ has been replaced by /a/, since /oi/ is not a permissible vowel sequence in Mauwake.

	sg	pl
1	*ya-isow*	*(y)i-isow*
2	*na-isow*	*ni-isow*
3	*wa-isow*	*wi-isow*

When they function as the subject they can occur alone (71), but it is more common for them to occur with other pronouns which show the case marking overtly (72, 73).

(71) *Manina* ***waisow*** *mauw-ap neeke wu-a-k.*
garden 3SG.alone work-SS.SEQ there put-PA-3SG
He made his garden alone and left it.

(72) ***Wiena wiisow*** *nan pok-ap-ik-e-mik.*
3PL.GEN 3PL.alone there sit-SS-be-PA-3PL
They were sitting there by themselves.

(73) ***Yo yaisow*** *me* ***efa*** *keraw-a-k.*
1SG.NM 1SG.alone not 1SG.ACC bite-PA-3SG
It didn't bite only me.

2.6 REFLEXIVE-RECIPROCAL PRONOUNS

The reflexives have the nominative pronouns as their basis, but the derivative suffix is slightly different for singular and plural. It is likely that the suffix has developed from the word *mia* 'body, skin', which according to Schachter (1985:28) is a fairly common origin for reflexives. Two languages distantly related to Mauwake, namely Usan (Reesink 1984) and Bargam (Hepner 1986) have been reported to use the word 'body' for reflexives. And in the closely related languages of Miani and Mala the corresponding suffix is *-mi,* resembling the Mauwake *mia* (Loeweke and May 1982:12). In Mauwake the reflexive pronouns are as follows:

	sg	pl
1	*y-ama*	*yi-am*
2	*n-ama*	*ni-am*
3	*w-ama*	*wi-am*

The singular forms are used as reflexives (74), the plurals as reciprocals (75) or reflexives (76). The interpretation of the plural form often depends on the context. If a distinction is not clear from the context and needs to be overtly expressed, the simple genitive pronoun is added to give the reflexive meaning (77) and a reduplicated genitive pronoun with instrumental suffix to give the reciprocal meaning (78). The reflexive pronouns in Mauwake are not used as assertive pronouns (e.g. 'I did it myself' in English); the genitive pronouns are used for this function.

(74) *Naap on-ap* ***yama*** *amukar-e-m.*
thus do-SS.SEQ 1SG.REF scold-PA-1SG
Having done so I scolded myself (was angry at myself).

(75) *Niena maa-ke, niena kamenap* ***niam*** *asip-owen.*
2PL.GEN thing-CF 2PL.GEN how 2PL.REF help-FU.2PL
It is your own business, how you help each other/yourselves.

(76) ***Niam*** *tuun-ap teeria erup wu-eka.*
2PL.REF count-SS.SEQ group two put-2PL.IMP
Count yourselves and make two groups.

(77) ***Wiena wiam*** *kookal-i-mik.*
3PL.GEN 3PL.REF like-PR-3PL
They like themselves.

(78) ***Wie-wien-iw wiam*** *kookal-i-mik.*
3PL.GEN-RED-INS 3PL.REF like-PR-3PL
They like each other.

The plural forms have another, quite different, use: when they are followed by numerals, especially 'two' or 'three', they function as dual/trial etc. forms of the personal pronouns. These are considered to be in the nominative case when not followed by other pronoun forms (79); other cases need to be shown by appropriate additional pronouns (80).

(79) ***Niam erup*** *kamenap ekap-e-man?*
2PL.REF two how come-PA-2PL
How did you two come?

(80) ***Wiam arow*** *me* ***wia*** *uruf-a-m.*
3PL.REF three not 3PL.ACC see-PA-1SG
I didn't see the three of them.

It is worth noting that the reflexives are far less frequent in Mauwake than in most European languages, because in Mauwake they seem to be fairly strongly connected with +Control. If one unintentionally hurts oneself, normally the Cause(r) or Instrument occupies the subject position instead of the person hurt. Thus, 'A stone hit my foot' or 'A knife cut him' would be typical descriptions of non-deliberate actions which in English would be expressed as 'I hit my foot (on/against a stone)' and 'He cut himself (with a knife)'.

2.7 COMITATIVE PRONOUNS

The comitative set is a mixture as far as the basic forms are concerned. The first and second singular forms have as their stems the accusative pronouns, all the others have the reflexive pronouns. The ending is the comitative ending *-iya*, which can also be added to nouns and is one of the several ways of expressing accompaniment in Mauwake.

	sg	pl
1	*efa-m-iya*	*yiam-iya*
2	*nefa-m-iya*	*niam-iya*
3	*wama-iya*	*wiam-iya*

(81) *Lasen mua emeria* ***wiam-iya*** *me aakun-e-mik.*
Lasen man woman 3PL-COM not speak-PA-1PL
We didn't speak with the Lasen people.

(82) *Liisa Poh San ikos* ***yiam-iya*** *soomar-emi...*
Liisa Poh San with 1PL-COM walk-SS.SIM
Liisa and (literally: with) Poh San walked with us and...

3. PRIMARY AND SECONDARY REFERENCE

By primary reference of pronouns I mean where they are used in their default sense: first person singular person refers to the speaker alone, second singular to the addressee alone etc.[19] Besides this main use, the pronouns can also have a secondary reference, where the person and/or number of referents is different from that indicated by the pronoun. It can be illustrated by the English 'And how are *we* today?', where the addressee is actually only asked about his/her condition, although the form of the pronoun strictly speaking includes the speaker and some other person or people, which may or may not include the addressee. (In some other languages the same question is asked in the passive if the speaker wants to avoid a direct question in the second person.) Since in Mauwake there is neither a generic pronoun nor a passive verb form (except in a very narrow sense), the existing pronoun system also needs to handle those cases where the subject is either generic or left unmentioned.

Actually the secondary reference is mainly taken care of by the person/number suffixation of the verb, but the phenomenon is dealt with here, firstly because the pronouns are sometimes involved and secondly because there is a close relationship between pronouns and person marking of the verbs in general (Givón 1984).

In Mauwake both the first and especially the second person singulars as well as the third person plural pronouns can be used for non-specified, or generic, reference. They occur particularly in explanations of customs or general principles and in examples. The sentences are normally in the future tense and therefore hypothetical. In these texts, the second person singular and the third person plural may alternate quite freely. Example (83) is from a text describing adoption process in general, and (84) was said to a person who does not even have a 'spirit name' to call upon, nor know how to spear pigs. Here the pronouns have acquired a non-deictic role: their correct interpretation does not depend on the non-linguistic context (Anderson & Keenan 1985:260).

(83) ***Yo*** *muuka kookal-ep* ***yena*** *samapara wia* *maak-inen.*
1SG.NM son want-SS.SEQ 1SG.GEN clan 3PL.ACC tell-FU.1SG
When I want a child, I will tell my clan. (or When **one** wants a child, he will tell his own clan.)

(84) ***No*** *waaya mik-ap* *inasina unuma* *me unuf-inan-na,*
2SG.NM pig spear-SS.SEQ spirit name not call-FU.2SG-if

mua oko-ke nainiw mik-ap ***nefar*** *aaw-inon.*
man other-CF again spear-SS.SEQ 2SG.DAT take-FU.3SG
If you don't call your spirit name after spearing a pig, another man will spear it again and take it from you. (or If **one** doesn't call...)

One reason that the third person plural verb form is particularly suitable for non-specific reference is that in the present and past tenses it is identical with the first person plural form. In many process descriptions especially, the person is irrelevant ('we/they do so and so'), and since a whole text may be told without any pronouns at all, only an occasional future tense form will reveal the third person. Of course in these cases one could also argue ex silentio that because there are no overt first person pronouns, the verbs must be in the third person (see section 4.2).

If a language has a passive form, it is often used either to topicalise or focus on the Patient (or some other non-Agent argument), or to de-focus the Agent. Some of the reasons for the latter are that the Agent is not known or is very generic, or else there may be reluctance to name the Agent (e.g. 'The window got broken' instead of 'I broke the window').

Mauwake has various focus and topicalisation strategies involving topic and focus clitics, word order and stress (Järvinen 1988, Kwan 1980). One way of de-focusing the Agent is to use only verbal suffixes for person marking. Because of these devices there is not much need for a passive construction. For the cases where the Agent is not known (85), is generic (86) or his identity is not revealed (87), the third person plural marking on the verb is normally used in Mauwake.

(85) *Boika fikera ikum wiar* *kuum-e-**mik**.*
Boika grass illicitly 3SG.DAT burn-PA-3PL
Boika's grass was burned by arson.

(86) *Moramora-pa nan soop-a-**mik**.*
Moramora-LOC there bury-PA-3PL
She was buried at Moramora.

(87) *Saapara-pa nan suusa iw-e-**mik**.*
Saapara-LOC there needle give.him-PA-3PL
At Saapara he was given an injection.

In sentence (87) the identity of the medical orderly giving the injection was known to the speaker but it was irrelevant from the point of view of the story.

Sometimes the third person plural form is used instead of singular in cases where there is only one argument of the verb, and so it cannot be a question of topicalising one of several arguments. For some reason, this usage is most common in the context of sickness and death (88, 89).

(88) *Oko emeria panewowa-ko um-e-**mik**.*
other woman old-IF die-PA-3PL
Also, an old woman died.

(89) *Emeria fan eka luuma fain-ke **wia** aaw-o-k.*
woman here river flood this-CF 3PL.ACC get-PA-3PL
Here, this river (once) flooded and killed a woman.

The first person plural pronoun is normally used when a maximally generic object is needed for a transitive verb. As has been mentioned above, a transitive verb needs to have an overt object, and when there is no other object available, the first person plural accusative form is used (90, 91).

(90) *Ifa nain-ke **yia** keraw-i-ya.*
snake that-CF 1PL.ACC bite-PR-3SG
That snake bites.

(91) *Marasin fain **yia** girin-i-ya.*
medicine this 1PL.ACC smart-PR-3SG
This medicine smarts.

A cross-linguistically fairly common type of secondary reference is the use of plural instead of singular, or third instead of second person, to imply social distance or respect. Mauwake does not make use of it, although this usage is reported for the distantly related language of Usan (Reesink 1984).

4. USE OF PERSONAL PRONOUNS IN TEXT

As mentioned earlier, in Mauwake the person and number of the subject are marked on the verb with a suffix. Mauwake is also a pro-drop language: a sentence without an overt subject is perfectly acceptable. Therefore one would expect the frequency of pronouns in texts to be not very high. However, three different but interacting parameters should also be considered. Firstly, there is a difference between subject pronouns on the one hand and the other pronouns on the other. Secondly, there is considerable variation in the use of pronouns depending on the person, whether first, second or third. Thirdly, the pronoun frequency varies according to the discourse genre.

4.1 USE OF SUBJECT VERSUS NON-SUBJECT PRONOUNS

The study confirms the initial assumption that the frequency of subject pronouns is not very high in Mauwake. Less than one third of all the clauses in the narrative texts have an overt subject of any kind, and only a few of these are pronouns. Approximately six per cent of all the clauses have pronoun subjects. Most commonly the subject is only indicated by a verbal suffix.

Compared with the subject pronouns the frequency of non-subject pronouns is relatively high. In all discourse types studied except conversations the latter are more than twice as frequent as the former (see Table 3 in section 4.3).

There are a few obvious reasons for this difference. The only arguments marked on the verb itself are the subject and the beneficiary, and even the latter has only two person distinctions (1/2sg versus all other persons). Because of this the non-subject arguments need to be marked overtly by a pronoun or a NP. (As the third person singular accusative is zero, all the cases where a transitive verb does not have an overt object are automatically considered to be third person singular.)

The noun phrases only have case marking for some oblique cases like locative and instrument. To differentiate between various core arguments, a human object or indirect object (if not 3sg) is accompanied by an accusative pronoun. This pronoun also takes care of number marking, which is not shown in the noun forms (92).

(92) *Takira* ***wia*** *far-e-mik.*
boy 3PL.ACC call-PA-3PL
They called the boys.

Topicalising non-subject pronouns by means of a basic free pronoun is a frequent feature in Mauwake. This pronoun often occurs in a clause-initial Topic position (93) or immediately preceding the appropriate pronoun (94). The use of an appositive pronoun, not necessarily a topicalised one, preceding a NP is also quite common, mainly to indicate the person/number of the argument in question (95). It is also sometimes used with a place name in order to refer to the people of that place (96).

(93) ***I*** *kemuka-ko* ***yia*** *kemi-om-a!*
1PL.NM string-IF 1PL.ACC roll-BEN-IMP
Roll string for us!

(94) *Emeria inowa-ke* ***yo*** ***efa*** *uruf-a-mik.*
woman many-CF 1SG.NM 1SG.ACC see-PA-3PL
Many women saw me.

(95) ***Wi*** ***sawur*** *nain-ke kuura puuk-a-mik.*
3PL.NM spirit that-CF fly cut-PA-3PL
The spirits changed into flies.

(96) ***Wi*** ***Lasen-ke*** *kuum-e-mik.*
3PL.NM Lasen-CF burn-PA-3PL
The Lasen people burned it.

A separate issue but perhaps best handled here is the question of subject pronouns in connection with imperatives. Lack of overt subjects is one of the most common features of imperatives cross-linguistically (Givón 1979:80). Mauwake provides an interesting exception to this very common tendency in languages. By far the *highest* frequency of subject pronouns is found in imperative clauses: as many as 39 per cent of imperative clauses have a pronoun subject, as against six per cent in narrative and 34 per cent in conversation clauses. Slightly over half (52 per cent) of all the imperative clauses have an overt subject of some kind (97, 98), whereas in narratives the corresponding figure is 24 per cent. The high occurrence of subject pronouns in imperative clauses is not due to lack of differentiation between the various persons in the imperative form or between imperative and other verb forms, since the imperatives are clearly distinguishable. Neither is the

occurrence of the pronouns due to contrast, since that would be indicated with the contrastive focus marker (99).

(97) *Muuka* ***no*** *aakisa emeria aaw-e!*
son 2SG.NM now woman take-IMP.2SG
Son, take a wife now!

(98) ***Ni*** *ikiw-ep moma perek-eka!*
2PL.NM go-SS.SEQ taro pull.up-IMP.2PL
Go and pull up taro!

(99) ***Nos-ke*** *ikiw-e!*
2SG.NM-CF go-IMP.2SG
You go!

The high frequency of subject pronouns in imperative clauses may not be characteristic of Mauwake only. The grammatical descriptions of Papuan languages usually state that the subject pronoun is optional in these clauses, but give no statistical information as to the frequency. Personal communication with other field linguists working on Papuan languages gives reason to suggest that an overt personal pronoun in imperative clauses is quite common in these languages.

4.2 CORRELATION BETWEEN PERSON NUMBER AND FREQUENCY OF PRONOUN

First, second and third person pronouns are used with far from equal frequency in Mauwake. Only nominative pronouns are of interest here, since none of the other pronouns can be dropped for thematic, stylistic or other reasons. Naturally the choice of texts might be considered to skew the results somewhat, but since the present sample is quite varied this should not be a major problem. Actually one would expect the *third* person to be by far the most frequent, because most of the texts are told in the third person and there are more verbs in the third person form than in the other two.[20] By the same token the second person should be the least frequent since the amount of hortatory and conversational data is smaller than the narrative and descriptive text data, and even in conversations the participants are more likely to talk about themselves and other people (thus using first and third persons) than about each other.

Table 2 shows that in Mauwake the first person singular and plural pronouns together account for 72 per cent of all the nominative pronouns; the second person accounts for 13 per cent and the third person for 15 per cent.

TABLE 2: THE DISTRIBUTION OF SUBJECT PRONOUNS ACCORDING TO PERSON/NUMBER

	sg	pl	total
1	40%	32%	72%
2	8%	5%	13%
3	6%	9%	15%
total	54%	46%	100%

The very high frequency of first person nominative pronouns on the one hand and the very low frequency of third person pronouns on the other is unexpected. I suggest that the main factor for this discrepancy is the strong adherence to the principle of salience in the system of persons (Foley and Van Valin 1984:288). In Mauwake the first person is higher on the topicality scale than the other

persons, and the third person is lower than the second. This same hierarchy shows itself in the case of topicalising by means of pronouns: if there is a first person pronoun as *any* argument, it frequently gets topicalised (100); with second person pronouns the topicalisation is much less frequent and with third person rare.[21]

(100) ***Yo*** *me* ***efa*** *uruf-a-mik.*
1SG.NM not 1SG.ACC see-PA-3PL
They didn't see me.

4.3 PRONOUNS IN DIFFERENT TYPES OF TEXT

There is a marked difference in the use of pronouns depending on the discourse genre. Four types were compared for the present study: narratives (including legends), descriptive texts (including process descriptions), hortatory texts and conversations (including direct speech quotes from narratives).

The results of the comparison are shown in Table 3 below. 'no.' refers to the actual number of clauses and pronouns in the sample, '%' to the percentage of clauses that contain pronouns. Only part of available text data was used for this comparison because of the disproportionate amount of narrative compared with the other types of text.

TABLE 3: PRONOUN FREQUENCY IN DIFFERENT TEXT TYPES

	Narrative		Descriptive		Hortatory		Conversation	
	no.	%	no.	%	no.	%	no.	%
Clauses	583		556		120		233	
Subj. pron.	34	6	33	6	37	31	81	35
Non-subj. pron.	102	17	78	14	75	62	71	30
Total pron.	136	23	111	20	112	93	152	65

Narrative and descriptive texts are very similar as to the frequency of pronouns: only six per cent of the clauses contain subject pronoun and 14-17 per cent contain some other, non-subject, pronoun. The sample of the descriptive texts is somewhat skewed by two texts of local customs where the narrator includes herself in the description; without those two texts the percentage of clauses with a subject pronoun drops to four. The reason why the texts were not discarded is that they still belong to the descriptive category.

Hortatory and conversational texts present a strong contrast to narrative and descriptive texts in that over thirty per cent of the clauses contain subject pronouns. The main difference between these two types is that whereas hortatory texts contain twice as many non-subject as subject pronouns, conversations have fewer non-subject than subject pronouns.

The difference in the pronoun frequencies in the various discourse types calls for explanation. When topic continuity is considered, it becomes obvious that pronouns, especially the third person pronouns, are *not* used for maintaining the current topic. Where a subject pronoun does occur in the narrative, it usually indicates a shift of topic. This may be after a medial verb (101) or where there is a paragraph break marked by *aria* (102) or in a counterexpectation clause (103). A summary statement may also contain a subject pronoun: the sentence (104) occurs three times at different points of the same story.

(101) *Iwera oko* ***or-era*** ***wi*** *ir-iwikin iimar-e-k.*
coconut other go.down-DS.SEQ 3PL.NM climb-DS.SEQ stand.up-PA-3SG
A coconut bent down and when they climbed it, it straightened itself.

(102) ***Ne aria,*** ***o*** *ifara mokak-ikim-ik-ua.*
and all.right 3SG vine stare-go-be-3SG
All right, he was looking for a vine (while going).

(103) *Nomokowa war-ek-****na*** ***o*** *puk-emi nomokowa oko ek-a-k.*
tree cut-3SG-but 3SG.NM break-SS.SIM tree other go-PA-3SG
He cut the tree, but she broke away and went (flew) to another tree.

(104) ***O*** *samor aaw-o-k.*
3SG.NM badly get-PA-3SG
He got worse.

Since narrative and descriptive texts tend to maintain the same topic longer than conversational or hortatory texts, it is understandable that in Mauwake they should also contain fewer subject pronouns. The normal means of expressing topic continuity is through person marking in verbs, without an overt subject.

5. OTHER PRONOUNS

5.1 DEMONSTRATIVES

Demonstratives, or local (or spatial) deictics as they are also called, operate on the scale of proximity, making reference to something else on the basis of location (Halliday & Hasan 1976:58). The reference can be either exophoric (outside the text) or endophoric (text-internal). The proximity in the case of demonstratives is typically determined in relation to the category of person (Lyons 1968:278).

In Mauwake the status of demonstratives as pronouns is not quite as clear as that of the personal pronouns. They are like the personal pronouns in that they can occur as sole Head of a NP. But they differ from the personal pronouns in that they do not have the accusative, genitive and dative forms typical of the latter. In that respect the demonstratives are more like adjectives. Another feature that they share with the adjectives is that they mainly occur as modifiers in a NP. But unlike the adjectives, which can only occur alone in a complement position (without being elliptical), the demonstratives can occur by themselves in several clause positions. When they function as the head noun of a NP, they may take a genitive modifier (105). The numeral modifiers are positioned between the adjective and the demonstrative modifiers in the NP (106), but not between two different adjectives (107). Besides, the adjectives in Mauwake form a fairly small class, since much of the modification and qualification function in the language is taken care of by verbs (108).

(105) *Maa fain* ***yena*** ***nain-ke.***
thing this 1SG.GEN that
This thing is mine.

(106) *koora maneka* ***arow*** *nain*
house big three that
those three big houses

(107) *siowa sepa maneka* ***arow***
dog black big three
three big black dogs

(108) *Episowa ifa* ***eres-omak-e-k.***
tobacco leaf dry-DIS-PA-3SG
The tobacco leaves are dry. (literally: ...have dried.)

There is a clear distinction in Mauwake between human and non-human reference, shown in the choice of pronouns. A third person pronoun is not used for non-humans, whereas demonstrative pronouns in isolation are normally only used for non-humans. The only exception to this rule in all the data is sentence (109); *nain* 'that' would not be acceptable even here.

(109) *No* ***fain*** *me nena niawi akena-ke.*
2SG.NM this not 2SG.GEN your.father true-CF
This is not your true father.

In English, the only instance where a demonstrative can refer pronominally to humans is an equative clause (Halliday & Hasan 1976:63). In Finnish the proximal demonstrative *tämä* 'this' is also frequently used to disambiguate between two third person referents, like 'the latter' in English. Neither of these usages is normally possible in Mauwake (110).

(110) ***Mua nain*** *yena auwa-ke.*
man that 1SG.GEN my.father-CF
That is my father.

Both two-way and three-way distinctions in demonstratives are quite common in Papuan languages. The former is found e.g. in Siroi (Wells 1979) and Golin (Bunn 1974), and the latter in Bargam (Hepner 1986), Waskia (Ross & Paol 1978), Bine (Saari 1985) and Korafe (Farr and Whitehead 1981). A four-way distinction is also possible, and this is what occurs in Mauwake. Another language with this system is Selepet (McElhanon 1970). Several Papuan languages have even more elaborate deictic systems, which seem to have been influenced by the mountainous terrain on the island of New Guinea. In many languages the demonstratives not only mark the relative distance but also the position on the vertical plane: 'this higher up', 'this on the same level', 'this lower down' etc. This is true of Hua (Haiman 1980:258) and of Daga (Murane 1974:38); and Kewa also adds the parameter of visibility, with three different values: seen, neutral and unseen (Franklin 1971:36).

In Mauwake, proximity to the speaker and/or addressee, and visibility are the relevant parameters for the demonstratives, as shown in Table 4:

TABLE 4: DEMONSTRATIVES IN MAUWAKE

	proximal-1 *fain*	distal-1 *nain*	proximal-2 *eefin*	distal-2 *eenin*
near speaker	+	-	-	-
near addressee	±	±	-	-
visible	+	±	+	±

Apart from the proximal-1 demonstrative *fain*, the demonstratives are not mutually exclusive. They can be used when more than one demonstrative is called for and when their features conform to the pragmatic situation (111). *nain* 'that' is the least restricted of the three and in fact it is extremely common whereas *eefin* and *eenin* are rarely used.

(111) *Ema* ***eenin*** *fikera-ke* *aw-o-k,*
mountain that kunai.grass-CF burn-PA-3SG

aria ***eefin*** *fikera-ke* *me* *aw-o-k.*
alright this kunai.grass-CF not burn-PA-3SG
The kunai grass of that mountain burned, whereas the grass of this/that other mountain didn't burn.

There is no number distinction in demonstratives. When they modify a human noun, plurality is shown in the person/number marking of the verb and optionally by an additional personal pronoun (112); in the case of non-human nouns, a quantifier may be used (113) or a distributive aspect marking on the verb (114) or the number may be left unspecified (115).

(112) ***(Wi)*** *takira* ***fain-ke*** *ekap-e-mik.*
(3PL.NM) boy that-CF come-PA-3PL
These boys came.

(113) *Mera* ***arow*** ***nain*** *aaw-e-m.*
fish three that get-PA-1SG
I caught those three fish.

(114) *Mera* ***nain*** *aaw-**omak**-e-m.*
fish that get-DIS-PA-1PL
I caught those fish.

(115) *Amina* ***fain*** *pekap-e-mik.*
pot this bring-PA-1PL
We brought this/these pot(s).

Lakoff (1974) calls attention to another type of deixis, namely emotional deixis. She maintains that in English, besides giving greater vividness to the narrative, the use of *this* also involves the addressee more fully than the use of *that.* The distance marker *that*, on the other hand, seems to establish emotional solidarity between the speaker and the addressee, by distancing them both from the topic of conversation (116).

(116) ***That*** Henry Kissinger...

In Korafe (Farr & Whitehead 1981) the emotional deixis closely follows the referential deixis. The distal-1 demonstrative is the emotionally neutral one, whereas the proximal demonstrative is used for strong speaker association and the distal-2 demonstrative for speaker dissociation. In Mauwake emotional deixis has not been found to be important: the demonstratives are neutral in this respect.

In many languages demonstrative pronouns are used for anaphoric and cataphoric reference within a text. It is quite usual that the distal demonstrative is only used anaphorically and the proximate demonstrative is mainly used cataphorically but occasionally also anaphorically (Halliday & Hasan 1968, Farr & Whitehead 1981). This is true of Mauwake, too: *nain* 'that' only refers to the preceding text (117), *fain* 'this' usually but not always to the following text (118). The other two demonstratives, *eefin* and *eenin*, are not used for anaphoric or cataphoric reference at all.

(117) ***Nain*** *soo* *era-ke.*
that fishtrap way-CF
That is the way (to catch fish) with a fishtrap.

(118) *Mua arow **fain**: Kuuten, Dogimaw, aria Olas...*
man three this Kuuten Dogimaw okay Olas
These three men: Kuuten, Dogimaw and Olas...

The distal-1 demonstrative *nain* also has an important function in marking topic continuity in Mauwake. A continuous human topic is usually marked only by the person inflection on the verb, whereas a non-human topic chain uses NP's modified by *nain*.[22] In this function of expected topic marker, its semantic content is hardly more than that of a definite article. It is not surprising that its equivalents in many languages have developed into definite articles, and Channon (1980:107) calls its present-day English equivalent *that* 'the maximally unmarked pronoun'.

Another use of *nain* is that of a subordinator between clauses. It is used as a relative marker (see section 5.4) and as an adversative, temporal and conditional marker. All these functions are consistent with the core meaning of 'givenness' (Haiman 1978).

5.2 INTERROGATIVE PRONOUNS

There are several interrogative words in Mauwake; only those that could be classified as pronouns are discussed below, and all the interrogative adverbs are left outside the discussion.

Interrogatives clearly have at least one characteristic of pronouns: they can function as substitutes for a whole NP. One of the interrogatives, *kain* 'which', also has a morphological resemblance to demonstratives. In Amele (Roberts 1987:21) and Bine (Saari 1985:91) several of the interrogatives are closely related in form to the corresponding demonstrative pronouns and adverbs.

In some languages interrogatives are grouped under adjectives, since they can modify a noun. In Mauwake this is not plausible, as they differ from true adjectives syntactically (i.e. position in the NP), semantically and morphologically (as regards verb derivation).

The interrogative pronouns are:

naarew(e)	who
mauwa	what
kain	which
kaanin	which (of two)

Neither number nor case is marked on interrogative pronouns themselves. If either marking is required, it is done through personal pronouns (119, 120). When interrogative pronouns are used as subject, the contrastive focus marker *-ke* is obligatorily added (121-123). This is natural, since the question word is normally in focus. But it is also what the sentence is about, and therefore topic (Sadock and Zwicky 1985:185).

(119) *Mua **naarew wia** uruf-a-n?*
man who 3PL.ACC see-PA-2SG
Whom (pl) did you see?

(120) ***Naarew wiar** aaw-o-k?*
who 3.DAT get-PA-3SG
Who did he get it from? (or Whose (thing) did he get?)

(121) ***Mauwa-ke*** *nefa* *aruf-a-k?*
what-CF 2SG.ACC hit-PA-3SG
What hit you?

(122) *Mua* ***kain-ke*** *nomak-e-k?*
man which-CF win-PA-3SG
Which man won?

(123) *Masin* ***kaanin-ke*** *samorar-e-k?*
engine which-CF break-PA-3SG
Which engine broke (of the two)?

Typically, an interrogative pronoun is used in non-polar questions. It has the same syntactic position and function as the corresponding non-interrrogative item would have (124). In practice it often occurs as the initial element of the clause, since a clause frequently only consists of a verb plus one argument (125).

(124) *Unan* *uura* ***naarew*** *wia* *amukar-e-n?*
yesterday night who 3PL.ACC scold-PA-2SG
Whom did you scold last night?

(125) ***Naarew*** *iw-o-n?*
who give.him-PA-2SG
Whom did you give it to?

Echo questions can use both an interrogative pronoun and a question clitic (126). In this respect Mauwake is unlike English, where echo questions either do not syntactically differ from non-echo questions or where the question word is placed clause finally, and from Amele, where the position of the interrogative pronoun in relation to the verb marks the difference between the two types of questions (Roberts 1987), but similar to Finnish, where a question clitic can occur in the same clause as the question word (127).

(126) *Maa* ***mauwa*** *en-e-m-i?*
thing what eat-PA-1SG-QM
(Are you asking) what I ate?

(127) ***Mitä-kö*** *minä* *sö-i-n?*
what-QM 1SG.NM eat-PA-1SG
(Are you asking) what I ate?

Multiple questions, where more than one element of the clause is replaced by an interrogative, are possible in Mauwake (128).

(128) *Mua* ***naare-ke*** *maa* ***mauwa*** *sesenar-e-k?*
man who-CF thing what buy-PA-3SG
Who bought what?

Questions are prototypically asked to obtain information from the addressee(s). In many Papuan languages, however, there are pragmatic factors that restrict this basic use of questions. The discussion below applies to all questions, not only those formed with interrogative pronouns.

In Mauwake, the use of a straightforward interrogative clause is often considered abrupt and impolite, implying either criticism or a superior status of the person who is asking the question. To

make a question neutral and more acceptable as a way of eliciting information one needs to add a preamble in the form of a medial or subordinate clause (129).

(129) ***Ni maa en-e-man nain,*** *maa* ***mauwa*** *en-e-man?*
2PL.NM thing eat-PA-2PL that thing what eat-PA-2PL
When you ate, what did you eat?

In Papuan languages straightforward questions without a preamble are often rhetorical and are used to express rebuke, strong affirmation, mocking, amazement, command, outrage, fear, or accusation (Phinnemore 1987). Thus 'Who are you?' implies 'Who do you think you are?' and 'Didn't he pay me for this?' implies 'He paid me'.

5.3 INDEFINITE PRONOUNS

Of all pronouns, indefinites are the least pronoun-like, and quite often they are classified together with the quantifiers (e.g. Hakulinen & Karlsson 1979:81). In themselves they lack the element of definiteness typical of the other pronouns, hence their name (Quirk et al. 1985:376). They seldom if ever cliticise onto the verbal word, since they are low in topicality (Givón 1984:382). Also their status as substitutes is questionable.

In Mauwake, the indefinite pronouns behave syntactically very much like numerals. Their position in the NP is after the adjective(s) and immediately preceding the demonstrative. They are here included in the pronouns because some of them are identical in form with the interrogative pronouns (cf. Ultan 1978:230).

The group of indefinite pronouns in Mauwake, like many other Papuan languages, is not very extensive. It consists of the following:

oko	certain, another
papako	some, other
unowa	many, all
unowiya	all (together)
naarewe	whoever, someone, one
mauwa	whatever, something, the thing
kain	whichever
kaanin	whichever (of two)

unowiya 'all' is originally derived from *unowa* 'many' with the comitative clitic *-iya*, and it is normally only used with comitative meaning (135). Other ways of expressing the meaning 'all' are to add *maneka* 'big' (136) or *iiwawun* 'altogether' after *unowa*.

(130) *Iiriw muuka* ***oko*** *wiawi onak urera maa uup-e-mik.*
long.ago boy other his.father his.mother evening food cook-PA-3PL
Long ago, a certain boy's father and mother cooked food.

(131) *Naap ikiw-o-k, ikiw-o-k, ifara* ***oko*** *uruf-a-k.*
thus go-PA-3SG go-PA-3SG vine other see-PA-3SG
So he went and went, and saw another vine.

(132) *Wi emeria* ***papako*** *wia maak-e-k...*
3PL.NM woman other 3PL.ACC say-PA-3PL
He said to some women...

(133) *Ne wia,* ***papako-ke*** *ma-e-mik...*
and no other-CF say-PA-3PL
But no, others said...

(134) *Emeria* ***unowa*** *yo me efa uruf-a-mik.*
woman many 1SG.NM not 1SG.ACC see-PA-3PL
Many women didn't watch me.

(135) *Wi bala op-ap* ***unow-iya*** *taan-e-mik.*
3PL.NM decoration hold-SS many-COM fill-PA-3PL
Having decorated themselves they all together filled the place.

(136) ***Unowa maneka*** *Wewak-pa nan urup-e-mik.*
many big Wewak-LOC there go.up-PA-3PL
(They) all landed at Wewak.

Those indefinites that are identical with interrogatives also behave quite similarly as NP constituents, but on the sentence level there are differences. The interrogatives occur either in a simple interrogative sentence or else in a medial clause (137). The indefinite pronouns can occur in a medial clause (138) but they are more common in subordinate clauses, especially relative clauses (139, 140).

(137) ***Naarew*** *wia far-ep ekap-o-n?*
who 3PL.ACC call-SS come-PA-2SG
Whom did you call, and then came?

(138) *Masin* ***kaanin-ke*** *samorar-era oko fain-ke asip-inon.*
engine which-CF break-DS other this-CF help-3SG.FU
When one of the engines breaks down, this other one will help.

(139) *Mua* ***naare-ke*** *wadolal-i-ya, opora me wiar miim-e!*
man who-CF lie-PR-3SG talk not 3.DAT hear-2SG.IMP
Don't listen to whoever tells lies!

(140) *Prais aaw-ep ufowa* ***kain-ke*** *nomak-e-k nain wi-e-mik.*
prize take-SS dance which-CF win-PA-3SG that give.them-PA-3PL
They took the prize and, whichever dance won, they gave (the prize) to them (i.e. the dancers).

The indefinite pronoun *mauwa* is also used as a generic substitute for any non-human NP that is left unmentioned because the name of the particular item is either not known or temporarily forgotten (141).

(141) *Mua nain* ***mauwa*** *nain akim-a-k na weetak,*
man that what that try-PA-3SG but no

mauwa *nain me or-o-k.*
what that not go.down-PA-3SG
The man tried the thing (button), but no, the thing (lift) didn't go down.

In Mauwake there are also other ways of expressing the indefiniteness of participants. The irrealis focus marker may be used on an indefinite or very generic NP (142); and if the head noun of a relative clause is indefinite, it may be left out altogether, thus leaving neither antecedent NP nor relative NP behind (143).

(142) ***Mua-ko*** *me wia uruf-a-k.*
man-IF not 3PL.ACC see-PA-3SG
He didn't see anyone.

(143) *Owaruma or-op afura buan-i-mik nain-ko wia uruf-e!*
yard go.down-SS lime knock-PR-3PL that-IF 3PL.ACC see-IMP.2SG
Go down to the yard and see whoever it is who is knocking a lime container!

5.4 THE RELATIVE MARKER

Apparently all languages have relative clauses (RCs) of some kind, that is clauses that restrict the domain of a noun phrase. The presence of the restricting clause is the decisive factor, since there are cases where both the relative NP and the antecedent NP can be missing (Keenan 1985:142). Syntactically these clauses may differ considerably from language to language, but there are some basic types that are more common than others.

A relative pronoun is in no way necessary for the formation of a RC. In European languages it is fairly usual to have relative pronouns, but in the world's languages as a whole it is not very frequent. For a word to qualify as a relative pronoun, it has to occupy clause-initial position and have case marking at least to the same extent that the NPs in main clauses have it (Comrie 1981:142). Also, relative pronouns only occur in postnominal RCs, that is RCs that follow their head NP (Keenan 1985:149). According to Kuno (1974), most SOV languages lack relative pronouns.

The relative marker *nain* in Mauwake is not a relative pronoun. It occurs as the final element in the RC, and has no case marking to show its function in the RC. Also, since in Mauwake the RCs are usually replacive[23] (144) or occasionally prenominal (145), and since the language is of the SOV type, it would be very unusual if it had relative pronouns.

(144) *[Waaya mik-i-mik* ***nain]***$_{RC}$ *pun kokot me aaw-i-mik.*
pig spear-PR-1PL that also secretly not take-PR-1PL
Also, we do not take secretly the pigs that we spear.

(145) *[(Fofa) ikiw-e-mik* ***nain]***$_{RC}$ *fofa nain yo me paiyar-e-m.*
day go-PA-3PL that day that 1SG.NM not know-PA-1SG
I do not know the day that they went.

As for other Papuan languages, both the prenominal and replacive types are quite common; the former are more frequent in many Highlands languages, the latter for example in Usan (Reesink 1984:187).

The use of one of the demonstratives as a relative marker is quite widespread in Papuan languages, the distal-1 or middle distance demonstrative often being the most neutral and thus suitable for this function. Usan makes use of the near deictic *eng* 'this one' for a relative marker (Reesink 1984). The reason for this may be that the three far deictics are specific as to the position on the vertical plane.

The relative marker in Mauwake is identical in form with the distal-1 demonstrative *nain* 'that'. It is interesting to compare the RCs in Mauwake with nominalised clauses (cf. Akiba 1978). The demonstrative is the last element as it is in an ordinary NP, and occasionally the proximal-1 demonstrative *fain* 'this' can function as the relative marker (146). Also, the relative marker gets focus marking or oblique case marking according to the function of the RC in the main clause; normally the case marking is added to the last constituent of the NP (147).

(146) *Nomokowa unowa fan-e-mik, [Simbine ekap-omak-e-mik* ***fain***$]_{RC}$.
your.brother many here-PA-3PL Simbine come-DIS-PA-3PL this
Many of your brothers are/have come here, these who came from Simbine.

(147) *Yo [patopat auwa-ke on-ome-k* ***nain-iw***$]_{RC}$
1SG.NM fishing.spear my.father-CF make-BEN-3SG that-INS
mera mik-a-m.
fish spear-PA-1SG
I speared fish with the fishing spear that my father made for me.

6. CONCLUSION

For a Papuan language, Mauwake has quite an extensive personal pronoun system. Two sets, the basic free pronouns and the accusative pronouns, besides being used for their own functions also serve as a basis for the other pronoun sets. Some of the sets have varied functions, for example the basic free pronouns are used as subjects, topics or possessives, and the genitive pronouns as possessives as well as emphatic subjects.

The great variety of pronoun forms, the existence of a special set of focal pronouns and possibly the development of dual/trial pronoun forms suggest the possibility of some Austronesian influence on Mauwake.

The dative pronouns are an interesting phenomenon in Mauwake: besides being used for the semantic roles of source and goal, they are also used as possessors. But their possessive use depends on their coreferentiality with an NP earlier in the clause as well as on the syntactic function of the possessed NP.

Topic continuity in Mauwake is not expressed through pronouns but mainly through verbal suffixes. This is one factor accounting for the very low frequency of subject pronouns in narrative and descriptive texts. Non-subject pronouns are more frequent because they are needed especially for case and sometimes for number marking of non-subject arguments. First person pronouns occur nearly five times as often as second or third person, which is probably a result of adhering to the principle of salience in the system of person numbers.

Unlike most languages, Mauwake employs more subject pronouns in imperative clauses than in any other types of clauses. It is possible to leave the subject of the imperative unexpressed, but in the data over half of the imperative clauses have overt subjects.

Compared with the extensive system of personal pronouns in Mauwake, the other pronoun groups are relatively small. It would, moreover, be possible to classify some of the latter as other word classes, although they are here treated as pronouns (apart from the relative marker, which clearly is not a pronoun). Although there is, in principle, a four-way distinction in the demonstrative pronouns, Mauwake does not have nearly as elaborate a deictic system as some other Papuan

languages. The interrogative and indefinite pronouns are rather straightforward and present neither great problems nor interesting insights into the nature of the language.

The facts about the discourse use of the pronouns emphasise the necessity to go beyond the sentence level when pronouns of any language are studied. Two languages may superficially have the same kinds of pronouns, and yet their usage may differ considerably. I hope that the present paper provides a good insight into the pronoun system of one Papuan language, also supplying enough information on this facet of the language for anyone interested in comparative or typological studies.

ABBREVIATIONS

ACC	Accusative
BEN	Beneficiary
CF	Contrastive focus
COM	Comitative
DAT	Dative
DIS	Distributive
DS	Different Subject in following clause
FC	Focal pronoun
FU	Future
GEN	Genitive
IF	Irrealis focus
IMP	Imperative
INS	Instrumental
LOC	Locative
NM	Nominative
NOM	Nominaliser
NP	Noun Phrase
PA	Past tense
PL/pl	Plural
PR	Present tense
QM	Question Marker
RED	Reduplication
REF	Reflexive/Reciprocal
SEQ	Sequential action
SG/sg	Singular
SIM	Simultaneous action
SS	Same Subject in following clause
TNGP	Trans-New Guinea Phylum
TOP	Topic

NOTES

1. This paper is based on my MA thesis for the University of Helsinki. I am grateful for comments on an earlier draft of this paper from Professors Fred Karlsson and Bernard Comrie, Drs Ger Reesink and John Verhaar, and Ms Kwan Poh San. Any mistakes or inadequacies naturally remain my own responsibility.
2. According to the presently accepted classification (Z'graggen 1971, 1975), Mauwake belongs to the Kumilan language family, but there is some lexicostatistic and grammatical evidence that suggests it could be included in the larger Kaukombaran family (Järvinen 1985).
3. The third person plural pronoun is not included in Wurm's typology because of gaps in the material and greater variability of these than the other pronoun forms.
4. Manggang belongs to the Erap family of Finisterre-Huon Stock.
5. For example, all of the 27 Northern Adelbert Range languages use this particular set of pronouns.
6. An exception to this rule is the fact that the short form occurs with the irrealis focus marker *-ko*.

7. Most kinship terms in Mauwake are *inalienably possessed*, which means that the noun forms themselves indicate the person of the 'possessor', e.g. *auwa* 'my/our father', *niawi* 'your father', *wiawi* 'his/her/their father'; *aite* 'my/our mother', *niena* 'your mother', *onak* 'his/her/their mother' etc. There is no non-possessed form for these terms. An inalienably possessed noun may be further modified by a possessive pronoun.

8. Also the words *koora* 'house', *sira* 'custom' and *opora/opaimika* 'talk' can have their possessor in the nominative form.

9. This is a true medial clause rather than a relative clause, which would have a different form.

10. Irrealis focus marker *-ko* is the only marker added to the basic free pronoun rather than the focal pronoun.

11. With many experiential verbs, the experiencer is the object rather than subject:

    (i) *Maara efa tiitin-i-ya.*
    forehead 1SG.ACC ache-PR-3SG
    I have headache.

    (ii) *Dabela-ke efa op-i-ya.*
    cold-CF 1SG.ACC hold-PR-3SG
    I am cold.

12. The main reason for the restriction on the deletion was given above: any transitive verb without an overt accusative pronoun is interpreted as third person singular.

13. By itself this would be a very weak argument, but it gives additional weight to the others.

14. In the singular pronouns, one vowel has to be dropped either from the stem or the ending, since *oe* is an unacceptable vowel combination in Mauwake. In the first and second person, *o* is dropped from the stem, in the third person *e* from the ending.

15. *nain* is obligatorily followed by the contrastive focus marker if it is part of the non-verbal predicate of a stative clause.

16. The original form of the 3.sg may have been *w-ar* or *wo-ar* although at present the singular and plural forms are the same.

17. Marking the possessor for coreferentiality with the subject is not a common feature in Papuan languages; in fact I have not come across any grammatical description of TNGP languages mentioning it. But some European languages manifest this feature, although on a smaller scale than Mauwake. In Finnish, coreferentiality with another NP in the clause is one factor governing the use of possessive pronouns and possessive suffixes (Pierrehumbert 1980:605), and Swedish uses two different third person possessive pronouns depending on the coreferentiality with the subject.

18. Loeweke and May (1982) only mention the existence of two different kinds of possessives but do not explain their use. The examples that they provide suggest that these languages behave like Mauwake in this respect.

19. When a group of pronouns forms a coordinate NP, there is not normally a pronoun copy to summarise them. If more than one pronoun co-occurs, the person marking on the verb is first person plural whenever the first person is included, (i), otherwise it is second person (if possible) or third.

(i)

Yos,	*nos,*	*aria*	*wis,*	*unow-iya*	*ikiw-iyan.*
1SG.NM	2SG.NM	okay	3PL.NM	all-COM	go-FU.1PL

I, you and they – we will all go.

20. In narrative texts, the number of third person verb forms is roughly twice that of first person verb forms. The second person forms are virtually non-existent in narratives, but occur in other types of text.

21. The influence of the hierarchy can also be seen in the accusative marking, where all other persons than 3SG are marked. The accusative marking does not extend to non-animate nouns, and only very rarely to non-human animates.

22. Topic shift, if considered important enough to deserve special marking, is indicated by the topic clitic *-na* (Kwan 1980).

23. Comrie (1981) calls them relative clauses with an internal head. The head NP, instead of being outside the relative clause, is an integral part of it. The antecedent NP is often, but not necessarily, deleted. In many Papuan languages the RCs on first sight look like postnominal RCs, as the head noun appears as the first element of the RC. But with some syntactic tests it can be shown that they really are replacive relative clauses (Reesink 1984:186). As the other common type in Papuan languages is the prenominal RC, it is interesting to note that, according to Comrie (1981:139), the replacive and prenominal types are not necessarily mutually exclusive, and may at times be difficult to tell apart.

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QUESTION WORDS IN YAWA

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Kata-kata pertanyaan dalam bahasa Yawa

Pertanyaan-pertanyaan informasi dalam bahasa Yawa, salah satu bahasa Papua, menunjukkan beberapa ciri yang menarik. Kata-kata tanya untuk kata 'siapa' dan 'apa' memiliki bentuk-bentuk varian menurut kesesuaian genus dan bilangan, dan juga dipengaruhi oleh topikalisasi. Bentuk-bentuk untuk kata 'mengapa' menunjukkan kesesuaian subyek. Ada pula kata tanya serba guna, yaitu kata *ruwi* yang bisa berarti 'siapa', 'apa', 'yang mana', 'di mana' atau 'ke mana'.

1. INTRODUCTION

This paper examines the structure of questions in Yawa,[1] a Papuan language spoken on Yapen Island off the north coast of Irian Jaya. Yawa shares some of the typical characteristics of other Papuan languages. Like the vast majority of these languages, Yawa has SOV word order. This order is not rigid, and, as will be seen later in this paper, in certain types of questions the object precedes the subject. Oblique objects, such as indirect or benefactive objects, normally follow the verb. Topicalisation is common and may result in different word orders.

Most of the better known Papuan languages belong to the Trans-New Guinea Phylum (TNGP) and have certain features in common, one in particular being complex verb morphology. Yawa does *not* belong to this phylum and has only a modest amount of verb morphology. Also unlike most TNGP languages, Yawa has no switch-reference system.

Another distinctive aspect of Yawa is that there are ergative features, although they are quite weakly developed. There is a class of pronouns that occurs only as the subject of transitive clauses, where the occurrence of one of these pronouns is obligatory; the pronoun occurs even when there is an explicit noun phrase as subject. Further, there is verb agreement with the object in transitive clauses and verb agreement with the subject in most intransitives, but there is a handful of intransitive verbs which have "object-like" verb agreement. These features mean Yawa has ergative morphology, albeit quite weakly developed (see Linda K. Jones 1986a).

There are three major types of interrogative structures in Yawa: polarity ('yes-no') questions, alternative questions and information questions. Of these, the information question is of particular

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interest because of the many variations possible in Yawa, and because of the interesting features they display.

2. POLARITY QUESTIONS

Polarity questions are used to seek confirmation or disconfirmation of a proposition. The most frequent method of forming a polarity question is to attach the clitic *e* sentence-finally. (There is rising intonation on the final syllables of the question.)

(1) *Weti ny` anamu mamo nikija-e?*[2]
so your wife TOP sleep-Q
So is your wife sleeping?

(2) *Ndaovana gwaravainto-e?*
you.marry long-Q
Have you been married a long time?

3. ALTERNATIVE QUESTIONS

The fullest pattern for an alternative question consists of two or more alternatives, in which each alternative is terminated by the disjunctive particle *rako* 'or' *(ndako* after a consonant*)* and the final alternative is terminated by the polarity question clitic *e*. (The intonation rises on each of the non-final alternatives and there is a quick rise-fall-rise contour finally.)

(3) *Winyamo najowo nanen kakaije mi njoran ndako,*
you.TOP your.leg side left TOP hurt or
najowo nanen kove mi njoram-e?
your.leg side right TOP hurt-Q
Does your left leg hurt or your right leg?

The simplest type of alternative question is one in which there are really only two alternatives, with the second being the negation of the first. In Yawa this is expressed by using simply the negative word *joena* as the second alternative, followed by the polarity question clitic *e*.

(4) *Kawinta maruge maje rako joena-e?*
in.a.moment rain fall or not-Q
Is it going to rain shortly or not?

4. INFORMATION QUESTIONS

Information questions are the most interesting type in Yawa. In many languages there is an inventory of question words, such as in English *who, what, when, where, how much, how* and *why,* and in Indonesian *siapa, apa, kapan, di mana* or *ke mana, berapa, bagaimana* and *kenapa* or *mengapa.* A list of question words could be drawn up for Yawa, too: *arepi* 'who', *animaisyemi* 'what', *nanduirati* 'when', *ruwi* 'where', *ruwimaisya* 'how much', *-are ruwi* 'how' and *be animaibei* 'why'. However, the Yawa list would be very incomplete because most of the forms in the list have a number of variants. To include all the variants would make the list

excessively long. A better way is to instead describe the factors controlling these variants. There are at least six such factors.

4.1 GENDER AND NUMBER AFFECTING THE FORM OF QUESTION WORDS

The gender and number of the referent determine the question words for 'who' and 'what' in Yawa. Number also affects the question word 'how much'. For example, the neutral form of 'who' is *arepi,* but if the referent is known to be feminine the form changes to *aremi.*

Compare (5) and (6).

NEUTRAL (any gender or number)

(5) *Arepi poroto no Manatanen?*
who go(MAS) to village.name
Who went to Artanen?

FEMININE SINGULAR

(6) *Aremi wanya wato?*
who (FEM) woman over.there
Who is that woman over there?

The number of the referent may also affect the form of the 'who' question word. Compare the form *arepi* in (5) above with *are nawi* in (7) below.

PLURAL

(7) *Wanya bavinsanaiveye noa mare jajorami,*
woman pregnant until going.to labour

weamo are nawi wo raeranande ramu
CONJ who PL they care.for.her so.that

ndantuna kobe?
she.gives.birth well
When a pregnant woman goes into labour who are the ones who will take care of her so she gives birth okay?

Likewise there are variants in Yawa for the 'what' question word. The neutral form is *animaisyemi,* which is feminine singular, but there are marked forms for masculine and for plural. For example, compare the neutral form *animaisyemi* in (8) with the specifically masculine form *animaisyepi* in (9).

NEUTRAL

(8) *Animaisyemi so?*
what this
What's this?

MASCULINE SINGULAR

(9) *Animaisyepi sopa no warave?*
what (MAS) jump LOC there.out.at.sea
What's jumping out there in the ocean?

The question word for quantity in Yawa, *ruwimaisya* 'how much', does not change in form for gender. But for number there may be agreement, if the approximate number of the anticipated answer is known. When the number is known to be a few or several, then *ruwimaisya nai* is used, as in (11). When the number is known to be plural, *ruwimaisya nawi* is used. But when the number is altogether unknown, then the neutral form *ruwimaisya* is used, as in (10).

QUANTITY UNKNOWN

(10) *Nya arikainye ruwimaisya?*
your children how.many
How many children do you have?

QUANTITY KNOWN TO BE SEVERAL (MORE THAN ONE, LESS THAN MANY)

(11) *Anane wawe ruwimaisya nai nyo yamavun*
sago container how.many DU you sell.them
no Ivate mansaijewe?
LOC Biak to.them
How many containers of sago did you sell to the Biak people?

4.2 SYNTACTIC POSITION AFFECTING THE FORM OF QUESTION WORDS

The position of the question word within the sentence also affects its form. For 'who' and 'what' question words there are topicalised forms, which occur initially, versus non-topicalised forms, which occur in the usual syntactic position for that constituent. The topicalised form of 'who' is *arepi* (neutral), while the non-topicalised form is *are*. Examples (5), (6) and (7) all have topicalised forms of 'who'; (12) has the non-topicalised form *are* (which is uninflected for number or gender).

NON-TOPICALISED

(12) *Karepa po are anepata?*
name he whom is.hitting.him
Whom is Caleb hitting?

The same type of difference prevails for 'what'; *animaisyemi* is topicalised, but *animaisye* is not.

4.3 TIME AFFECTING THE FORM OF QUESTION WORDS

There is no tense in Yawa. Just as in Indonesian, when the speaker wishes to indicate the time, he does so by adding a time expression to one of the sentences in his discourse. However, whether something happened in the past or is yet to happen in the future can affect time question words in Yawa. The neutral form is *nanduirati* which can mean either past or future time.

UNMARKED TIME

(13) *Nanduirati Susterija nde no Urusibori?*
when nurse she.come LOC village.name
When did the nurse come to Rosbori?
or When will the nurse come to Rosbori?

However, if the speaker wishes to make it clear that past time is intended in his question, then the form *nanduijapi* must be used. If he wishes instead to imply future time, then the form *nanduirati umba* must be used.[3] Compare the preceding example with the following two.

PAST TIME

(14) *Nanduijapi Dortiusa kakai?*
when(PAST) name die
When did Dortius die?

FUTURE TIME

(15) *Nanduirati umba nyomane moronto?*
when(FUTURE) then boat go
When will the boat go?

4.4 ALTERNANT FORMS FOR QUESTION WORDS

In some cases there are simply alternant forms for a question expression. For example, there are two different ways of forming 'how' questions in Yawa – compare (16) and (17). Note, however, that *either* form for 'how' could be used in either sentence, with the same basic meaning.

'HOW': *-are ruwimaisy*

(16) *Anane mamo raporar-are ruwimaisy?*
sago TOP split.it-(how) how
How is a sago log split?

'HOW': *beare ruwimaisy*

(17) *Beare ruwimaisy umba vatane po ugey aubaisy?*
how (how) then person he pig kill.it
How does a person get a pig?

There are four alternant expressions for 'why' in Yawa. There appears to be no semantic difference between them. The four forms are *beare ruwiji(rati), beare ruwimaisyi, be animaibai(rati)* and *animaisye mi beamo.*

FOUR FORMS FOR 'WHY' IN YAWA

(18) *Beare ruwijirati Efraimija po yane so rave?*
Beare ruwimaisyi
Be animaibeirati
Animaisye mi beamo
why name he fence this make.it
Why is Efraim making this fence?

4.5 SUBJECT AGREEMENT AFFECTING THE FORM OF QUESTION WORDS

An interesting feature of all four of the expressions for 'why' in Yawa is that they manifest agreement with the subject in both number and person. The agreement is marked with a prefix on one of the words of the interrogative phrase. The word to which the prefix is attached always has the copula root *be,* thus *be, beare* ('be-MANNER'), *beamo* ('be-TOPIC'). The null prefix indicates masculine singular, as in (18) above. The other prefixes are *m-* feminine singular, *wim-* second

singular, *wuri-* second dual, *wa-* second plural, *i-* third dual and *u-* or *m-* third plural. Example (19) shows third person feminine singular agreement and (20) shows third dual agreement.

'WHY': THIRD FEMININE SINGULAR AGREEMENT WITH SUBJECT

(19) *Animaisye mi mbeamo Serpiaja mo ama yavare randamisy?*
why 3.FEM.be.TOP name she her house destroy.it
Why did Serpia destroy her house?

'WHY': THIRD DUAL AGREEMENT WITH SUBJECT

(20) *Ibe animaibeirati Pietijape Bartazarpe ije no so?*
3.DU.be why name.and name.and they.two.come LOC here
Why did Piet and Bartazar come here?

4.6 AMBIGUITY BETWEEN CERTAIN QUESTION WORDS

The semantic range of certain of the Yawa question words is quite broad, broader than their glosses in individual sentences might indicate. The supreme example of this is *ruwi* which is discussed in some detail in section 5. Here we will simply examine *beare ruwimaisy* and closely-related forms such as *beare ruwijirati.* As was seen in (17) above, *beare ruwimaisy* means 'how, in what manner?' But in (18) we saw that the same form means 'why, what is the explanation?' These are not mistakes. It so happens that *beare ruwimaisy* means *both* 'how' and 'why'. It is ambiguous. The answer obtained might be reason, purpose, means, method, instrument or manner. It has a broad semantic range.

While *beare ruwimaisy* and *beare ruwijirati* are semantically broad, in actual usage their meanings are usually quite precise. This is because the semantics and pragmatics of the question help shape the answer. Thus, in (21) a 'how' reading is much more natural to be asking than 'why', while the reverse in true for (22).

'HOW' READING

(21) *Sarmona beare ruwijirati po mandokaije apusiyoe?*
name be how he shark catch.it
How did Sarmona catch the shark?

'WHY' READING

(22) *Yancea beare ruwijirati bauname joen?*
name be why marry not
Why hasn't Yancea married yet?

5. *ruwi:* ALL-PURPOSE QUESTION WORD

Sadock and Zwicky (1985:184) state that it is theoretically possible for a language to get by with a single morpheme for all information questions, which would gloss as 'what?'. 'All or nearly all information questions would involve periphrasis *(what person?* for 'who?', *at what time?* for 'when?', etc.).' They say, however, that they know of no such language.

The morpheme *ruwi* in Yawa almost appears to fit this description although, as is clear from the preceding discussion, it is not at all the case that this is the *only* question morpheme in Yawa. At the same time, however, the morpheme *ruwi* has a surprisingly wide range of usage and may by itself be

used to question 'who', 'what', 'which', 'when' and 'where'. With the addition of the suffix *maisy*, it may be used to ask 'how much/many'. Or with the addition of the copula *beare*, it may be used to ask 'how' and 'why'.

It should be noted that this is accomplished completely without periphrasis in most instances. That is *ruwi* means 'who' in (23) and (24) *without* the addition of a morpheme such as 'person' (e.g. 'what person'). Likewise *ruwi* means 'what' in (25), and in (26) it means 'which'. Further, in (27) it means 'when' *without* the addition of a morpheme meaning 'time' (the morpheme *rati* here could be added in any of the other sentences as well – it is a politeness marker frequently used in questions). Finally, in (28) *ruwi* means 'where' *without* the addition of a morpheme meaning 'place'.

ruwi MEANING 'WHO'

(23) *Ruwi pi nyo awaino nya `nuja?*
who TOP you call.him your older.sibling.same.sex
Who do you call 'older brother'?

ruwi MEANING 'WHO'

(24) *Arikainye ruwi pi wato?*
child who TOP over.there
Who is that child over there?

ruwi MEANING 'WHAT'

(25) *Nya tame mi ruwim?*
your name TOP what
What is your name?

ruwi MEANING 'WHICH'

(26) *Unari kampono ruwija umba udea?*
their.place village which then they.come
From which villages have they come?

ruwi MEANING 'WHEN'

(27) *Ruwirati umba ny` anaisye raisy?*
when then your food eat.it
When will you eat?

ruwi MEANING 'WHERE'

(28) *Isakija pi ruwi?*
name TOP where
Where is Isaac?

It is evident that the semantic readings of 'who', 'what', 'which', 'when' and 'where' are derived partly from the constituent structures which the morpheme *ruwi* enters into. For example, in (23) *ruwi* is topicalised and is the direct object, which would narrow the meaning of *ruwi* to either 'who' or 'what'. The semantics of the question force the 'who' reading over a 'what' reading. Similarly, in (27) *ruwi* occurs initially and is immediately followed by *umba*, a time word meaning 'then'. Since this is the normal position for a time expression, *ruwirati umba* is interpreted as a unit filling this position, which then gives the 'when' reading. And in (28) *ruwi* occurs finally, the position for a locative. This of course pushes a locative reading on the question word.

ruwi may be suffixed with *maisy*. By itself *ruwimaisy* generally means 'how much/many'. In conjunction with the copula morpheme *beare* it may change to either 'how' or 'why'.

ruwi MEANING 'HOW MANY'

(29) *Yakopa `pa somuntije mote ruwimaisya?*
name his citrus tree how.many
How many citrus trees does Jacob have?

ruwi MEANING 'HOW'

(30) *Beare ruwimaisy umba vatane po ugey` aubaisy?*
be how then person he pig kill.it
How does a person kill a pig?

ruwi MEANING 'WHY'

(31) *Beare ruwimaisy Obeda seo to no Serui?*
be why name he.go.up he.to LOC town.name
Why did Obed fly to Serui?

Thus we see that the morpheme *ruwi* in Yawa is a very fruitful interrogative word. It functions as an all-purpose question word and may be used to ask any type of question. There are, of course, other interrogative words that are more specific. But the existence of the question morpheme *ruwi,* which may ask all types of questions in Yawa, is an important fact for the theory of universals, in that it substantiates what was hitherto just a theoretical possibility.

NOTES

1. The Yawa language is a Papuan language and has been classified as a stock-level isolate in the Geelvink Bay Phylum, a minor phylum restricted to a small section of the north coast of Irian Jaya (Anceaux 1961; Wurm 1975). It is spoken by approximately 6000 speakers in more than two dozen villages throughout central Yapen Island. There are a number of dialects (Larry Jones 1986). The dialect described in this paper is that spoken on the north coast by the villages of Rosbori, Ariobu and Artanen, as well as by Ambaidiru in the centre of the island. Data were collected over the period of time 1984 to 1987 during extended village stays. I acknowledge the help of the following Yawa speakers: Efraim Karubaba, Seth Paay, Domingus Kapanay, Borden Paay, Sopia Rumansara and Dortius Rumansara (since deceased).

2. The phonology of Yawa has been described in Linda K. Jones 1986b. That paper describes a different dialect from the one studied in this paper, but the phonological differences are slight. The main difference is that the dialect in this paper has an additional phoneme /v/. It also appears morphologically richer.

   The examples in this paper do not show full morphological detail. The word glosses give some indication of the morphology, but only those morpheme breaks pertinent to the discussion are shown.

Abbreviations used in the examples are:

`	contraction	MAS	masculine
CONJ	conjunction	PL	plural
DU	dual	Q	question
FEM	feminine	TOP	topicalisation
LOC	locative		

3. Actually, if the time interval into the future is anticipated to be quite short (say a half-day or less), then these future forms are not acceptable as they imply a more distant future time. For short times into the future, *ruwirati umba* must be used.

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THREE VOWELS, SEMIVOWELS, AND NEUTRALISATION: ORTHOGRAPHIC AND OTHER PROBLEMS OF SEPIK LANGUAGES[1]

DON LAYCOCK

Non-linguists, and linguists who have not worked with 'unwritten' languages, are often unaware of the extent to which we (Western scholars, Eastern scholars and other 'people of the book') are influenced by and conditioned by orthography. We are used to languages that have a long tradition of writing. We have come to believe that there is such a thing as 'correct spelling', and that the ability to control the established spelling of a language is the sign of an educated person. We have learned to associate certain values with the letters of the Roman alphabet in particular, and our faith in the permanency of those values has only partly been shaken by our learning other languages. In fact we have come to feel that certain values of letters are immutable, and that others are subject to change, without realising that such a feeling has arisen solely from our chance experience of a few European languages. Thus, for example, a *p* for us is always a bilabial stop, and an *m* a bilabial nasal; we would get very upset at learning a language where *m* was a low back vowel and *p* was an interdental fricative.[2] On the other hand, we see nothing odd about the fact that *q* is *k* in French, *kv* in German and *kw* in English, or that *j* and *y* have at least four values in Western Europe.

When we come to Pacific languages, however, the shortness of the orthographic tradition means that we have to revise our expectations. With few exceptions, the languages have been written for less than a hundred years; many have not yet been written at all. In addition, the orthographies have never had very wide currency. The linguistic populations have been small, the amount of literacy in the vernacular is often restricted, writings in the language are often confined to mission or administrative materials, and the extent to which the language is learned by outsiders is minimal.

Nevertheless, the orthographic conventions of Pacific languages are not always totally alien – understandably enough, because the languages were written down by Europeans. The 'unfixed' letters of the Latin alphabet *(c, j, q, x,* especially*)* are often given unusual values, but these are just the letters one expects to vary – even though it is a little surprising to find that *c* stands for *th* in Fijian, and *q* for *ngg*. It is a bit more disconcerting to learn that *g* is *ng* in Fijian, and [ɣ] in Roviana; but *p, t, k* hold their values, as do *m* and *n,* and even remembering the prenasalised values of *b, d* and *g* in many Melanesian languages is not much of a burden.

However, there are languages where the orthographic conventions are less acceptable to the European learner. Sometimes this is simply because the language is low down on the linguistic hierarchy;[3] frequently, however, it is because the language has a phonemic structure which is resistant

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to European linguistic conventions. This is the case with many Papuan languages of the Sepik River area, especially those of the Sepik-Ramu Phylum (for which see Laycock 1973 and Wurm and Hattori 1981) – and, within that phylum, languages of the Ndu Family (Laycock 1965). What all these languages have in common is a shortage of vowel contrasts. The underlying three-vowel system was first postulated by me at a talk in 1960 at Ukarumpa, the base of the Summer Institute of Linguistics in Papua New Guinea, immediately after my first Sepik fieldwork, and elaborated in my doctoral dissertation (1962). The system was later independently confirmed by Pike (1964), and became widely available in the published version of my dissertation (Laycock 1965). A similar system has been described for Kalam, another unrelated Papuan language (Biggs 1963, Pawley 1966), and even for languages outside Papua New Guinea (Kuipers 1960).

In orthographic terms, few vowels pose more problems than many vowels. The basic five vowels of the Latin alphabet – *a e i o u* – can always be eked out by digraphs, or by diacritical symbols, to produce many more vowel distinctions. To exemplify by *a* alone, it is possible to create at least the following distinctions:

á à â ă ã ā å ä ą ạ

as well as other forms of the letter *a* such as

ɑ æ ɒ ɑ ơ ɔ ɐ

– and others known only to God and phoneticians.

But when the number of vowels is few – less than the basic five, say – or the vowels are oddly distributed, it is inevitable that some of the allophones of the vowels will resemble some of the 'missing' vowel phonemes. The temptation then becomes almost irresistible to write, for example, *e* and *o* when [e] and [o], or [ɛ] and [ɔ], are heard; it is what non-linguists call 'writing phonetically'.[4]

Let me exemplify by presenting the underlying[5] three-vowel system of Ndu Family languages, as it is manifested in Abelam; the same system applies essentially to all Ndu Family languages, and is discernible in other languages of the Sepik-Ramu Phylum.

TABLE 1: VOWEL ALLOPHONES IN ABELAM

Basic Vowel[6]	/ɨ/	/a/	/aa/
AFTER			
/y/, palatalised consonants	ɪ	ɛ	aː̝
/w/, labialised consonants	ʊ	ɔ	aː̞
BEFORE			
/y/, palatalised consonants	iː	e (eɪ)	aː̝ (aɪ)
/w/, labialised consonants	uː	o (oʊ)	aː̞ (aʊ)

The basic three vowels produce up to 15 distinguishable syllabic nuclei – and even more if we take into account vocalic shades produced when a vowel occurs between, for example, a /w/ and a /y/. In addition, the /ɨ/[7] is often reduced to zero when it occurs next to other vowels or (in some interpretations) the semivowels /w/ and /y/.

For most languages, an acceptable orthography can be produced on the phonemic contrasts of the language. But, for Abelam and other Sepik languages, all phonemic solutions, as well as non-phonemic ones, run into trouble. Consider the forms and possible orthographic solutions for [ndu] 'man' and [ŋg^{w}u] 'water', with their accusative/allative forms [nduwat] and [ŋgwat]:[8]

TABLE 2: ALTERNATIVE ORTHOGRAPHIES IN ABELAM

	[ndu]	[nduwat]	[ŋgwu]	[ŋgwat]
I	*dw*	*dwat*	*gw*	*gwat*
II	*dɨw*	*dɨwat*	*gɨw*	*gwat*
III	*dwɨ*	*dwat*	*gwɨ*	*gwat*
IV	*duw*	*duwat*	*guw*	*gwat*
V	*du*	*duat*	*gu*	*guat*

Solution I is essentially that of Laycock (1965), in which the central high vowel /ɨ/ is not written next to semivowels. Solutions II and III require statements in the grammar about /ɨ/-deletion – but III, although it works for these words, falsifies the phonology, since elsewhere in the language it is the combination /ɨ+w/ that produces [u], not /w+ɨ/. Solutions IV and V are compromises that involve writing *u* as an additional vowel – perhaps V is the most generally acceptable, but, as will shortly be seen, there are still problems.

In Laycock (1965) the vowel /ɨ/ is omitted when it is in variation with its absence, as at the end of a word. An even more extreme line is taken by Biggs (1963) and Pawley (1966), where it is omitted throughout the Kalam language. Although this is linguistically acceptable (the specification of consonant clusters makes it clear where the 'non-phonemic' [ɨ] occurs) it tends to produce text that is unreadable by the layman: *mñy g-sp-yn* 'now I am going', *mnm ag d-sp-yn* 'I have just finished talking'. (One should further note that, in any language with readily definable phonotactics, it is always possible to devise an orthography with one phoneme (vowel or consonant) less than the phonemic inventory requires; the extra phoneme then occurs in all those places where its presence is predictable).[9]

The problem of /ɨ/ next to /y/ must also be solved in a way similar to that of /ɨ/ next to /w/ – note, for instance, [mi]/[miyat] 'tree/tree(allative)', [gay]/[gayt] 'village/village(allative)'. The situation is further complicated by the palatal consonants /s j ñ/, which have the same effect on surrounding vowels as does /y/.[10]

Even if a solution is found for /ɨ/, however, we are no further toward solving the problem of the other vowels. The following list of Abelam forms shows almost all the difficulties. All are formed in the same way: STEM+bound pronoun+past tense morpheme. The bound pronouns are /dɨ/ 'he' and [wutɨ] (however written) 'I'; the past tense marker is /n/ throughout.

Root	/ka-/	[kandɨn]	[ko^{ʊ}tɨn]
Root	/bwl-/	[mbulndɨn]	/mbulutɨn]
Root	/yɨ-/	[yɪndɨn]	[yɪwtɨn]
Root	/gɨraa-/	[ŋgɨra·ndɨn]	[ŋgɨra^{ʊ}tɨn]
Root	/vɨkŋw-/	[vɨkŋ^{w}undɨn]	[vɨkŋ^{w}u·tɨn]
Root	/vɨ-/	[vɨndɨn]	[vu·tɨn]

It is clear that any form of 'phonetic' writing – *kadɨn, koutɨn, buldɨn, bulutɨn, yindɨn, yütɨn, giraadɨn, girautɨn, vɨkŋwudɨn, vɨkŋwuutɨn, vɨdɨn, vuutɨn* – completely obscures the morphological unity of this paradigm. On the other hand, strictly phonemic writing produces forms like /kadɨn, kawtɨn, bwldɨn, bwlwtɨn, yɨdɨn, yɨwtɨn, giraadɨn, giraawtɨn, vɨkŋwdɨn, vɨkŋwwdɨn, vɨdɨn, vɨwtɨn/, which require some effort on the part of the reader, if he is to remember how they are pronounced. Obviously, some compromise is required – but I am not completely convinced that a compromise is attainable. If the phonetic orthography annoys the linguists and some native speakers, and the phonemic orthography annoys the non-linguist foreigners and the rest of the native speakers, it is likely that a compromise orthography will annoy all users.

The upshot of all this is that writing a language is not a simple matter. Not even professional linguists are always aware of the needs of all users of the orthography, and non-linguists are in even more of a quandary. Where there is an established orthography for a language, there is, of course, no good excuse for not using it, no matter how bad or how good it is; but where there is no established orthography the non-linguist has a difficult time of it. We have seen that naive phonetic writing frequently distorts the workings of a language out of all recognition, while the linguist's phonemic transcription is often unintelligible to both native speaker and non-linguist. Missionary orthographies, which may or may not be based on linguistic analysis, are usually designed to cater for the native speaker only – an understandable bias, but not a bias which makes the task of the foreign researcher any easier.

For many languages, then, obtaining an orthography that will satisfy all users is often an impossible task. The best advice that can be given to researchers working with a new language is: if you can't yourself make a better orthography than any already in use, then use the best one available. And do not be misled by the pseudo-scientific sound of writing 'phonetically'!

NOTES

1. Although the title of this paper mentions 'neutralisation', there is in fact nothing more that needs to be said about neutralisation than this note. Neutralisation is a problem that both phonemics and orthography have failed to solve. Thus, in Iatmul, /t/ and /r/ contrast at the beginning of words only. Intervocalically, only [r] is heard, while only [t] is heard in absolute-final position, or before a consonant; and this final [t] will become [r] if a vowel follows. If we write what we hear in every case, then many words will have two different orthographic shapes; if we choose to write, say, *r* medially and *t* finally, regardless of what we hear, then we are suppressing a phonemic contrast in the language that is evidenced in the contrast in initial position.
2. In proposing a 'rational' spelling system for Javanese, Berg (1941) proposes the use of the 'unnecessary' letters of the Roman alphabet to represent, arbitrarily, the sounds of Javanese; thus *v* = [ə], *f* = [ŋ]. It is not surprising that most people find such a system unacceptable.
3. Just as there is prejudice against races (racism) and women (sexism), so too there is prejudice against languages – for which there seems no better term than 'linguism'. For this word the Supplement to the OED gives the meaning of 'advocacy of languages on a regional basis', in reference to the language riots in India (quote from 1967); I should like to extend it to cover all kinds of prejudice for or against particular languages. It is the kind of prejudice exhibited, for instance, by Margaret Mead, when she chose not to follow the then standard orthography of Samoan during her first fieldwork; and it is the kind of prejudice commonly directed against

Tok Pisin, when foreign speakers do not take it seriously as a language, or use English-based spelling instead of the standard orthography. The lesser-known languages of the world – particularly the vernacular languages of Papua New Guinea – are very subject to such prejudice. Nevertheless, it is hard to find a good term for persons who are guilty of 'linguism' – one cannot simply say they are 'linguists'.

4. Recent publications on Sepik ethnography use such phrases as 'Die Schreibweise ist rein phonetisch', 'I have used a simple phonetic rendering', and 'die Schreibweise der einheimischen Bezeichnungen ist soweit als möglich leserlich gehalten'.

5. By an 'underlying' three-vowel system is meant that one cannot find in the language more than three simple vowel contrasts in syllables where the flanking consonants are not semivowels, palatalised consonants, or labialised consonants; or that such a system can be demonstrated to have been in evidence in the past. For many of the languages of the Sepik-Ramu Phylum, it is necessary to recognise more than three vowels in the current orthography, either because the conditioning factors have become obscured by phonetic change (as in Boikin, where the labialised series has disappeared, leaving its presence visible only in the altered vowel), or because the language has adopted many loanwords from languages (such as Tok Pisin) with a very different phonology.

   Not all analyses recognise the underlying three-vowel system – although some missionary-linguists, particularly those of the Summer Institute of Linguistics, do not always make it clear whether they are speaking of phonemes, or of orthographies. Pike (1964) recognises three vowels for Manambu, Mayo (Yessan-Mayo), and Iatmul; Allen and Hurd (1972) agree for Manambu, and Staalsen (1966) agrees for Iatmul. Foreman and Marten (1973) analyse Mayo with four vowels, but the fourth, /ɔ/, has a limited distribution, and mainly occurs adjacent to /w/ or labialised consonants. Wilson (1980) provides no description of phonology in her grammar of Abelam (Abulas), in which she writes seven vowels, but her description of the morphophonemics shows that she understands what is happening. Kooyers, Kooyers and Bee (1971) find seven vowels also in Kwoma (Washkuk), but their analysis is not very convincing.

6. Even in a paper such as this one it is difficult to find adequate symbolisation for the three basic vowels. Laycock (1965) uses the not very satisfactory set /ə ʌ a/; Staalsen originally (1966) used /ɨ ə a/, but later (1969, 1972) /ɨ a aa/; Allen and Hurd (1972) write /i a aa/. The different impression that is given by minor orthographic changes can best be seen by comparing four different ways of writing Iatmul (three of them from the same author):

Laycock 1965		Staalsen 1966		Staalsen 1972		Staalsen and Staalsen 1975	
p	*t*	*p*	*t*	*p*	*t*	*p*	*t*
c	*k*	*s, ts*	*k*	*s, (ts)*	*k*	*s, ts*	*k*
b	*d*	*mp*	*nt*	*b*	*d*	*mb*	*nd*
j	*g*	*(nts)*	*nk*	*j*	*g*	*nj*	*ng*
m		*m*		*m*		*m*	
n	*ñ*	*n*	*ñ*	*n*	*ny*	*n*	*ny*
ŋ	*r*	**n*	**l*	**n*	**l*	**n*	**l*
**k*	*w*	*g̃*	*w*		*w*	*g*	*w*
y	*a*	*y*	*a*	*y*	*aa*	*y*	*aa*
ə	*ʌ*	*ɨ*	*ə*	*i ɨ u a e o*		*i ɨ u a e o*	

(Forms in parentheses were not found in the cited works. Starred forms imply a difference in interpretation of the phonemic system, with the starred form showing the phoneme under which the additional contrast is subsumed. At this stage, I have no reason to doubt that the Staalsen 1966 analysis is basically correct).

7. As Wassmann (1982) notes: '[ɨ] ist ein zentraler oberer Vokal. Am einfachsten gelangt man zu seiner Aussprache, wenn man versucht, ihn gar nicht auszusprechen.' [[ɨ] is a central high vowel. The simplest way for one to attain its pronunciation is for one absolutely not to try to pronounce it.] The occurrence of this vowel /ɨ/ causes problems in writing place names all over the Sepik. It is written *i* in Mindimbit [mɨndɨmbɨt], *a* and *u* in Tambanum [tambɨnɨm], and as *e* or *u* in Terebu/Turupu [tɨrɨbu], and as *e* in Tendegum [tɨndɨgɨm].

8. In all the examples cited, the prenasalised stops are written, for simplicity, *b d j g*. A reasonable case can be made for writing them as *mp nt ns nk;* it is harder to justify *mb nd nj ng*, which introduce new symbols which (at least in the case of *b d j*) occur only in these combinations.

9. If /ɨ/ is not written in Abelam, the language becomes, effectively, a 'one-vowel' language, if the other two vowels are written as *a* and *aa*! In any case, the difficulty of representing /ɨ/ has apparently led some Papua New Guineans independently to a 'vowel-less' solution; I have seen a canoe on the Sepik labelled MDBT (for *Mɨndɨmbit*). However, this may stem rather from a form of abbreviation by writing only the onset of a syllable; in Buin (North Solomons), I saw a canoe labelled MGNP for *maiganapau* 'public ferry'. Buin has a straightforward system of five vowels /a e i o u/, without /ɨ/.

10. To achieve strict consistency, it may be necessary to regard the labialised consonant sequences /pw bw mw kw gw/ as unit phonemes, to match the palatal series /s j ñ/; or else the palatals should be treated as sequences /ty dy ny/. The latter solution is probably the correct one in diachronic terms, but the synchronic analysis is not entirely clear.

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REDUPLICATION IN AMELE

JOHN R. ROBERTS

1. INTRODUCTION

Reduplication, according to Crystal (1985:259), is 'a term in morphology for a process of repetition whereby the form of a prefix/suffix reflects certain phonological characteristics of the root'. Moravcsik (1978) further delimits the notion of reduplication by saying that, formally, reduplication can be the repetition or reiteration of a syntactic, phonological or phonetic string, and this repetition can be n-number of times, whereby the reduplicated form wholly or partially reiterates the base form and that the reduplicated form is semantically linked to the base form in some systematic way. So this definition of Moravcsik's requires that a reduplicated form has a non-reduplicated base form and would exclude instances of reduplication being used to express onomatopoeia, for example. It would also exclude repeated reference to the same referent. Moravcsik discusses the properties of reduplicative constructions across a wide language database and on the basis of these data posits some language universal principles with respect to reduplication processes. Marantz (1982) and Kitagawa (1987) have also proposed different formal models to account for reduplication within the framework of metrical phonology. Reduplication, according to Bolinger and Sears (1981:65), is one of a number of morphological devices available across languages for word formation. Other devices include compounding, derivation, invention, acronymy and conversion.

Reduplication is not an exotic phenomenon and occurs in various forms in Indo-European languages. For example, in Latin and Ancient Greek reduplication is used to express the perfect tense, e.g. (Latin) *fefellī* perfect of *fallō* 'to deceive' and (Greek) *tetypha* perfect of *typtō* 'to smack'. Reduplicated verbs also occurred in Old English when the language was far more inflectional than Modern English (see, for example, Quirk and Wrenn (1989:52-53)). According to Quirk et al. (1985:1579) reduplication is used in Modern English onomatopoeically, *(rat-a-tat, tick-tock, haha),* to express alternate movement *(seesaw, flip-flop, ping-pong)* and intensification *(teeny-weeny, tip-top),* and to disparage by suggesting instability, nonsense etc. *(higgledy-piggledy, hocus-pocus, wishy-washy).*

In fact, reduplicative compounds in English have some interesting features. For example, while many of these compounds invclve reiterations of the same form, e.g. *bye-bye, chin-chin, goody-goody, so-so, wee-wee,* others have either a vowel or consonant change. Where there is a vowel change it involves primarily two pairs, /a/ <-> /ɪ/ and /ɒ/ <-> /ɪ/. With both of these pairings it can be seen that the derivational process has operated both forwards and backwards from the original base form. So for the /a/ <-> /ɪ/ pairing there are forms where the base form is on the right and the

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reduplication has been to the left, e.g. *chit-**chat**, dilly-**dally**, mish**mash**, prittle-**prattle**, splish-**splash**.* On the other hand, there are forms where the reverse has applied, e.g. ***dribs** and drabs, **fiddle**-faddle, **snip**-snap, **wiggle**-waggle.* The same applies to the /ɒ/ <-> /ɪ/ pairing, e.g. *clip-**clop**, hippity-**hoppity**, niddle-**noddle*** versus ***ding**-dong, **nig**-nog, **ping**-pong.* Many reduplicative compounds in English have a consonant change, e.g. *boogie-woogie, itsy-bitsy, lovey-dovey, namby-pamby, pell-mell, willy-nilly.* However, it is interesting that, whereas the vowel-change reduplication in English is limited almost entirely to two vowel pairings, the consonant change is dominated by the consonant /h/ as in the following examples: *hab-dabs, handy-dandy, hanky-panky, harum-scarum, heebie-jeebies, helter-skelter, hickery-pickery, higgledy-piggledy, hirdy-girdy, ho-hum, hobjob, hobnob, hocus-pocus, hoddy-doddy, hodge-podge, hogen-mogen, hoity-toity, hokey-pokey, holus-bolus, honky-tonk, hoot-toot, hubble-bubble, hubbub, huff and puff, hugger-mugger, humdrum, humpty-dumpty, hum-strum, hurry-skurry, boo-hoo, yoo-hoo.* In the vowel-change and consonant-change type of reduplication then a language like English selects only a limited range of phonemes from its phoneme inventory for use in this function.

Reduplicative structures occur in many languages and have a range of functions. The main purpose of this article[1] is to describe the reduplicative structures that occur in the Amele language[2] of Papua New Guinea (PNG). Amele is interesting in that while using more common devices for word formation, such as compounding and derivation, the language also uses reduplication extensively for forming new words and in morphosyntactic processes. All major word classes are subject to reduplication processes and these processes have a range of different structures. For example, there are over 20 different types of reduplicative constructions in the verbs depending on the form-class of the verb and function-meaning of the reduplication.

Another interesting feature about reduplication in Amele is that a number of structures occur which are counterexamples to the formal properties of reduplication predicted so far in the literature by the theoretical linguists. For example, instances occur of both CV and VC reduplication in Amele for the same classes of words, which Moravcsik (1978:307) claims does not occur in natural languages: 'reduplicated phonetic strings I found invariably defined in reference to consonant-vowel sequences and absolute linear position. In other words, all such specifications are of the type: "reduplicate the first C and V of the word" ...and never of the type: "reduplicate the first two segments regardless of whether they are consonants or vowels"'. In Amele this type of reduplication can be handled by two separate reduplication rules. It is also the case that mirror-image reduplication occurs in Amele, which Moravcsik (1978) and Marantz (1982) claim does not occur in natural languages. The evidence for mirror-image reduplication is described in section 3.4. Finally reduplication in Amele is interesting because Amele is a Papuan language and as far as I can tell no data on a Papuan language has been included in any cross-linguistic discussion of reduplication despite the fact that Papuan languages represent about 14% of the world's languages.[3]

It may be the case that the reduplication that occurs in Amele is somewhat unique to this class of languages. For example, Foley (1986) does not mention reduplication as a typical device in morphological process in his overview of Papuan languages. However, Haiman (1980:124-135) describes CV reduplicative processes that occur in Hua which are similar to those that occur in Amele. Reesink (1987:113-119) describes reduplication of whole words in Usan of the type that occurs in Amele and Davies (1981:171) gives an example of reduplication in Kobon that involves a vowel change similar to the processes in English and which also occurs extensively in Amele. So

reduplication may after all be a common device employed in morphological process in Papuan languages.

This article comprises two basic sections. In section 2 the forms of the various reduplicative structures are described along with the word classes to which each structure belongs. In section 3 the various functions of reduplication in Amele are described along with the rules for each process.

2. FORMS OF REDUPLICATION IN AMELE

Formally Amele has whole and partial reduplication.

2.1 WHOLE REDUPLICATION

In Amele we can differentiate between whole-word and whole-stem reduplication. In whole-word reduplication the whole word, including inflection, is reduplicated, whereas in whole-stem reduplication just the stem is reduplicated and the inflection attaches to the reduplicated stem. Whole-word reduplication applies to all major word classes including the inflected word classes, i.e. possessed nouns and verbs. Whole-stem reduplication, on the other hand, only applies to verbs. The whole verb stem can be reduplicated in different ways with different semantic functions and the verbal inflection attaches to the reduplicated stem. Examples of whole-word reduplication are given in Table 1 and examples of whole-stem reduplication are given in Table 2.

TABLE 1: WHOLE-WORD REDUPLICATION

Nouns (non-possessed)			
jo	house	*jo-jo*	houses
baga?	leaf	*baga?-baga?*	thin
Possessed Nouns[4]			
?otig	brother	*?otig-?otig*	brothers
?ebinag	sibling of opposite sex	*?ebinag-?ebinag*	brother and sister
Pronouns			
oso	one	*oso-oso*	anyone
ana	where	*ana-ana*	wherever
Adjectives			
me	good	*me-me*	very good, many good things
nag	small	*nag-nag*	very small, many small things
Postpositions			
?a	add, with	*?a-?a*	alike
na	in, at	*na-na*	in every one, at every place

Verbs[5]

fe?	to see	*fe?-fe?*	seeing
do?	to know	*do?-do?*	knowing
fe?eb	he[6] looked-DS	*fe?eb-fe?eb e?*	to look at each other
g͡bo?ob	he hit-DS	*g͡bo?ob-g͡bo?ob e?*	to hit each other
g͡betudo?ob	he cut him-DS	*g͡betudo?ob-g͡betudo?ob e?*	to cut each other

TABLE 2: WHOLE-STEM REDUPLICATION

?eel-en	he rejoiced	*?eel-?eel-en*	as he rejoiced
gudu-en	he ran	*gudu-gudu-en*	as he ran
budu-ena	it thuds	*budu-budu-ena*	it is thudding
ho-na	he comes	*hu-hu-ena*[7]	he is coming
budu-ena	it thuds	*budu-bada-ena*	it thuds sporadically
gasu-ena	he searches	*gasu-gisi-ena*	he searches here and there

As to the question of in which direction the whole-word and whole-stem reduplication operates the evidence would suggest that in both cases this is a left to right operation. In some cases of whole-word reduplication the reduplicated formant can be reduced in some way as in Table 3 for example.

TABLE 3: REDUCED WHOLE-WORD FORMANTS

?eteh	thing	*?eteh-teh*	things
oso	one	*oso-so*	anyone

In some cases of whole-stem reduplication there is a vowel change which operates on the rightward reduplicated formant (see Table 2). Both these pieces of evidence would indicate that whole reduplication operates from left to right in Amele. Another indication that the whole-stem reduplication is a type of rightward reduplication is that the position between the verb stem and verb suffixation is also the site for word incorporation as in (1).

(1) a. *?esul-ade-ig-a.*
help-3PL.O-3PL-TODP
They helped them.

b. *?esul bahi? ade-ig-a.*
help very 3PL.O-3PL-TODP
They really helped them.

c. *?esul g͡bee ade-l-ein.*
help not 3PL.O-3PL-TODP
They did not help them.

2.2 PARTIAL REDUPLICATION

Partial reduplication is primarily leftward from the base form although rightward and internal reduplication can also occur. The fact that leftward reduplication is the main type of partial

reduplication is probably due to the fact that regular inflection in Amele is entirely by suffixation. So the leftward reduplication naturally fills the gap left by the absence of prefixation morphology.

2.2.1 PARTIAL LEFTWARD REDUPLICATION

The most common type of leftward reduplication is a copy of the first CV of the base form. This is an active process in the verbs and also applies to one possessed noun and one emphatic word. This type of reduplication is CV based and not syllable based since where the first syllable of a base form is CV+semivowel only the CV is reduplicated. Examples are given in Table 4.

TABLE 4: CV REDUPLICATION

Verbs			
bile?	to sit	*bi-bilen*	as he sat
tawe?	to stand	*ta-tawen*	as he stood
foio?	to vomit	*fo-foion*	as he vomited
jaune?	to dress up	*ja-jaunen*	as he dressed up
Non-verbs			
dahig	his ear	*da-dahig*	ears of everyone
dih	just	*di-dih*	just now

V and VC leftward reduplication also occurs. VC reduplication applies to verbs and one possessed noun form and V reduplication applies only to verb forms. Examples are given in Table 5.

TABLE 5: V AND VC LEFTWARD REDUPLICATION

V			
ilale?	to dodge	*i-ilalen*	as he dodged
odo?	to do	*o-odon*	as he did
VC			
eben	his hand	*eb-eben*	hands of everyone
abale?	to search with hands	*ab-abale?*	to search repeatedly with hands
iloe?	to fall as small drops	*il-iloe?*	to fall repeatedly as small drops

2.2.2 PARTIAL INTERNAL REDUPLICATION

With internal reduplication the consonant-vowel strings CV, V and VC can all occur as reduplicated strings. Sample forms are given in Table 6.

TABLE 6: INTERNAL REDUPLICATION

CV			
ameg	his eyes	*ame-meg*	the eyes of everyone
aho?	to bring	*aho-hon*	as he brought
goldo?	to stir	*goldo-don*	as he stirred

V

abale?	to search with hands	*abale-en*	as he searched with hands
maniaden	he cooked for them	*mania-aden*	as he cooked for them

VC

manaden	he cooked them	*manad-aden*	as he cooked them
?edaden	he got them	*?edad-aden*	as he got them

2.2.3 PARTIAL RIGHTWARD REDUPLICATION

Partial rightward reduplication is controversial. The first type involves what is analysed as mirror-image reduplication. A CV string becomes a reduplicated VC string with an epenthetic glottal stop inserted. For the moment these forms are illustrated in Table 7 as they occur but in section 3.4 arguments are presented to substantiate the claim that these are indeed instances of mirror-image reduplication. Mirror-image reduplication occurs with some of the locative pronouns and also with some of the postpositions.

TABLE 7: RIGHTWARD CV -> VC REDUPLICATION

ene	here	*ene-?-en*	it is here
ono	there	*ono-?-on*	it is there
ana	where?	*ana-?-an*	it is where?

The second type of rightward reduplication is again controversial. It applies to the speech verbs. A quote sentence commonly comprises a speech verb followed by a direct quote followed by a copy of the speech verb. This copy is normally just the verb suffixation, as in (2).

(2) a. *Ugba mad-ei-a,* "..." *ei-a.*
3SG say-3SG-TODP 3SG-TODP
He said, "...".

b. *Ugba ma-te-i-a,* "..." *te-i-a.*
3SG say-1SG.O-3SG-TODP 1SG.O-3SG-TODP
He told me, "...".

c. *Ugba ma-ade-i-a,* "..." *ade-i-a.*
3SG say-3PL.O-3SG-TODP 3PL.O-3SG-TODP
He told them, "...".

This second type of reiteration would fall within the structural definitions of reduplication given above, especially when it applies to just the verb suffixation. The occurrence of intervening material is common in reduplicative constructions but in this case it can consist of a sentence, a string of sentences or a whole discourse. So if we consider this construction to be an instance of reduplication we must assume that a discourse can be embedded within a word. In section 3.10 arguments are presented that quote closure is not in fact a type of reduplication.

3. FUNCTIONS OF REDUPLICATION IN AMELE

Reduplication in Amele can indicate plurality, similarity or likeness, inclusiveness or distribution, intensification, simultaneity, iterativity (either regular or irregular), participial function, reciprocity

and reflexivisation. These functions can be either morphosyntactic or derivational. One could say that the basic semantic function of reduplication in Amele is 'additive', i.e. to indicate an increase in quality or quantity of the notion expressed by the word that is reduplicated. Thus reduplication in Amele is basically iconic – more of the same in form indicates more of the same in meaning. In this sense one could view reduplication as the most basic or primitive form of morphological process. However, while the basic meaning is additive, a range of subcomponents of meaning can be differentiated on the basis of differences of form, word class and whether the function is morphosyntactic or derivational. These functions are described in the following sections.

3.1 PLURALITY

Nouns and adjectives can be reduplicated to indicate plurality. This is a whole-word type of reduplication. Examples are given in Table 8. Where adjectives are reduplicated to indicate plurality the noun modified by the adjective can be present or not. If it is not present then the meaning is 'many things with the quality X'.

TABLE 8: REDUPLICATION INDICATING PLURALITY

Nouns

bolob	trap	*bolob-bolob*	many traps
ʔeteh	things	*ʔeteh-ʔeteh*	many things
hamol	room	*hamol-hamol*	many rooms
jo	house	*jo-jo*	many houses
jobon	village	*jobon-jobon*	many villages
maha	land	*maha-maha*	many lands
g͡bala	burial hole	*g͡bala-g͡bala*	cemetery
sigin	knife	*sigin-sigin*	many knives

Adjectives

ben	big	*ben-ben*	many big things
fil	different	*fil-fil*	many different things
me	good	*me-me*	many good things
nag	small	*nag-nag*	many small things
mel haun	young man	*mel haun-haun*	many young men
mel sim	young child	*mel sim-sim*	many young children

It is also the case that many nouns and adjectives are in a frozen reduplicated form, i.e. there is no corresponding unreduplicated form. So these forms do not strictly belong to the reduplicative systems in the language. Nevertheless many plural or mass nouns are in this form. In most cases this is a partial CV or VC reduplication. Both non-possessed and possessed nouns can be in this form. Examples are given in Table 9.

TABLE 9: REDUPLICATED MASS AND PLURAL NOUNS

folo-folo	lungs
ab-ab	a wave of the arm
al-alag	stagnant water

bo-bos	dust
be-beig	roots
ʔi-ʔit	barbs
do-do	tail feathers
fu-fu	wind
gi-gi	grass
fi-fiji	a bubbling hot spring
la-laʔ	rain puddles
li-lih	broom made of coconut spines
mu-mudiʔ	light rain
ni-nihul	type of wasp
od-od	paths through a garden
g͡ba-g͡bah	type of iguana
su-sul	peelings
to-toʔ	dew
ud-ud	type of ginger
we-wes	type of ant
bi-bitomi	my buttocks
ge-gehini	my body dirt
go-godomi	my backbone

3.2 REDUPLICATION INDICATING SIMILARITY OR LIKENESS

Both non-possessed and possessed nouns can be reduplicated in a whole-word form to indicate the notion of similarity or likeness. The reduplicated nominal often functions as an adjective or adverb. So although this type of reduplication is formally the same as that indicating plurality its function is different. Reduplication indicating plurality has a morphosyntactic function whereas reduplication indicating similarity has a derivational function. Examples are given in Table 10.

TABLE 10: REDUPLICATION INDICATING SIMILARITY OR LIKENESS

baga?	leaf		*baga?-baga?*	leaflike, thin
bi?	tail		*bi?-bi?*	like a tail
		e.g.	*bi?-bi? nue?*	to go backwards, lit. tailwards
boh	plate		*boh-boh*	like a plate
		e.g.	*boh-boh le?*	to go sleek and shiny like a plate
gel	fence		*gel-gel*	like a fence
		e.g.	*dana gel-gel*	men surrounding like a fence
gemo	middle		*gemo-gemo*	through the middle
		e.g.	*gemo-gemo ʔobo?*	to walk through the middle
ho	pig		*ho-ho*	like a pig
		e.g.	*ho-ho ʔobo?*	to walk like a pig, i.e. on all fours

le?is	two		*le?is-le?is*	two by two
		e.g.	*le?is-le?is ho?*	to come two by two
?otig	brother		*?otig-?otig*	brothers
		e.g.	*age ?otig-?otig*	they are brothers
?ebinag	sibling of opposite sex		*?ebinag-?ebinag*	brother and sister
		e.g.	*age ?ebinag-?ebinag*	they are brothers and sisters

The adjective *ihoc* 'sufficient' can be reduplicated to indicate equivalence, e.g. *age ihoc-ihoc* 'they are equal' and the postposition *?a* 'add, with' can be reduplicated to indicate the notion of similarity. In this form it normally functions as a predicative adjective as in (3).

(3) *Ija na ho hina na ho ale ?a-?a.*
1SG of pig 2SG of pig 3DU add-add
My pig and your pig are alike.

3.3 REDUPLICATION INDICATING INCLUSIVENESS OR DISTRIBUTION

The notion of 'including all' or 'in every place' can be indicated by reduplication. This applies to some of the possessed nouns, the demonstrative and interrogative pronouns and the postpositions *na* 'in, at' and *nu* 'for'. Examples are given in Table 11.

TABLE 11: REDUPLICATION INDICATING INCLUSIVENESS OR DISTRIBUTION

Possessed nouns

ameg	eyes	*ame-meg*	eyes of everyone
dahig	ears	*da-dahig*	ears of everyone
eben	hands	*eb-eben*	hands of everyone

Pronouns

oso	one	*oso-oso*	anyone
adi	how	*adi-adi*	however
ai	where	*ai-ai*	wherever
ana	where	*ana-ana*	wherever
?el	which	*?el-?el*	whichever
eeta	what	*eeta-eeta*	whatever
gani?	how many	*gani?-gani?*	however many
in	who	*in-in*	whoever

Postpositions

na	in, at	*na-na*	in every one, at every place
nu	for	*nu-nu*	for everyone

It should be noted that this reduplication in the possessed nouns involves structural descriptions (SD) for both CV and VC copying. So inclusiveness (Incl.) in these forms requires either rule [1] or rule [2]. For the same reduplicative function operating on the same word class then both a CV and VC structural description is required. This is therefore a counterexample to Moravcsik's (1978:307)

claim that a specification of the type 'reduplicate the first two segments regardless of whether they are consonants or vowels' does not occur in natural languages.

[1] SD: (V) Incl. + C V ...
1 2 3 4 5

SC: 2 -> 4 5

[2] SD: Incl. + V C ...
1 2 3 4

SC: 1 -> 3 4

3.4 REDUPLICATION INDICATING INTENSIFICATION

The meaning of a word can be intensified by reduplication. This applies primarily to the adjectives but one emphatic word and the postposition *na* 'with (instrument)' can be reduplicated to express this notion. Intensification is also the main function of mirror-image reduplication. Table 12 gives examples of intensified adjectives and the emphatic word.

TABLE 12: REDUPLICATION INDICATING INTENSIFICATION

Adjectives

ben	big	*ben-ben*	very big
ʔebit	slow	*ʔebit-ʔebit*	very slow
fil	different	*fil-fil*	very different
gaid	always	*gaid-gaid*	for ever and ever
me	good	*me-me*	very good
nag	small	*nag-nag*	very small

Emphatic word

dih	just	*di-dih*	just now

Postposition

ʔebit na	slowly	*ʔebit na-na*	very slowly

Like the nouns many adjectives have a frozen reduplicated form. These adjectives have the inherent notion of intensification. They cannot be reduplicated by whole-word reduplication, for example, to express intensification. Examples are given in Table 13.

TABLE 13: REDUPLICATED ADJECTIVES

ʔe-ʔelaʔ	(very) long
du-duleh	(very) rough
gi-giʔit	(very) tight
ha-hawan	(absolutely) first
it-itom	(very) righteous
la-lan	(very) crumbly
ne-nel	(very) sloping
so-sog	(very) narrow
tu-tuʔ	(very) straight

As mentioned above, the primary function of mirror-image reduplication in Amele is to express the notion of intensification (INTENS). Mirror-image reduplication occurs with the postpositions *na* 'possessive' and *nu* 'benefactive' and the demonstrative locative pronouns. The function is to emphasise the statement regarding the possession, benefaction or location. The postpositions can only occur with pronouns when reduplicated in this way, whereas otherwise they can also occur with proper nouns. Examples are given in Table 14.

TABLE 14: MIRROR-IMAGE REDUPLICATION

Postpositions

ija na	my	*ija na?in*	that is mine
ija nu	for me	*ija nu?un*	that is for me

Locatives

ene	here	*ene?en ~ ene?in*	it is here
ono	there	*ono?on ~ ono?in*	it is there
ana	where?	*ana?an ~ ana?in*	it is where?

While the semantic function of mirror-image reduplication is basically one of emphasis, it also has the derivational function of turning the pronoun form into a predicative adjective. So, whereas the possessive pronoun form can function either as an attributive or predicative adjective, as in (4), the mirror-image reduplicated form can only function as a predicative adjective, as in (5).

(4) a. *ija na jo*
1SG of house
my house

b. *Jo eu ija na.*
house that 1SG of
That house is mine.

(5) a. **ija na?in jo*
1SG of.INTENS house

b. *Jo ija na?in.*
house 1SG of.INTENS
That house is (definitely) mine.

Similarly, the demonstrative pronoun can function as either a demonstrative or a predicative adjective, as in (6), but the mirror-image reduplicated form can only function as a predicative adjective and not as a demonstrative, as in (7).

(6) a. *Jo ono bil-i-a.*
house there sit-3SG-TODP
The house is there.

b. *Jo ono.*
house there
The house is there.

(7) a. **Jo ono?on bil-i-a.*
house there.INTENS sit-3SG-TODP

b. *Jo ono?on.*
house there.INTENS
The house is (over) there.

For the postposition *na* the epenthetic vowel /i/ is inserted in the V position. /i/ occurs frequently in epenthetic processes in Amele and is the default epenthetic vowel in the phonological system[8]. For

the postposition *nu* this is copied as is but in reverse linear sequence. For the locatives either the last CV can be copied in reverse or the epenthetic vowel /i/ can be inserted. There is free fluctuation between these alternatives. This mirror-image reduplication can be accounted for by two rules operating in sequence: the CV reduplication by [3a] and the metathesis with glottal epenthesis by [3b].

[3a] SD: n $\begin{bmatrix} u_i \\ V_j \end{bmatrix}$ [postposition or pronoun] + INTENS

1 2 3 4

SC: 4 -> 1 $\begin{bmatrix} u_i \\ \begin{bmatrix} V_j \\ i \end{bmatrix} \end{bmatrix}$

2

[3b] SD: C V + Ø C V

1 2 3 4 5 6

SC: 4 -> ʔ 6 5

The question arises: Is this really mirror-image reduplication or is it just the case that we have a suffix such as -*ʔVn* attaching to these forms? The evidence from the language would suggest that this is really mirror-image reduplication, albeit not what might be expected. Firstly, this suffixation only occurs with these forms, i.e. forms with *nV* preceding. If it was an unreduplicated suffix one would expect to find it attached to other forms phonologically dissimilar. Secondly, Amele only allows vowel change in other reduplicative processes (see section 3.6.2) and not consonant change, so the fact that alternative vowels are allowed in these forms would suggest that it is a reduplication process. Thirdly, other reduplicated forms occur in the language with an inserted linking element, although the element is a vowel in these cases and not a glottal stop. These are all frozen forms with a linking vowel and examples are given in Table 15.

TABLE 15: REDUPLICATIVE FORMS WITH A LINKING VOWEL

beg-a-beg	orphan
ʔeel-a-ʔeel	a swallow
ʔin-a-ʔin	a blue-collared parrot
dab-a-dab	plenty
gab-a-gab	a stretcher
gih-i-gih	heat
jab-a-jab	a share
lug-u-lug	a joist

A fourth argument is that there is a correspondence between forms in other languages of the Gum language family and Amele, which shows that metathesis has taken place in the Amele form.[9] Where metathesis has taken place there is often a glottal stop inserted. This would be good evidence to suggest that the presence of a glottal stop in the reduplicated forms in Table 14 is indicative that metathesis has taken place. Examples of metathetic correspondence are given in Table 16.

TABLE 16: METATHETIC CORRESPONDENCE BETWEEN AMELE AND OTHER GUM LANGUAGES[10]

Amele Form	Form in other Gum languages	
bui?	*biw*	ripe
le?is	*elis*	two
esi?	*egis*	sand
gola?	*joga*	blood

Finally, Lass (1984:188-190) notes that while metathesis is often involved diachronically in language change, for example /æsk/ in English came originally from /æks/, there are examples of metathesis in morphological process. He cites an example from Papago, where plural formation by reduplication involves a metathetic /h/. This does not produce mirror-image reduplication but it is interesting that the only instance of metathesis in morphological process that Lass cites is the Papago example involving reduplication. Schane (1973) also cites an example of metathesis in morphological process in Hanunoo, where a sequence of glottal stop plus consonant becomes consonant plus glottal stop.

3.5 REDUPLICATION INDICATING SIMULTANEITY

One of the main functions of reduplication in the verbs is to indicate simultaneous action. Amele, like many Papuan languages, has a clause chaining structure whereby clauses can be joined together in a clause chain. In such a structure there are basically two types of verb: a final verb type, which occurs in the clause at the end of the clause chain, and a medial verb type, which occurs in clauses in non-final position. Both verb types can be marked for subject and object agreement but, in addition, final verbs are marked for tense, aspect and mood, whereas medial verbs are marked for two basic categories, viz. same subject following (SS) versus different subject following (DS) and sequential action (SEQ) versus simultaneous action (SIM). SS indicates that the subject of the following verb is the same as that of the marked verb and DS indicates that the subject of the following verb is different from the subject of the marked verb.[11] SEQ indicates that the action of the following verb is consecutive to the action of the marked verb and SIM indicates that the action of the marked verb is concurrent with the action of the following verb. (SEQ and SIM are actually distinctions of relative tense.[12]) SS-SEQ is marked morphologically on the verb by *-me* and DS-SEQ is marked by *-?V*, where V is a harmonic vowel. SIM is marked morphologically by reduplication of some part of the verb and this is described in detail below. SS-SIM versus DS-SIM is indicated by the set of subject agreement markers attached to the verb. DS-SIM has a further subdivision of realis modality (R) versus irrealis modality (IR).[13] DS-SIM-R occurs with final realis verbs marked for categories such as past and present tense and past habitual aspect. DS-SIM-IR occurs with final irrealis verbs marked for categories such as future tense and imperative and contrafactual modality. Table 17 displays illustrative paradigms for the three forms of SIM based on the verb *fe?* 'to see'.

TABLE 17: SIMULTANEOUS TENSE PARADIGMS

	SS-SIM	DS-SIM-R	DS-SIM-IR
1SG	*fi-fi-g*	*fi-fi-gin*	*fe-fe-min*
2SG	*fe-fe-g*	*fe-fe-gan*	*fe-fe-m*
3SG	*fe-fe-i*	*fe-fe-n*	*fe-fe-b*
1DU	*fi-fi*	*fo-fo-won*	*fo-fo-hul*
2/3DU	*fe-fe-si*	*fe-fe-sin*	*fe-fe-bil*
1PL	*fe-fe-b*	*fo-fo-g͡bon*	*fo-fo-mun*
2/3PL	*fe-fe-ig*	*fe-fe-gin*	*fe-fe-bil*

Initial CV reduplication is the primary means of marking SIM in the verb. There are other means depending on the type of the verb. Examples are given in Table 18. All examples in the table are given in the DS-SIM-R third person singular subject form. Set (a) illustrates verbs that reduplicate the first CV of the verb stem. The forms with initial CV+semivowel only reduplicate the first CV so this reduplication process is CV based rather than syllable based. Set (b) illustrates those verbs that reduplicate the first V of the verb stem. Set (c) illustrates verbs that reduplicate the first V of the verb morphology. Set (d) illustrates verbs that reduplicate an object marker. Any verb that contains an object marker will reduplicate this morpheme. With third person dual and plural it makes a difference as to whether the object is direct or indirect. If the object is direct then the reduplication is VC but if it is indirect the reduplication is V. Set (e) illustrates a few verbs that reduplicate the whole stem to indicate SIM. These verbs operate this way even if there is a reduplication of the object marker. Set (f) illustrates some verbs that reduplicate stem internally. These are forms that were originally two stems but are now fused as one. With respect to this type of reduplication note that in a serial verb construction, which comprises a string of verb stems stripped of most of their verb morphology, it is usually the last verb that reduplicates for simultaneous action.

TABLE 18: FORMS OF SIMULTANEOUS REDUPLICATION

Set (a)

beʔ	to come up	*be-ben*	as he came up
bileʔ	to sit	*bi-bilen*	as he sat
ʔafaleʔ	to untie	*ʔa-ʔafalen*	as he untied
fajeʔ	to pay	*fa-fajen*	as he paid
foioʔ	to vomit	*fo-foion*	as he vomited
geleʔ	to scrape	*ge-gelen*	as he scraped
hoʔ	to come	*ho-hon*	as he came
jag͡beʔ	to write	*ja-jag͡ben*	as he wrote
jauneʔ	to dress up	*ja-jaunen*	as he dressed up
libeʔ	to tie	*li-liben*	as he tied
mudeʔ	to make	*mu-muden*	as he made
nijeʔ	to lie	*ni-nijen*	as he lay
nueʔ	to go	*nu-nuen*	as he went
g͡bataneʔ	to split	*g͡ba-g͡batanen*	as he split
siweʔ	to share	*si-siwen*	as he shared
tanaweʔ	to make peace	*ta-tanawen*	as he made peace
taweʔ	to stand	*ta-tawen*	as he stood
wegeʔ	to weave	*we-wegen*	as he weaved

Set (b)

ade?[14]	how?	*a-aden*	whenever?
ede?	to be like this	*e-eden*	as it was like this
ilale?	to dodge	*i-ilalen*	as he dodged
o?	to get	*o-on*	as he got
odo?	to do	*o-odon*	as he did

Set (c)

abale?	to search with hands	*abale-en*	as he searched with his hands
babale?	to cross	*babale-en*	as he crossed
?ogoge?	to twist	*?ogoge-en*	as he twisted
deee?	to stare	*deee-en*	as he stared
eue?	to cry	*eue-en*	as he cried
fanine?	to flatter	*fanine-en*	as he flattered
gasue?	to search	*gasue-en*	as he searched
idade?	to trade	*idade-en*	as he traded
mecie?	to watch	*mecie-en*	as he watched
g͡belele?	to tremble	*g͡belele-en*	as he trembled
tefa?e?	to jump over	*tefa?e-en*	as he jumped over
utae?	to call	*utae-en*	as he called

Set (d)

abuldo?	to struggle	*abuldo-don*	as he struggled
balado?	to tear	*balado-don*	as he tore
?aha?do?	to obstruct	*?aha?do-don*	as he obstructed
dido?	to pull	*dido-don*	as he pulled
elelando?	to provoke	*elelando-don*	as he provoked
fagdo?	to stick	*fagdo-don*	as he stuck
goldo?	to stir	*goldo-don*	as he stirred
hehdo?	to support	*hehdo-don*	as he supported
iwesdo?	to sweep	*iwesdo-don*	as he swept
jabdo?	to pursue	*jabdo-don*	as he pursued
loldo?	to wander	*loldo-don*	as he wandered
meledo?	to examine	*meledo-don*	as he examined
sa?iado?	to prepare	*sa?iado-don*	as he prepared
wela?do?	to scorch	*wela?do-don*	as he scorched

Direct object

man-ale?	to cook two	*man-al-alen*	as he cooked two
man-ade?	to cook them	*man-ad-aden*	as he cooked them

Indirect object

mani-ale?	to cook for two	*mani-a-alen*	as he cooked for two
mani-ade?	to cook for them	*mani-a-aden*	as he cooked for them

Set (e)

ʔeeleʔ	to rejoice	*ʔeel-ʔeelen*	as he rejoiced
gudueʔ	to run	*gudu-guduen*	as he ran
ʔuadoʔ	to wave a branch to light it	*ʔua-ʔuado-don*	as he waved a branch to light it

Set (f)

ahoʔ	to bring	*aho-hon*	as he brought
ag͡bateʔ	to take a short cut	*ag͡bate-ten*	as he took a short cut
ʔaʔitoʔ	to spit out	*ʔaʔito-ton*	as he spat out
ʔaʔoʔ	to wipe	*ʔaʔo-ʔon*	as he wiped
ʔaʔuteʔ	to unhang	*ʔaʔute-ten*	as he unhung

Serial verbs

ehi te-ten	as he took and went up
take go.up	
ji fe-fen	as he tasted
eat see	
mani ʔuhado-don	as she cooked well
cook surpass	

Reduplication to indicate simultaneity also needs a rule for both (C)V and VC reiteration, as in [4] and [5].

[4] SD: ...SIM + (C) V ...
1 2 3 4

SC: 1 -> 3 4

[5] SD: ...SIM + V C ...
1 2 3 4

SC: 1 -> 3 4

3.6 REDUPLICATION INDICATING ITERATIVITY

There are two types of iterative action that can be marked by reduplication in Amele: regular and irregular iterative. There are both formal and functional differences between these two types. Iterative reduplication differs from simultaneous reduplication in two ways. In simultaneous reduplication the main form is CV reduplication and also there is a particular type of subject agreement morphology associated with this category. In iterative reduplication, on the other hand, the main form is whole-stem reduplication and any type of category, excluding simultaneity, can be marked morphologically on either the medial or final verb.

3.6.1 REGULAR ITERATIVE

The meaning of the regular iterative is a repeated, regular action. In the reduplication process the whole stem is normally reduplicated if the verb does not have an object marker, otherwise the object

marker is reduplicated either in place of or in addition to the reduplication of the verb stem. The evidence presented in section 2.1 would indicate that this reduplication is from left to right. Examples are given in Table 19.

TABLE 19: REGULAR ITERATIVE REDUPLICATION

Set (a)

be?	to come up	*bi-bi-e?*	to come up repeatedly
?ago?	to cut	*?agu-?agu-e?*	to cut repeatedly
ĝbo?	to hit	*ĝbu-ĝbu-e?*	to hit repeatedly
ho?	to come	*hu-hu-e?*	to come repeatedly
le?	to go	*li-li-e?*	to go repeatedly
o?	to get	*u-u-e?*	to get repeatedly

Set (b)

budue?	to thud	*budu-budu-e?*	to thud repeatedly
falee?	to flash	*fale-fale-e?*	to flash repeatedly
gasue?	to search	*gasu-gasu-e?*	to search repeatedly
gele?	to scrape	*gel-gel-e?*	to scrape repeatedly
libe?	to tie	*lib-lib-e?*	to tie repeatedly
joe?	to hover	*jo-jo-e?*	to hover repeatedly
ĝbatane?	to split	*ĝbatan-ĝbatan-e?*	to split repeatedly

Set (c)

balado?	to tear it	*bala-(bala-)du-du-e?*	to tear it repeatedly
?aha?do?	to obstruct him	*?aha?-(?aha?-)du-du-e?*	to obstruct him repeatedly
elelando?	to provoke him	*elelan-(elelan-)du-du-e?*	to provoke him repeatedly
fenundo?	to press it	*fenun-(fenun-)du-du-e?*	to press it repeatedly
gohudo?	to knock it	*gohu-(gohu-)du-du-e?*	to knock it repeatedly
iwesdo?	to sweep it	*iwes-(iwes-)du-du-e?*	to sweep it repeatedly
waldo?	to turn it	*wal-(wal-)du-du-e?*	to turn it repeatedly

Since this type of reduplication is whole-stem reduplication instead of partial reduplication (as in simultaneous reduplication), the verb stem can be marked as a predicate in certain forms, indicating that it functions as an additional verb. The predicate marker is *-i*. This combines with certain verb stems as given in sets (a) and (c) in Table 19 in a process of vowel coalescence. The forms where this applies are, firstly, those that have a single consonant for the verb stem, as in *b-e?* 'to come up', *ĝb-o?* 'to hit', *h-o?* 'to come' and *l-e?* 'to go'. In these cases the predicate marker *-i* combines with the infinitive markers *-e?* and *-o?* to produce the vowels *-i* and *-u* respectively. This process of vowel coalescence also applies to the forms that have *-o?* as the final part of the infinitive form, as in *o?* 'to get', *?ago?* 'to cut' and *balado?* 'to tear it'. So in set (a) *be?* + *i* coalesces to *bi* and *ho?* + *i* coalesces to *hu*. The verb morphology then attaches to this reduplicated verb stem. In a similar way in set (c) the predicate marker coalesces with the infinitive form of *balado?* 'to tear it' to produce *baladu-* which then reduplicates. The verb morphology then attaches to this reduplicated verb stem.

It is also possible to express iterativity with a reduplicated serial verb construction. A serial verb construction comprises two or more SS verb stems with reduced morphology in a series. However a serial verb stem is minimally marked with the predicate marker (PRED). With this type of reduplication the verb can be reduplicated many times as in (8).

(8) *t-i t-i t-i t-i ohis ʔal-en*
go.up-PRED go.up-PRED go.up-PRED go.up-PRED above arrive-3SG.REMP
up, up, up, up he went and arrived at the top

There is often another verb occurring as the final verb in the serial verb chain. With this type of construction a speaker can usually vary the form, i.e. have a final verb or not and have different final verbs.

(9) *Ag͡bus-i ag͡bus-i le-Ø-na.*
unhang-PRED unhang-PRED go-3SG-PRES
He unhangs repeatedly (lit. he unhangs, unhangs, going).

(10) *Bagaw-i bagaw-i hele-Ø-na.*
break-PRED break-PRED throw-3SG-PRES
He breaks repeatedly (lit. he breaks, breaks, throwing).

A reduplicated iterative verb can be incorporated in the serial verb type of construction, as in (11-13), when an alternate action is described. In this type of construction the verb morphology is attached to the whole serial verb chain rather than to just one reduplicated verb stem.

(11) *Li-li hu-hu ena.*
go-go come-come 3SG.PRES
He goes and comes.

(12) *Ti-ti ni-ni ena.*
go.up-go.up come.down-come.down 3SG.PRES
He goes up and comes down.

(13) *G͡Beti li g͡beti hu ena.*
cut go cut come 3SG.PRES
He cuts backwards and forwards.

Such structures can be very complex as in (14) taken from text.

(14) *ʔebina-g-ul ale laha-luhu-du-du wol-wil-du-du*
sibling-3SG-PL 3DU stamp-stamp-3SG-3SG turn-turn-3SG-3SG

li-li hu-hu olo-si
go-go come-come HABP-3DU
His (two) sisters used to stamp on him all over, turn (their heels) on him all over, this way and that way.

With some verbs only the first VC of the stem is reduplicated to indicate iterative reduplication, as in Table 20.

TABLE 20: VC ITERATIVE REDUPLICATION

abalena	he searches with hands	*ab-abalena*	he searches repeatedly with hands
eedena	it glows	*ed-edena*	it glows continuously
iloena	it drips	*il-iloena*	it drips repeatedly

3.6.2 IRREGULAR ITERATIVE

The meaning of irregular (Irr.) iterative is a repeated action that is irregular in some way, i.e. haphazard, spasmodic, intermittent, etc. This form involves reduplication of the verb stem but with a vowel change. So it is similar to forms in English like *mish-mash, wishy-washy, flip-flop, clip-clop* and *see-saw*. The reduplication process clearly works from left to right since this is the direction the vowel change operates. There are eight types of vowel change possibilities which are determined by phonological factors:

(i) /u/ -> /a/
(ii) /u/ -> /i/
(iii) /a/ -> /u/
(iv) /i/ -> /u/
(v) /i/ -> /o/
(vi) /i/ -> /a/
(vii) /o/ -> /i/
(viii) /e/ -> /u/

/i/ and /u/ are each involved in five of the vowel changes and are the dominant vowels in this process. /e/, on the other hand, is only involved in one vowel change and in fact, as described below, only a few examples of this change have been observed. Most verb stems with an /e/ use an alternative strategy than vowel-change reduplication to indicate the same meaning. In Tables 21-31 reduplicated forms that exhibit a vowel change but do not have a corresponding unreduplicated form are also listed.

(i) /u/ -> /a/

Examples of this vowel change are given in Table 21. The conditioning factors here would appear to be that if there are two vowels in the verb stem and the arrangement is /u/ preceded by a [+high] vowel then both vowels become /a/ as in [6]. Examples of this rule are given in set (a) in Table 21.

[6]

			V							
SD:	(C)		[+high]	C	*u*	(C)	+	Irr.	iterative	...
	1		2	3	4	5	6	7		
SC:	7 ->	1	*a*	3	*a*	5	...			
		2		4						

However if there is only one /u/ in the stem then the change is unpredictable as in set (b), since there are also stems with only one /u/ vowel which exhibit a different vowel change (as in Table 22 set (b) for example).

TABLE 21: REDUPLICATION WITH /u/ -> /a/ VOWEL CHANGE

Set (a)

budue?	to thud	*budu-badae?*	to thud sporadically
bugue?	to swell up	*bugu-bagae?*	to swell and explode sporadically
buhue?	to plop	*buhu-bahae?*	to plop sporadically
busue?	to fart	*busu-basae?*	to fart sporadically
fugudo?	to split	*fugu-fagado?*	to split all over
fulule?	to flap wings	*fulu-falae?*	to flap wings erratically

guhudo?	to thunder	*guhu-gahado?*	to thunder in one direction then another
ibuldo?	to stir up	*ibul-abaldo?*	to stir up in a haphazard manner
ihuldo?	to mix	*ihul-ahaldo?*	to mix haphazardly
		ihul-ahal	a chaotic mix
jugue?	to bend over	*jugu-jagae?*	to bend this way and that
lugue?	to wobble	*lugu-lagae?*	to wobble about all over the place

Set (b)

guhe?	to bump	*guhi-gahae?*	to bump up and down
guldo?	to pull	*gul-galdo?*	to pull backwards and forwards
lub	a joist	*lub-lab*	one who builds in a haphazard manner

(ii) /u/ -> /i/

Examples of this vowel change are given in Table 22. The conditioning factors here would appear to be that if there are two vowels in the verb stem and the arrangement is /u/ preceded by any [-high] vowel except /e/ then both vowels become /i/. If however the preceding vowel is /e/ this vowel does not change.[15] Examples of this process are given in set (a) in Table 22 and the process is formalised in [7].

[7]

SD: (C) [-high]$_i$ C *u* (C) + Iπ. iterative ...
1 2 3 4 5 6 7

SC: 7 -> 1 $\begin{bmatrix} \alpha i \\ i \end{bmatrix}$ 3 *i* 5 ...
2 4

However if there is only one /u/ in the stem then the change is unpredictable as in set (b), since there are also stems with only one /u/ vowel which exhibit a different vowel change (as in Table 21 set (b) for example).

TABLE 22: REDUPLICATION WITH /u/ -> /i/ VOWEL CHANGE

Set (a)

ahuldo?	to disturb	*ahul-ihildo?*	to mix up haphazardly
fenundo?	to press	*fenun-fenindo?*	to press all over the place
gasue?	to search	*gasu-gisie?*	to search here and there
gohudo?	to knock	*gohu-gihido?*	to knock sporadically
		bohu-bibie?	the movement of fish in water
		obut-ibit	stripes of alternate colours

Set (b)

but	a tree knoll	*but-bit*	knobbly surface

(iii) /a/ -> /u/

Examples of this vowel change are given in Table 23. There would appear to be no conditioning factors on reduplication rule [8], except that it only applies when /a/ is selected as the operative vowel in the stem. In most cases of vowel-change reduplication the operative vowel selected is the final vowel in the verb stem but this is not always the case. For example, in *fale-eʔ -> fale-fule-eʔ* the final vowel in the stem is /e/ and not /a/ but the vowel-change operates on /a/ nevertheless.

[8] SD: (C) *(a)* (C) *a* C *a* (C) + Irr. iterative ...
1 2 3 4 5 6 7 8 9

SC: 9 -> 1 *(u)* 3 *u* 5 *u* 7 ...
2 4 6

TABLE 23: REDUPLICATION WITH /a/ -> /u/ VOWEL CHANGE

balado?	to tear	*bala-buludo?*	to tear and scatter
?afdo?	to squeeze	*?af-?ufdo?*	to squeeze all over
?a?agane?	to talk in sleep	*?a?agan-?u?ugune?*	to talk sporadically in sleep
?aha?do?	to obstruct	*?aha?-?uhu?do?*	to obstruct in every direction
?ata?do?	to break off	*?at-?utdo?*	to crush, to mash
fagdo?	to pierce	*fag-fugdo?*	to stick all over
fahale?	to wander	*fahal-fuhule?*	to wander all over
falee?	to flash	*fale-fulee?*	to flash intermittently
hagale?	to wrap around	*hagali-hugule?*	to wrap all around
lahado?	to stamp	*laha-luhudo?*	to stamp all over
g͡bale?	to look behind	*g͡bal-g͡bule?*	to look behind one way then the other
waldo?	to turn around	*wal-wuldo?*	to turn around every which way
		aigul-ugul	type of tree

(iv) /i/ -> /u/

This vowel change is related to (v) and (vi) and examples are given in Table 24. The conditioning factors here would appear to be that if there are two vowels in the verb stem and the arrangement is /i/ preceded by a [-high] vowel then both vowels become /u/ as in [9].

[9] V
SD: (C) [-high] C *i* (C) + Irr. iterative ...
1 2 3 4 5 6 7

SC: 7 -> 1 *u* 3 *u* 5 ...
2 4

TABLE 24: REDUPLICATION WITH /i/ -> /u/ VOWEL CHANGE

a?ildo?	to shout and sing	*a?il-u?uldo?*	to shout and sing all over the place
fali?do?	to turn	*fali?-fulu?do?*	to revolve
gati?do?	to clear vines off a tree	*gati?-gutu?do?*	to clear vines in a haphazard manner
lahido?	to shake something	*lahi-luhudo?*	to shake something all over

mani?do?	to bend something	*mani?-munu?do?*	to bend something backwards and forwards
		amimi-umumue?	to do many different things at the same time
		olib-ulub me?	to put two sets of different things in parallel rows

(v) /i/ -> /o/

This vowel change is related to (iv) and (vi), and examples are given in Table 25. The conditioning factors would appear to be that if there is an /i/ preceded by a [+high] vowel then both vowels become /o/ as formalised in [10].

[10]

				V					
SD:	C	[+high]	C	*i*	(C)	+	Irr. iterative ...		
	1	2	3	4	5	6	7		
SC:	7 ->	1	*o*	3	*o*	5 ...			
				2		4			

TABLE 25: REDUPLICATION WITH /i/ -> /o/ VOWEL CHANGE

?ifili?do?	to open something out	*?ifili?-?ofolo?do?*	to open something out all over
filihi?do?	to unravel something	*filihi?-foloho?do?*	to unravel something all over
gilido?	to move	*gili-golodo?*	to move from side to side
hilido?	to ripple	*hili-holodo?*	to ripple all over
wilido?	to stir	*wili-wolodo?*	to stir in a haphazard manner

(vi) /i/ -> /a/

This vowel change is related to (iv) and (v), and examples are given in Table 26. The conditioning factors would appear to be that if there is an /i/ preceded by a consonant that is both [-back] and [-round][16] then the /i/ becomes /a/ as formalised in [11].

[11]

			C					
SD:	[-back			*i*	C	+	Irr. iterative ...	
	-round]							
	1			2	3	4	5	
SC:	5 ->	1	*a*	3 ...				
			2					

TABLE 26: REDUPLICATION WITH /i/ -> /a/ VOWEL CHANGE

dido?	to pull	*di-dado?*	to pull carelessly
lildo?	to be out of square	*lil-laldo?*	to be out of square all over

(vii) /o/ -> /i/

Examples of this vowel change are given in Table 27. The conditioning factors here would appear to be that if /o/ occurs as the only vowel in the verb stem or is preceded by any other vowel then all vowels change to /i/ as formalised in [12].

[12] SD: (C) (V) C *o* (C) + Irr. iterative ...
1 2 3 4 5 6 7

SC: 7 -> 1 *(i)* 3 *i* ...
2 4

TABLE 27: REDUPLICATION WITH /o/ -> /i/ VOWEL CHANGE

ʔogoge?	twisted	*ʔogog-ʔigige?*	twisted all over the place
goldo?	to stir	*gol-gildo?*	to stir one way then another
golo?do?	to peel skin off	*golo?-gili?do?*	to peel skin off all over
gondo?	to turn aside	*gon-gindo?*	to zigzag
		gon-gin	a crooked path, a zigzag
iho?do?	to poke	*iho?-ihi?do?*	to poke all over
lohdo?	to stroke	*loh-lihdo?*	to stroke all over
loldo?	to wander	*lol-lildo?*	to wander all over the place
sonone?	to glide over the ground	*sono-sinie?*	to glide from side to side
woldo?	to turn	*wol-wildo?*	to turn this way and that way

(viii) /e/ -> /u/

The vowel change involving /e/ in reduplication is not as common as the other vowel change processes and only a few examples have been observed to date, as given in Table 28.

TABLE 28: REDUPLICATION WITH /e/ -> /u/ VOWEL CHANGE

belede?	to scrape	*bele-buludo?*	to scrape all over
me?ie?	to look	*me?i-mue?*	to look from side to side

Most stems with /e/ do not use reduplication to express iterativity. They use a distributive morpheme *-ad*, instead, which is homophonous with the third person plural suffix *-ad*. Examples are given in Table 29.

TABLE 29: USE OF THE DISTRIBUTIVE MORPHEME *-ad* WITH /e/-STEM VERBS

bele?	to go	*belade?*	to go everywhere, in all directions
ʔehe?	to plant	*ʔehade?*	to plant everywhere
ʔese?	to scoop up	*ʔesade?*	to scoop up everything
deee?	to stare	*deeade?*	to stare for a long time
hele?	to throw	*helade?*	to throw all over the place
jele?	to wrap	*jelade?*	to wrap up completely
mete?	to pare	*metade?*	to pare everything

Some verb stems with vowels other than /e/ also use the distributive morpheme instead of reduplication as illustrated in Table 30. So these forms are marked exceptions to the reduplication rules [6]-[12] above.

TABLE 30: USE OF THE DISTRIBUTIVE MORPHEME *-ad* WITH NON /e/-STEM VERBS

babale?	to cross	*babalade?*	to cross all over
ʔuse?	to rub	*ʔusade?*	to rub all over
fulusdo?	to increase	*fulusade?*	to increase profusely
gagale?	to scold	*gagalade?*	to scold all the time
lulue?	to grate	*luluade?*	to grate everything

masue?	to proliferate	*masu**ade?***	to proliferate profusely
wale?	to search	*wal**ade?***	to search everywhere

There is also one form that just undergoes a vowel change, /u/ -> /e/, to indicate the same distributive meaning but there is no reduplication of the verb stem, as in *g͡bag͡baguldo?* 'to bump into' *g͡bag͡bag**e**ldo?* 'to bump into many times in an irregular way'.

At first glance the vowel-change reduplication processes in Amele appear to be complex and arbitrary but closer inspection reveals that there is a striking order and symmetry to these processes. To begin with, although Amele has a five vowel system of /a, e, i, o, u/ these processes operate primarily with just four of the vowels, /a, i, o, u/. So the first step in the vowel-change process is to ignore the /e/ vowel and assume a four vowel system defined in terms of the features [HIGH] and [BACK] as in [13]. The vowel change processes then operate within the parameters of [±back] and [±high] and the basic operation can be conceptualised as a change of tongue position from [αback] to [-αback] with [+high] as first choice for the value of tongue height.

[13]

-BACK	+BACK	
i	*u*	+HIGH
a	*o*	-HIGH

The eight different vowel-change processes are summarised in Table 31. The operative vowel is marked by * in each case. It should be noted that while the segmental reduplication operates from left to right copying the CV skeleton from the base form to the right of the base form, the vowel-change process operates from the right to the left. So the operative vowel is normally the right-most vowel in the base form and the vowel changes operate leftward from this vowel in the reduplicated formant.

TABLE 31: SUMMARY OF VOWEL CHANGE PROCESSES

(i)

V	*u	->	*a*	*a*
[+high]	[+high, +back]		[-high, -back]	[-high, -back]
... 2	1		... 2	1

-BACK	+BACK	
i	*u*	+HIGH
a	*o*	-HIGH

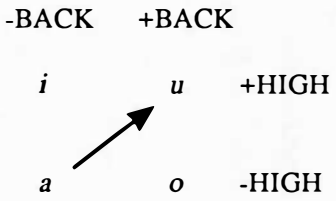
(ii)

V	*u	->	*i*	*i*
[-high]	[+high, +back]		[+high, -back]	[+high, -back]
... 2	1		... 2	1

-BACK	+BACK	
i	*u*	+HIGH
a	*o*	-HIGH

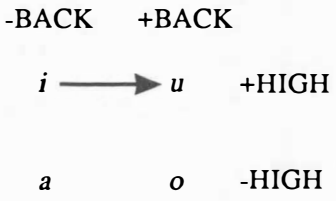
(iii)

a	**a*	->	*u*	*u*
[-high -back]	[-high -back]		[+high +back]	[+high +back]
... 2	1		... 2	1



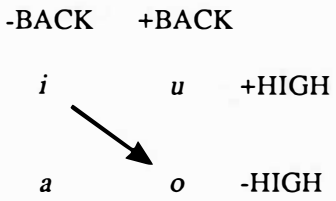
(iv)

V	**i*	->	*u*	*u*
[-high]	[+high -back]		[+high +back]	[+high +back]
... 2	1		... 2	1



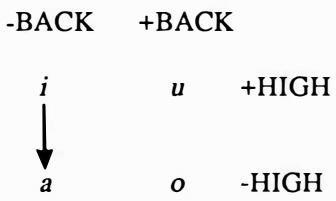
(v)

V	**i*	->	*o*	*o*
[+high]	[+high -back]		[-high +back]	[-high +back]
... 2	1		... 2	1



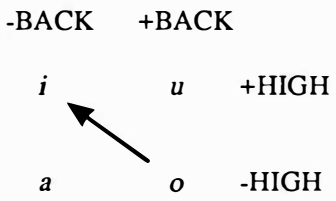
(vi)

C	**i*	->	C	*a*
[-high -round]	[+high -back]			[-high -back]
... 2	1		... 2	1



(vii)

V	**o*	->	*i*	*i*
	[-high +back]		[+high -back]	[+high -back]
... 2	1		... 2	1



(viii) **e* -> *u*

All the processes except (vi) /i/ -> /a/ change the tongue position from [αback] to [-αback]. Six of the processes illustrated in Table 32 form a regular pattern of three mirror-image pairs. The mirror-image pairs are:

(i) /u/ -> /a/ and (v) /i/ -> /o/
(ii) /u/ -> /i/ and (iv) /i/ -> /u/
(iii) /a/ -> /u/ and (vii) /o/ -> /i/

The processes (vi) /i/ -> /a/ and (viii) /e/ -> /u/ do not pattern with the other six processes and not surprisingly only a few examples of these processes actually occur in the language. (vi) and (viii) are therefore marked exceptions to the general vowel-change pattern and can be ignored for the purposes of defining the basic vowel-change system. From the six regular processes it can be seen that the vowel-change process is basically two stage. The first stage is to select a vowel of opposite value for tongue position. The second stage is to choose the [HIGH] value. [+high] is the first choice as can be seen from (iii) /a/ -> /u/ and (vii) /o/ -> /i/ and also (ii) /u/ -> /i/ and (iv) /i/ -> /u/. However, the essence of this process is vowel change so if the operative vowel is preceded by a [+high] vowel then [+high] cannot be selected since it may not produce a vowel change in the preceding vowel. Therefore [-high] must be selected in these circumstances.

The six regular processes of vowel-change reduplication can therefore be reduced to the rule schema [14] where * marks the operative vowel. For tongue position, [BACK], [αback] -> [-αback]. With regard to tongue height, [HIGH], the situation is slightly more complex in that two instances of [+high], as in (i) and (v), cancel out to produce a [-high] vowel, whereas other combinations of values of [HIGH] always produce a [+high] vowel, this being the default choice. Vowels preceding the changed vowel in the reduplicated formant then harmonise with the changed vowel.[17]

[14] 1. Assume a four-vowel system:

-BACK	+BACK	
i	*u*	+HIGH
a	*o*	-HIGH

(if the operative vowel is /e/ assume to /a/)

2.

	V	*V		V_i	V_i
		[αback]	->		[-αback]
...	2	1		... 2	1

(if C *i then [-back])

	$\begin{bmatrix}\text{-high}\\ \text{-round}\end{bmatrix}$	$\begin{bmatrix}\text{+high}\\ \text{-back}\end{bmatrix}$
...	2	1

3. if then

	V	*V		V_i	V_i
	[+high]	[+high]	->		[-high]
...	2	1	...	2	1

else

			V_i	V_i
		->		[+high]
		...	2	1

3.7 REDUPLICATION WITH PARTICIPIAL FUNCTION

The infinitive form of the verb comprises the verb stem followed by a suffix which can be either *-eʔ* or *-oʔ* depending on the class of the verb. Categorisation by infinitive marker is arbitrary and there is no phonological conditioning. Most verbs belong to the first class, which includes *bel-eʔ* 'to go', *buj-eʔ* 'to defecate', *ʔob-eʔ* 'to walk', *f-eʔ* 'to see', *hagal-eʔ* 'to entangle', *m-eʔ* 'to put', *od-eʔ* 'to do'. The second class includes *ʔag-oʔ* 'to cut', *ʔob-oʔ* 'to walk', *god-oʔ* 'to beat', *h-oʔ* 'to come', *od-oʔ* 'to do', *g͡b-oʔ* 'to hit'. In fact some verbs belong to both classes, such as *ʔobeʔ ~ ʔoboʔ* and *odeʔ ~ odoʔ* for example. The infinitive (INF) form of the verb can occur in several constructions including the purpose construction, as in (15).

(15) *Ija j-eʔ nu h-ug-a.*
1SG eat-INF for come-1SG-TODP
I came to eat.

The infinitive form of the verb also has a reduplicated form. In this form it has an adjectival function similar to the participial *-en* and *-ing* forms in English. This function is illustrated by (16-18).

(16) *Welu eu man j-eʔ-j-eʔ bil-i-a.*
mango that bird eat-INF-eat-INF sit-3SG-TODP
Those mango are bird-eaten.

(17) *Man qee f-eʔ-f-eʔ q-it-i je-i-a.*
snake not see-INF-see-INF hit-1SG.O-PRED eat-3SG-TODP
Not seeing the snake (it) bit me.

(18) *Saen ʔal m-igi-an qee d-oʔ-d-oʔ nu-i-na.*
time dead become-3SG-FUT not know-INF-know-INF go-3SG-PRES
He goes not knowing when he will die.

3.8 REDUPLICATION INDICATING RECIPROCITY

A reciprocal action can be indicated by a reduplication process. The structure of this form is similar to that of the serial verbs described in sections 3.5 and 3.6 except that, whereas in the serial verb construction the subjects of all the verbs in the series are the same, the serial verbs in the reciprocal construction have different subjects. The reduplicated verb can only occur as a different subject third person singular form. This reduplicated DS verb then has verb morphology attached to it which agrees in person and number with the reciprocal group as a whole, either dual or plural, as in (19).

(19) *Age g͡bo-ʔo-b g͡bo-ʔo-b eig-a.*
3PL hit-DS-3SG hit-DS-3SG 3PL-TODP
They hit each other.

The reduplicated reciprocal verb can also be part of a serial verb construction as in (20, 21).

(20) *Ale meen g͡bel-i g͡bo-ʔo-b g͡bo-ʔo-b esi-a.*
3DU stone throw-PRED hit-DS-3SG hit-DS-3SG 3DU-TODP
They (2) threw stones at each other.

(21) *Age ʔeta eh-i le-ʔe-b eh-i le-ʔe-b eig-a.*
3PL yam take-PRED go-DS-3SG take-PRED go-DS-3SG 3PL-TODP
They took yams to each other.

If the reciprocal verb has an object marker it makes a difference if the object is direct or indirect as to how the verb reduplicates. When the verb has direct object reference the whole verb is reduplicated, as in (22, 23), but when the verb has indirect object reference just the verb morphology is reduplicated, as in (24, 25).

(22) *Age gb̂et-udo-ʔo-b gb̂et-udo-ʔo-b eig-a.*
3PL cut-3SG.O-DS-3SG cut-3SG.O-DS-3SG 3PL-TODP
They cut each other.

(23) *Age od-udo-ʔo-b od-udo-ʔo-b i-me-ig asal-eig-a.*
3PL do-3SG.O-DS-3SG do-3SG.O-DS-3SG PRED-SS-3PL laugh-3PL-TODP
They made each other laugh.

(24) *Age jaʔas gb̂et-i do-ʔo-b do-ʔo-b eig-a.*
3PL tobacco cut-PRED 3SG.O-DS-3SG 3SG.O-DS-3SG 3PL-TODP
They cut tobacco for each other.

(25) *Ale na ho u do-ʔo-b do-ʔo-b esi-a.*
3DU of pig get-PRED 3SG.O-DS-3SG 3SG.O-DS-3SG 3DU-TODP
They (2) killed each other's pig on each other.

It should be noted that reciprocity can be indicated in the verb by other means than a reduplication process. For example, each verb with an object marker has an alternative reduced reduplicated form, as illustrated in Table 32. This form is analysed as having the reduplicated form *doʔob-doʔob* reduced to *dod*.

TABLE 32: RECIPROCAL VERBS WITHOUT REDUPLICATION

ababdoʔ	to wave	*ab̀abdodeʔ*	to wave at each other
beluhdoʔ	to lick	*beluhdodeʔ*	to lick each other
ʔesuldoʔ	to help	*ʔesuldodeʔ*	to help each other
dodoldoʔ	to approach	*dodoldodeʔ*	to approach each other
elelandoʔ	to provoke	*elelandodeʔ*	to provoke each other
fanindoʔ	to flatter	*fanindodeʔ*	to flatter each other
gihaʔdoʔ	to squeeze	*gihaʔdodeʔ*	to squeeze each other
hehdoʔ	to support	*hehdodeʔ*	to support each other
ihondoʔ	to imitate	*ihondodeʔ*	to imitate each other
jabdoʔ	to chase	*jabdodeʔ*	to chase each other
leledoʔ	to betray	*leledodeʔ*	to betray each other
maleldoʔ	to examine	*maleldodeʔ*	to examine each other
nesildoʔ	to choose	*nesildodeʔ*	to choose each other
gb̂ududoʔ	to touch	*gb̂ududodeʔ*	to touch each other
soadoʔ	to care for	*soadodeʔ*	to care for each other
talildoʔ	to circle	*talildodeʔ*	to circle each other
wogoldoʔ	to spear	*wogoldodeʔ*	to spear each other

There are also three verbs that have an irregular reciprocal form, as illustrated in Table 33. In this case the reduplicated suffix *-dadaneʔ* is added to the verb stem and for these verbs this is the only

reduplicated form. The meaning of these forms is slightly different to the meaning of the regular reciprocal forms. The *-dadane?* form indicates an unequal involvement of the recipricators, viz. that one of the recipricators is responsible for initiating the action of the verb.

TABLE 33: IRREGULAR RECIPROCAL VERBS

dido?	to pull	*di-dadane?*	to pull each other
feee?	to disobey	*fee-dadane?*	to argue with each other
gulu?do?	to meet	*gulu?-dadane?*	to meet each other

3.9 REDUPLICATION INDICATING REFLEXIVISATION

There are two principal ways of indicating a reflexive action in Amele. A reflexive action can be indicated where the object agreement marked on the verb is coreferential with the same entity as indicated by the subject agreement, as in (26).

(26) *Ija gb̂-it-ig-a.*
1SG hit-1SG.O-1SG-TODP
I hit myself.

Another means is by use of a pronoun marked with the reflexive adjective or postposition *do-do?*, which is a reduplicated form. This reflexive form can only occur following a personal pronoun so it could be equally well analysed as either an adjective or a postposition. *do-do?* only occurs in this form, however. There is no unreduplicated form **do?* so this item is not part of the reduplicative processes in the language. It can have a reflexive function as in (27a) and it is interesting to note that it cannot co-occur with the object marker type of reflexivisation, as in (27b). It can also have an emphatic function similar to reflexive pronouns in English as in (28).

(27) a. *Ija ija do-do? gb̂-ug-a.*
1SG 1SG self hit-1SG-TODP
I hit myself.

b. **Ija ija do-do? gb̂-it-ig-a.*
1SG 1SG self hit-1SG.O-1SG-TODP

(28) *Ija do-do? nu-ig-en.*
1SG self go-1SG-FUT
I myself will go.

3.10 REDUPLICATION INDICATING QUOTE CLOSURE

As described in section 2.2.3 discontinuous reiteration occurs with speech verbs. The whole verb, or more commonly the verbal suffixation of the speech verb, is copied after the direct quote, as in (29, 30). As stated above this type of reiteration falls within the structural description of reduplication. It is a repetition of a morphosyntactic string which can be a whole or partial reiteration of the base form. But, unlike the other types of reduplication in Amele, the reduplicated form is not semantically linked to the base form in any systematic way. It is purely a structural device for bracketing off the quote and should not therefore be considered as a type of reduplication.

(29) *Age mad-eig-a, "Ege due bele-gb̂-an", (mad)-eig-a.*
3PL say-3PL-TODP 1PL dance go-1PL-FUT (say)-3PL-TODP
They said, "We will go to the dance", they said.

(30) *Age ma-t-eig-a, "Ege due bele-gb̂-an", (ma)-t-eig-a.*
3PL say-1SG.O-3PL-TODP 1PL dance go-1PL-FUT (say)-1SG.O-3PL-TODP
They told me, "We will go to the dance", they told me.

4. SUMMARY AND CONCLUSION

This article is basically a description of the various reduplication systems that occur in the Papuan language, Amele. The description is in itself interesting in that Amele has a rich variety of forms and functions of reduplication and this would appear to be somewhat unusual for a Papuan language since reduplication is normally associated with Austronesian languages in PNG.

The forms of reduplication include whole-word, whole-stem, partial leftward, partial internal and partial rightward reduplication. These forms can occur with all the major word classes of noun, verb, adjective, pronoun and postposition. The functions include expressions of plurality, similarity or likeness, inclusiveness or distribution, intensification, simultaneity, iterativity, participial function, reciprocity and reflexivisation. The reduplication processes in Amele can have either a morphosyntactic function such as to indicate plurality in nouns and adjectives or to mark categories on the verb such as simultaneity, iterativity or reciprocity, or they can have a derivational function such as to derive adjectives and adverbs from nouns, verbs or postpositions and, in the case of mirror-image reduplication, to derive predicative adjectives from pronouns. It was also argued that, whereas the phenomenon of quote closure falls within the structural description of reduplication, on the basis of semantic criteria it must be excluded as a proper instance of reduplication.

The most interesting aspect of reduplication in Amele, however, is that there are some types that, according to the current linguistic literature, do not occur in the world's languages, viz. reduplication that could be construed as 'reduplicate the first two phonemes regardless of whether they are C or V' and mirror-image reduplication. In conclusion this description of a language which makes extensive use of reduplication in morphological process adds to the database of linguistic knowledge with particular reference to the linguistic phenonemon known as 'reduplication' and helps further in the formal delimitation of Language itself.

NOTES

1. This article is a slightly revised version of a paper first presented at the 1989 Conference of the Linguistic Society of Papua New Guinea. The following abbreviations are those which are not introduced in the text: D(ifferent)S(ubject), FUT(ure tense), HAB(itual)P(ast tense), O(bject), PRES(ent tense), REM(ote)P(ast), S(tructural)C(hange) - in the rules, S(tructural)D(escription) - in the rules, TOD(ay's)P(ast tense), 1 (first person), 2 (second person), 3 (third person) S(in)G(ular), DU(al), PL(ural).

2. Amele has approximately 6000 speakers and is the largest language group belonging to the Gum language family. The other Gum languages are Sihan, Gumalu, Isebe, Bau and Panim. The Gum language family belongs to the Mabuso Stock, Madang-Adelbert Range sub-phylum (Z'graggen 1975). The grammar of Amele is extensively described in Roberts (1987).

3. This percentage is based on the latest Ethnologue (Grimes 1988) which cites some 6000 distinct extant languages in the world, over 860 of which are in PNG.

4. Possessed nouns are mainly kinship and body-part terms. They can be inflected for first, second and third person and singular, dual and plural number of the possessor and, in the case of the kinship terms, also for singular and plural number of the possessed. A paradigm for *ʔotig* 'brother' is given below.

	Singular possessor	Dual possessor	Plural possessor	
1	*ʔot-i*	*ʔot-ile*	*ʔot-ige*	
	ʔot-i-el	*ʔot-ile-il*	*ʔot-ige-il*	Plural possessed
2	*ʔot-in*	*ʔot-ola*	*ʔot-oga*	
	ʔot-in-el	*ʔot-ola-il*	*ʔot-oga-il*	Plural possessed
3	*ʔot-ig*	*ʔot-ola*	*ʔot-oga*	
	ʔot-ug-ul	*ʔot-ola-il*	*ʔot-oga-il*	Plural possessed

5. Verbs can be inflected for various past, present and future tenses, sequential and simultaneous relative tense, contrafactual and injunctive mood, past habitual aspect, negation, person and number subject, direct and indirect object agreement, and also as to whether the subject of the following verb is same or different. Verbs in Amele can also undergo word incorporation.

6. For convenience, third person forms are translated 'he' except where the context specifically requires 'she' or 'it'.

7. See section 3.6.1 for an explanation of how *ho-* reduplicates to *hu-hu-* in these iterative forms.

8. See Roberts (1987) for a full description of Amele phonology including vowel epenthesis and vowel harmony.

9. For more information on metathesis in Amele and its significance in determining dialect isoglosses see Roberts (forthcoming).

10. The non-Amele forms are taken from Z'graggen (1980).

11. I present arguments in Roberts (1988a, 1988b) that the switch-reference system in Amele in fact tracks the pragmatic category of theme/topic rather than the syntactic category of subject. But since the subject is usually also the topic of the clause this description of SS and DS will suffice for the purposes of this article.

12. In Comrie's terms (Comrie 1985) SEQ is E *before* R, i.e. the event, E, described by the marked verb occurs before the event, R, described by the following verb and SIM is *Esimul* R, i.e. the event, E, described by the marked verb occurs simultaneously with the event, R, described by the following verb.

13. See Roberts (1990) for further explication of realis vs. irrealis modality in the DS-SIM verb.

14. *adeʔ* is the infinitive form of the interrogative verb. It has various meanings depending upon the function of the verb being questioned, e.g. *eu ad-eʔʔ* that question-INF 'what/how is that?', *ad-i h-og-aʔ* question-PRED come-2SG-TODP 'how did you come?', *aad-eb h-ugi-anʔ* question-SIM.IR.3SG come-3SG-FUT 'whenever will he come?'

15. Amele has a five vowel system /a, e, i, o, u/, but consistently the /e/ vowel is not involved in reduplication processes.

16. See Roberts (1987) for an explication of the use of the cover feature [ROUND] as applicable to both consonants and vowels in Amele.

17. Vowel harmony also operates in morphological processes in the possessed nouns and verbs in Amele. See Roberts (1987) for further discussion.

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SETTING A COURSE IN GALELA: AN ORIENTATION SYSTEM OF NORTH HALMAHERA

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Summer Institute of Linguistics

Penempatan arah di Galela: Sebuah sistem orientasi di Halmahera Utara

Bahasa Galela mempunyai sekelompok akar verba tertutup yang menunjukkan gerakan dalam arah tertentu. Ada seperangkat enklitik yang menunjukkan arah yang terkait, yang kadang-kadang muncul sebagai postklitik pada verba gerak yang tidak menunjukkan arah, dan secara wajib pada nominal dalam frase postposisional. Begitu pula, lokasi benda dapat dinyatakan dari jarak tertentu, dekat ataupun jauh, melalui kata lokatif yang selalu ditandai dengan proklitik dari perangkat-klitik-arah yang sama.

1. INTRODUCTION

This paper[1] describes the orientation system of Galela,[2] a Papuan language spoken on Halmahera and Morotai islands in Indonesia. The orientation of actor to a contextually determined reference point is elaborated by the use of various directional postclitics. These correspond with six directional verb roots which indicate motion in one of six directions. Directional postclitics appear occasionally on non-directional motion verbs, and also obligatorily as postpositions in the postpositional phrase.

In addition, the location of any item may be indicated at a specific distance, near or far, in one of the six directions, by means of a locative word. Locative words consist of a proclitic attached to a locative root. There are ten locative roots and six proclitics. The proclitics are the same six clitics that appear as postclitics with non-directional verbs. Thus, if we consider the locative word alone and exclude extended semantic and pragmatic meanings from consideration, 60 different lexical combinations are possible from the six directional clitics and ten locative roots.

The following description focuses on the fine points of the Galela orientation system. It is hoped that this will provide further material from which to study similar systems among the other languages of North Halmahera. Section 2 describes motion verbs. Section 3 describes locative words and postpositional phrases, both of which function as locatives.

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2. MOTION VERBS

In Galela, directional motion verbs form a closed class and express motion in a particular direction. Non-directional motion verbs may be made to express motion in a particular direction by the addition of directional postclitics. These two types are described in more detail in the following two subsections.

2.1 DIRECTIONAL MOTION VERBS

Verb roots from the closed class of directional motion verb roots express both the component of motion and the component of direction. They form a closed class containing six members,[3] illustrated in examples (1)-(6).

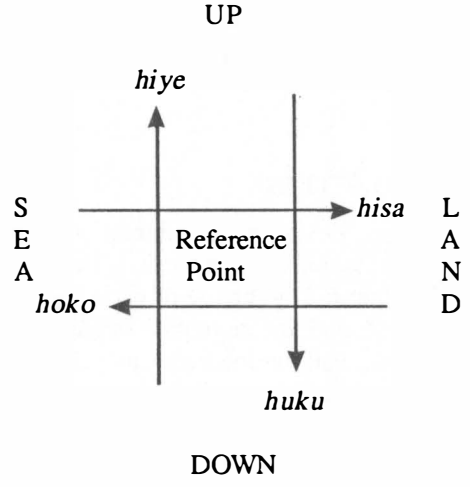
The four directional motion verbs of (1)-(4)[4] each express the movement of actor 'he' in one of four **topographical** directions with relation to some contextually determined reference point. These topographical directions are seawards/landwards and upwards/downwards.

(1) *wa-hiye*[5]
3msgA,LOC-move.upwards
he went upwards

(2) *wa-huku*
3msgA,LOC-move.downwards
he went downwards

(3) *wa-hoko*
3msgA,LOC-move.seawards
he went seawards

(4) *wa-hisa*
3msgA,LOC-move.landwards
he went landwards

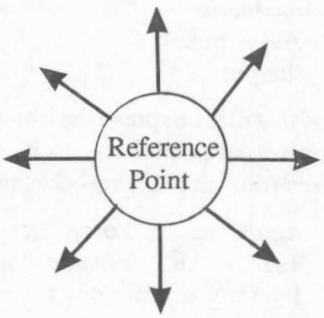


The meanings of the directions of the seawards/landwards opposition are relative to which side of an island the speaker is orienting him/herself from. On the Galela (east) side of North Halmahera and the east side of Morotai, seawards corresponds with east and landwards corresponds with west; whereas, on the west coast of Morotai the meaning of seawards corresponds with west and landwards with east.

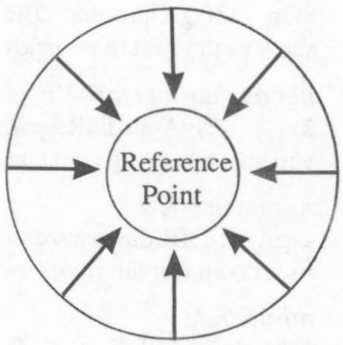
The meanings of the topographical directions of the upwards/downwards opposition correspond with vertical elevation. When topography cannot determine an upwards direction as opposed to a downwards direction and if upwards/downwards corresponds with the south/north axis, an extended meaning corresponding with the cardinal points of south/north is the determinant. In such a context upwards corresponds with south and downwards with north.

The two directional verbs of examples (5) and (6) express the movement of actor 'he' in one of two **radial** directions with relation to some contextually determined point of reference. The motion of actor 'he' is in a direction away from some reference point in (5) and towards some reference point in 6.[6]

(5) *wa-hika*
3msgA,LOC-move.away.from.ref.pt
he went (away from reference point)



(6) *wa-hino*
3msgA,LOC-move.to.ref.pt
he came (to reference point)



2.2 NON-DIRECTIONAL MOTION VERBS

Non-directional motion verb roots are those verb roots which contain only the component of motion (with no direction indicated), such as *pasa* 'pass', *tagi* 'go', *tami* 'sit', *bola* 'return', *tura* 'drop' and *ḑoma* 'precede'. Some of these verbs are illustrated in examples (7)-(9). These occur in situations where, although a certain direction is sometimes implied lexically (as in (8)), an explicit direction is not marked. Therefore, there is no emphasis on the direction of the actor's motion but only on the motion itself.

(7) *to-tagi*
1sgA-go
I went

(8) *mi-uti*
1plA-descent
we descended

(9) *mo-hado*
3fsgA-put
she put

Verbs of this class express the component of motion. Additional information about direction can be given by verbal postclitics, such as *-ku* 'downwards' in (10) and (13), *-sa* 'landwards' in (11), *-ye* 'upwards (on)' in (12), and *-ka* 'away from reference point' in (14).[7]

(10) *ngohi o kofor ta-hado-KU*
1sg ART suitcase 1sgA,LOC-put-DIR.downwards
I put my suitcase down

(11) *muna mo-ɗoma-SA*
3fsg 3fsgA-precede-DIR.landwards
she was the first to go landwards

(12) *ngona no-matami-YE*
2sg 2sgA-sit-DIR.upwards
you take a seat (up on a chair)

(13) *to-matami-KU*
1sgA-sit-DIR.downwards
I sat down (on the floor)

(14) *mi-uti-KA*
1plA-descend-DIR.away.from.ref.pt
we descended away from (the sky in an airplane)

These directional postclitics are reduced from the closed class of directional motion verb roots (section 2.1). For example, *-ku* 'DIR.downwards' is reduced from *huku* 'move.downwards'.[8] Each member of the set is reduced from the full verb root form as illustrated in Figure 1.

DIRECTIONALS

		FULL FORM	CLITICISED FORM
TOPOGRAPHICAL	SEAWARDS	*hoko*	*-ko*
	LANDWARDS	*hisa*	*-sa*
	UPWARDS	*hiye*	*-ye*
	DOWNWARDS	*huku*	*-ku*
RADIAL	away from reference point	*hika*	*-ka*
	towards reference point	*hino*	*-no*

FIGURE 1: REDUCTION OF VERB ROOTS TO POSTCLITICS

If a speaker chooses to specify the direction, any one of the four topographical directional postclitics can be added to a non-directional motion verb root. For example, *ɗoma* 'precede' from example (11) can optionally take any of these four directional postclitics. Others of these verb roots, however, can vary as to what directions are semantically possible for that motion. Many verb roots may permit movement in only one direction.[9] Therefore, should a speaker choose to add a directional postclitic to such a verb root, only one of the four would be appropriate. This is because postclitics make explicit what is implied by such verb roots. Such verbs are illustrated by *dato-KU* 'plant downwards/into' in (15), and *maoko-YE* 'stand up' in (16).

(15) *ngone po-dato-KU*
1&2 1&2A-plant-DIR.downwards
we planted downwards (into the ground)

(16) *una wo-maoko-YE*
3msg 3msgA-stand-DIR.upwards
he stood upwards

The occurrence of a directional postclitic on such a non-directional motion verb is pragmatically conditioned. Thus, it indicates, at discourse level, what event is the foregrounded event among a string of events in temporal sequence.

From examples (1)-(16) it can be seen that direction in Galela can be expressed by a closed class of six directional verbs that express both motion and direction, and by non-directional verbs which express only the component of motion and need a postclitic in order to express direction.

3. LOCATIVES

Direction in Galela may also be indicated by locatives alone or in conjunction with motion verbs. These locatives are of two types:

Locative word = locative root + proclitic

Postpositional phrase = nominal + postclitic

The first type, the locative word, specifies relative distance from some reference point. It may occur alone or with the second type in apposition. The second type, the postpositional phrase, may occur alone if relative distance is not being specified or is not considered important to the context. These two types of locatives are described in more detail in the next two subsections.

3.1 LOCATIVE WORDS

A Galela locative word consists of a locative root with a directional proclitic. There are ten locative roots which indicate relative distance, five indicating a near distance and five indicating a far distance.[10] Furthermore, one member from each set of five denotes distance away from the reference point in any direction and the other four denote distance along one of the topographical axes. Figure 2 illustrates the two locative roots for any direction and the eight locative roots for topographical directions.

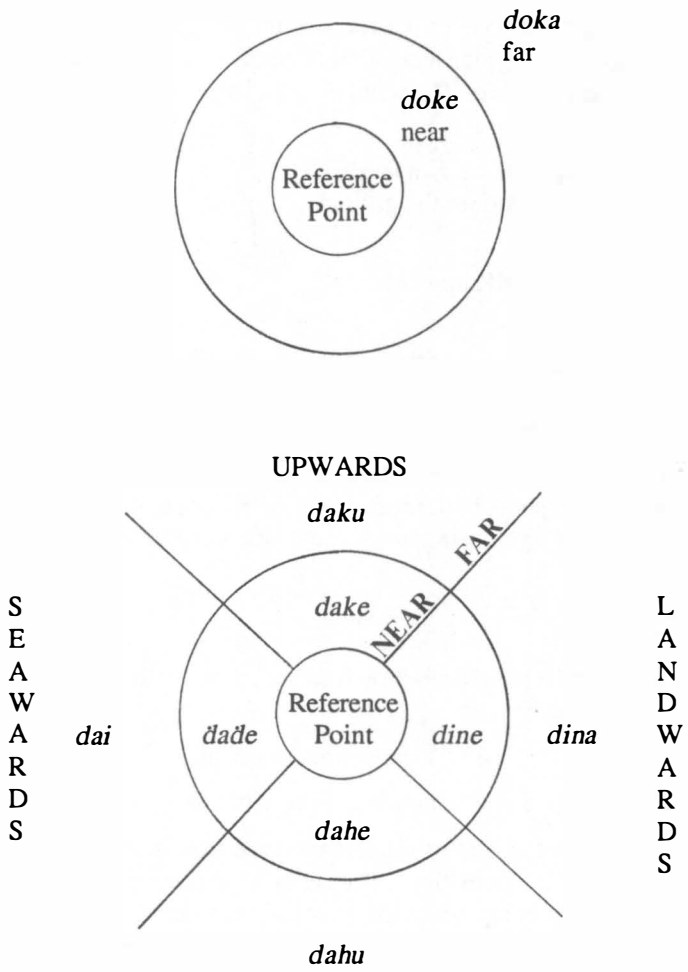


FIGURE 2: SET OF TEN LOCATIVE ROOTS

In this set there is a formal pattern in that all locative roots indicating near distance end in *e*. Furthermore, this is the only difference between the forms for near and far for all but the seaward locative roots, *ďaďe* and *dai*. Each locative root obligatorily carries any one of the six directional clitics as a **pro**clitic,[11] as illustrated in Figure 3.

		DIRECTIONAL CLITICS		LOCATIVE ROOTS: NEAR DISTANCE	LOCATIVE ROOTS: FAR DISTANCE
TOPOGRAPHICAL	SEAWARDS	*ko*		*-ḍaḍe*	*-dai*
	LANDWARDS	*sa*		*-dine*	*-dina*
	UPWARDS	*i*		*-dake*	*-daku*
	DOWNWARDS	*ku*	+	*-dahe*	*-dahu*
RADIAL	away from reference point	*ka*		*-doke*	*-doka*
	towards reference point	*no*			

FIGURE 3: LOCATIVE ROOTS COMBINE WITH DIRECTIONAL PROCLITICS

Examples (17) and (18) use two of these locative roots with directional proclitics.

<-LOC->

(17) *no-tuuru* *SA-dina*
2sgA-follow.behind DIR.landwards-LOC.far.land
you follow behind landwards to a far location

<-LOC->

(18) *KA-dahu* *ta-huku*
DIR.away.from.ref.pt-LOC.far.down 1sgA,LOC-move.downwards
I went downwards to a far down location.

3.2 POSTPOSITIONAL PHRASES

The postpositional phrase of a Galela clause consists of a noun phrase and a directional postclitic. In (19) the nominal *o doro* 'a garden' is marked as a postpositional phrase by the directional postclitic *-sa* 'landwards'.

<----LOC---->

(19) *ma awa mo-tagi o doro-SA*
the mother 3fsgA-go ART garden-DIR.landwards
the mother was walking landwards to the garden

The postpositional phrase occurs after the predicate in (19) but before the predicate in (20). The normal position of the locative is preceding the predicate. When the locative follows the predicate it is right dislocated and is pragmatically conditioned. It, as well as the directional verb postclitic (see 1.2), indicates the foregrounded event among a string of events in temporal sequence. However, regardless of the position in which the Galela locative occurs, it can always be identified by the **obligatory** directional postclitics.

Collocational restrictions of postclitics do occur with certain lexical items. Thus, in (20) the verb *liho* 'go home' implies 'home' as the reference point to which the actor is travelling; therefore the

radial directional *-no* 'to reference point' is used in the postpositional phrase instead of the radial directional *-ka* 'away from reference point'. (Any one of the topographical directionals can be used in conjunction with this verb as well.)

```
          <---LOC--->
(20)      Ternate-NO          wo-liho
          Ternate-DIR.to.ref.pt 3msgA-go.home
          he came home from Ternate
```

The postpositional phrase can function as the predicate. In (21), an equative clause, the postpositional phrase constitutes the predicate itself.

```
                          <------LOC------>
(21)      una   magena  o    Limau-YE
          3msg  that    ART  Limau-DIR.upwards
          he is upwards (south) from Limau
```

From the context of this example, the actor is known to be upwards or south from Limau. So in this instance *o Limau-ye* 'Limau upwards' means upwards **from** instead of upwards **towards** Limau.

Directional redundancy carried in both the directional motion verb and the postposition is quite common. In (22) the nominal *o teo* 'the sea' is marked as a postpositional phrase by the directional postclitic *-ko* 'seawards'.

```
          <----LOC---->
(22)      o    teo-KO           ta-hoko
          ART  sea-DIR.seawards 1sgA,LOC-move.seawards
          I went seawards to the sea
```

The radial directional *-ka* 'away from reference point' can also be used in a generic sense to replace any of the topographical directional clitics (when referring to a direction away from a reference point). In (23b) the downwards direction indicated in the verb is not repeated with a *-ku* 'downwards' postclitic on the postpositional phrase. Instead, the radial directional postclitic *-ka* 'away from reference point' is used in a generic sense to reduce redundancy; the locative of (23b) refers to the same location (away from a reference point) as that in (23a).

```
                          <-------LOC------->
(23a)     to-majobo...o   lapangan-KU
          1sgA-leave ART  field-DIR.downwards
          I left downwards for the airstrip

                                          <--------LOC------->
(23b)     ta-huku                         o    lapangan-KA
          1sgA,LOC-move.downwards         ART  field-DIR.away.from.ref.pt
          (when) I went downwards to the airstrip
```

The radial directional *-ka* 'away from reference point' in a postpositional phrase can also be used in the extended sense meaning 'at'. In (24) the noun phrase *o Papaya ma ake* 'the waters of the Papaya (river)' is marked as a postpositional phrase by the *-ka* directional 'at'.

<----------LOC---------->
(24) *o Papaya ma ake-KA* *mi-mawoma*
ART Papaya the water-DIR.away.from.ref.pt 1plA-rest.self
we rested ourselves at the waters of the Papaya

In Galela, the constituent referring to the recipient of an action is also a postpositional phrase. When a noun phrase referring to the recipient occurs in a clause, that noun phrase is always marked by the directional postclitic *-ka* 'away from reference point', as illustrated in (25) and (26). (None of the other directional postclitics are used this way.)

<--RECIP-->
(25) *ma awa-KA* *mo-temo*
the mother-DIR.away.from.ref.pt 3fsgA-say
she said to the mother

<-RECIP->
(26) *o nyawa asa ya-balasi o loha ngone-KA*
a person will 4A,4O-reply ART good 1&2-DIR.away.from.ref.pt
someone will repay us with good

The recipient marked with the postclitic *-ka* 'away from reference point' can also be considered as the goal of an action. In (27), since 'his father' is the recipient of the action *wa-hike* 'he gave it', the phrase *awi baba-ka* 'to his father' is like the goal of the action.

<---GOAL--->
(27) *una o pipi wa-hike awi baba-KA*
3msg ART money 3msgA,4O-give his father-DIR.away.from.ref.pt
he gave money to his father

Alternatively, if the postpositional phrase is considered as the **abstract** goal of an action, a shared thread of meaning is apparent. Compare the recipient in (27) with the postpositional phrases in (28) and (29), which function as abstract goals. In (28) the postpositional phrase is considered the abstract goal of the action since semantically 'two pieces' is the intended result of the action *ma-oto* 'she cut it'.

<-GOAL->
(28) *ma-oto ma-tepi sinoto-KA*
3fsgA,4O-cut the-piece two-DIR.away.from.ref.pt
she cut it into two pieces

In (29) the postpositional phrase is seen as the goal of the action since semantically *'tahoko* birds' is the intended result of the action *i-maaka* 'they became'.

<-----GOAL----->
(29) *o ngopa magena i-maaka o tahoko-KA*
ART child that 3plA-become ART bird.type-DIR.away.from.ref.pt
those children became *tahoko* birds

These postpositional phrases, therefore, refer to intended results of actions which are more abstract, rather than to actual locations towards which actions are directed.

3.3 COMBINATIONS OF LOCATIVE WORDS AND POSTPOSITIONAL PHRASES

A locative word may occur in apposition with a postpositional phrase.[12] In (30) the location of a field is specified 'at a far down location' by the locative word *ku-dahu* preceding the postpositional phrase *o lapangan-ku* 'a field in a downwards direction'.

		<--LOC-->	<-------LOC------->
(30)	*to-majobo*	*KU-dahu*	*o lapangan-ku*
	1sgA-leave	DIR.downwards-LOC.far.down	ART field-DIR.downwards
	I left for the far down location of the airstrip		

Since the location of the field is specified and *majobo* 'leave' is directed downwards by the clitics, the field is the goal of the action, or the place **towards** which they are leaving.

In (31) the location of a house is specified 'at a near location' by the locative word *ka-doke* preceding the postpositional phrase *o tahu-ka* 'a house in a direction away from the reference point'.

	<-LOC->	<----LOC---->	
(31)	*KA-doke*	*o tahu-ka*	*to-tagi*
	DIR.centrifugal-LOC.near	ART house-DIR.centrifugal	1sgA-go
	I went to a house at a nearby location		

Since the location of the house is specified and *tagi* 'go' is also directed away from the reference point by the clitics, the house is the goal of the action or the place **towards** which the actor is going.

In (32) the location of Manado[13] is specified 'at a far sea location' by the locative word *sa-dai* preceding the postpositional phrase *o Manado-sa* '(from) Manado in the landwards direction'.

	<-LOC->	<-------LOC------>	
(32)	*SA-dai*	*o Manado-sa*	*mi-masidiado*
	DIR.landwards-LOC.far.sea	ART Manado-DIR.landwards	1plA-CAUS.arrive
	we arrived going landwards from the far sea location of Manado		

Since Manado is specified at a far sea location and *masidiado* 'arrive' is directed landwards by the clitics, Manado is the starting point of the action, or the place **from** which they arrived.

Example (33) is similar to (32). Here the subject *muna* 'she' is specified as the starting point, located 'at a near sea location', by the locative word *saḋaḋe* following the subject and preceding the predicate.

	<-LOC->		
(33)	*muna*	*sa-Ḋ AḊ E*	*mo-temo*
	she	DIR.landwards-LOC.near.sea	3fsgA-speak
	she spoke landwards from a near sea location		

Since the location of the subject 'she' is specified as seaward and the action *temo* 'speaking' is directed landwards by the proclitic *sa-* 'landwards', this location is the starting point of the action, or the point **from** which she is speaking.

4. CONCLUSION

The closed class of directional verb roots places Galela in Talmy's (1985:68-69) second typological pattern for the expression of motion. Such languages, according to Talmy, rather than

establishing direction in the surrounding discourse, have a whole series of verbs that express motion along various paths. The Galela directional verb roots indicate motion in a specific direction or path. These directional verb roots correspond to a set of directional clitics which are occasionally used as postclitics on non-directional motion verbs to specify a direction.

This set of directional postclitics is also used to mark postpositional phrases as locatives. Accordingly, a nominal is marked as a locative simply by means of adding a directional postclitic. In addition, the location, object and/or subject can be indicated at a relative distance, near or far, by means of locative words. These locative words are composed of a set of locative roots plus proclitics from the same set of directional clitics.

NOTES

1. Fieldwork began in Galela in 1983, under the Cooperative Program of Pattimura University and the Summer Institute of Linguistics. Data for this analysis were gathered during 18 months of residence in the village of Duma, at the interior end of Lake Galela.

   Grateful acknowledgements are made to Josafat Etha and Jande Selong of Duma village who helped with the Galela texts, to Les Bruce, Charles Grimes, Wyn Laidig, Howard Shelden (my husband) and John Wimbish, fellow colleagues of the Summer Institute of Linguistics, for very helpful comments in the review of this manuscript. Grateful acknowledgement is also made to Drs A.S. Lumbessy, lecturer in Geography at Pattimura University, and to the Indonesian government officials who helped initiate and continue the fieldwork for this study.

   Most of the clauses in the examples were taken from one of three Galela texts recorded in Duma village: a travelogue by Josafat Etha recounting a trip from North Maluku to Irian Jaya, a folktale by Ibu Selong, and another travelogue recounting a hunting trip by Mawi Sumtaki.

2. Galela, spoken by about 60,000 people on the islands of North Halmahera, Bacan and Morotai (just north of Halmahera) in the Moluccan Islands, is a member of the West Papuan Phylum. Most of the languages in the rest of the Moluccan Islands are Austronesian. Due to centuries of spice trading, the Galela language has had some contact with other languages.

3. It is tempting to add a seventh verb root to the class of directional motion verb roots in this discussion. *hiwa* 'is not' could be described as negating the direction. Then the expression *i-hiwa* 'it-move.not' would be viewed as a motion with *no* direction to be followed, meaning 'it did not move or go into motion'. Its reduced form however, the postclitic *-wa* 'not', does not function in the same way as the reduced forms of the other directional verb roots, described in sections 2.2 and 3. It could be considered as a restricted member of the class; however, I have not included this verb root in the closed class of directional verbs even though it would fit morphologically.

4. This differs from Yoshida's (1980:31) list of orientation verb roots which has *hiko* for 'seawards' where I have *hoko*.

5. H. Shelden (this volume) describes *wa-* as one form of the fourth person object marker. Any combination of actor markers with the fourth person object marker involves a morphophonemic process such that, in this instance, *wo-* —> *wa-*. The resulting surface form is that of third person singular male actor and fourth person object, which I normally gloss as '3msgA,4O'. When the location becomes the object of the verb, however, it is glossed as '3msgA,LOC'. The actor prefix alone, e.g. *wo-* '3msgA' without the object prefix as fourth person location

(LOC), never occurs on the directional verbs of examples (1)-(6). This is due to the high topicality (Deidre Shelden 1986) of location in directional verbs.

6. This differs from Yoshida (1980:28), however, where the author says the actor moves in relation to the speaker which is always the reference point. Such an analysis does not consider narrative text told in third person.

7. This example illustrates the radial directional postclitic *-ka* 'away from reference point'. This directional occurs more often, both as a proclitic and as a postclitic, than the four topographical directionals. This is because the orientation given through the surrounding context already implies a topographical direction or else topographical direction is not important at that point. The *no* 'to reference point' clitic is used in this same way, though less frequently.

8. The data seems to tempt a simpler analysis where the *hi* in each directional verb root would mean 'move' and would then take the directional postclitics, so that *hi* 'move' plus *sa* 'landwards' becomes *hisa* 'move.landwards'. A phonological rule for vowel harmony would change the *i* of *hi* to *o* for *hoko* 'move.seawards' and to *u* for *huku* 'move.downwards'. However, there are three pieces of counterevidence to such an analysis. First, such a vowel harmony rule does not apply to other words in the lexicon, e.g. *piliku* 'to tie', *hiko* 'tree species' and *liko* 'to hang'. Secondly, there are no other monosyllabic verb roots in Galela. Finally, most other North Halmaheran languages use the full verb root as a clitic (Baarda 1908:77, Yoshida 1980:38-51, Taylor 1984). While such use of full verb roots as clitics does not explain their reduction to clitics in Galela, it demonstrates that the language family has directional motion verbs as well as directional clitics.

9. Galela verb roots with movement in only one direction do not appear to be as restrictive as in the closely related language of Tobelo. The data does not have any non-directional motion verbs which expect movement in only the topographical direction of *-sa* 'landwards' or *-ko* 'seawards', as Taylor (1984:130-132) describes for Tobelo.

10. A set of two demonstratives *nena* and *gena*, meaning 'here' and 'there', respectively, can also function as locative roots when used in the same locative slot as these ten locative roots. They function, however, as demonstratives and refer to a location implied by the surrounding context as illustrated below in (a) or to the last location mentioned as below in (b).

(a)
<-LOC->
ka-NENA *to-tagi*
DIR.away.from.ref.pt-here 1sgA-go
I came (went away to) here

(b)
o *warung* *magena* *ma* *ronga* *Warung* *Madura,*
ART cafe that the name Cafe Madura

<-LOC->
ka-GENA *ta-hika*
DIR.away.from.ref.pt-there 1sgA-move.away.from.ref.pt
the cafe named the Madura Cafe is where I went

I have not included these in the present discussion since they function in other syntactic constructions also and do not actually add to a discussion on directionals. As to when a Galela speaker may use *gena* 'there' as opposed to, for example, *doke* 'near location' or *dai* 'far sea

location', it is a matter of whether or not there is emphasis on a 'near' distance and/or the 'sea' direction (suggested in Taylor 1984:110).

This differs, however, from Yoshida (1980:27) where the author says it is simply a matter of distance and does not mention emphasis; e.g., he describes *gena* 'there' as being used for a closer distance than *doke* 'near location'. Yoshida (1980:26) also ascribes a difference of visibility or non-visibility. The visibility test often applies, but it is actually relative to the situation. For example, I asked someone in my house where my child was. That person knew he was close by, even though he was not visible due to the wall of the house blocking our view. So this person wanted to reply that he was not far but nearby, and said

ka-DOKE	*wo-uule*
DIR.away.from.ref.pt-LOC.near	3msgA-play
he is playing at a nearby location	

Such an answer is the same whether the wall of the house blocks my visibility of him or not. The point is that what is important in this case is not so much whether he is visible, but whether he is relatively close to home and thus nearby. Taylor (1984:119-121), on the other hand, analyses Tobelo as an opposition of demonstrative versus abstract locatives. A further difference is that I do not include *naga* 'is' or 'exists' as a locative root, though Yoshida (1980:28) does, but instead define it as an existential verb.

11. These proclitics are the same directional clitics which occur on non-directional motion verbs with only one difference. The clitic glossed as 'DIR.upwards' has two phonetically similar allomorphs, the postclitic *-ye* and the proclitic *i-*. In this analysis, the *ka-* and *no-* radial directionals as proclitics do not have the additional semantic function of crossing over obstacles (such as a river) that Yoshida (1980:29) gives them.

12. Although the locative word precedes the postpositional phrase in examples (30)-(32), the order may be reversed so that a locative word occurs after a postpositional phrase. Speaker preference seems to determine which constituent order is used.

13. It should also be noted that even though Manado is actually west or landwards from the Galela area on the east coast of Halmahera Island, it is considered as a seawards location since it has to be reached by boat.

LIST OF ABBREVIATIONS

The following abbreviations are used in this paper:

1	first person	DIR	directional
1pl	we exclusive	f	feminine
2	second person	LOC	locative
1&2	we inclusive	m	masculine
3	third person	O	object
4	fourth person (H. Shelden, this volume)	pl	plural
		pt	point
A	actor	ref	reference
ART	article (obligatory)	RECIP	indirect object of recipient
CAUS	causative	sg	singular

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GALELA PRONOMINAL VERB PREFIXES

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Awalan-awalan verba pronominal dalam bahasa Galela

Subjek (pokok) maupun objek (penderita) mempengaruhi pembentukan verba dalam Bahasa Galela. Menurut pembentukan verba tsb., verba intransitif mendapat awalan subjek, dan verba statis mendapat awalan objek, tetapi verba transitif lengkap (doubly-marked) mendapat kedua-duanya awalan subjek dan awalan objek. Awalan pronominal membedakan orang pertama, kedua ketiga, dan keempat; juga membedakan tunggal dan jamak, serta jenis kelamin.

Yang menakjubkan adalah bahwa ruang lingkup hirarki orang keempat meningkat bila sifat transitif kalimatnya meningkat. Jadi, salah satu awalan orang keempat harus digunakan pada verba statis (sifat transitifnya rendah) untuk menunjukkan sesuatu yang bersifat non-manusiawi. Kemudian, salah satu awalan orang keempat harus digunakan pada verba intransitif (sifat transitifnya agak tinggi) untuk turut menunjukkan sesuatu yang non-manusiawi ataupun sesuatu yang manusiawi yang **tidak tentu**. Lagi pula, salah satu awalan orang keempat harus digunakan pada verba transitif (bilamana telah ditandai kedua-duanya subjek dan objek verbanya) untuk turut menunjukkan sesuatu yang non-manusiawi, atau sesuatu yang tidak tentu (baik jamak maupun tunggal), atau juga sesuatu yang manusiawi yang tentu dan **jamak.**

1. INTRODUCTION

Galela[1] verbs have a complex prefixing system by which they include some information about the arguments associated with them. This information can include person, number, gender and syntactic function, i.e. subject or object. Almost every verb obligatorily carries some information about at least one, but not more than two, arguments. This paper[2] discusses the Galela pronominal verb prefixes[3] and the clause-level conditioning factors. For a discussion of higher-level conditioning factors, see D. Shelden 1986.

In addition to pronominal prefixes, Galela verb roots may take prefixes which derive through addition, reduplication or modification of stem-initial consonants (Voorhoeve 1985:4ff).

Galela is what Dixon 1979 would classify as a split S-marking type of ergative language, similar in ergativity to languages of the Caddoan, Siouan and Iroquoian language families (p.82-83). It has

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Pacific Linguistics, A-73, 1991.

two classes of non-transitive verbs which are distinguished grammatically by the pronominal prefixes they take. **Intransitive** verbs take the same prefixes which agree with the subject of transitive verbs. **Stative** verbs take the same prefixes which agree with the object of transitive verbs. Section 2 discusses the subject prefixes which appear on active intransitive verbs. Section 3 discusses the combinations of subject and object prefixes, which appear on transitive verbs. Section 4 discusses the object prefixes which appear on stative verbs. Finally, section 5 discusses the reason for positing a fourth person and shows how the use of fourth person correlates with transitivity.

Whenever examples have been taken from actual text material,[4] I have attempted to give a natural English translation. The parts of the free translation which are enclosed in parentheses reflect words translated from the broader context as well. Material in square brackets is implied information. Since Galela verbs carry no tense marking, they depend on their context for tense specification. Examples transcribed out of context may be translated with any tense, i.e. past, present or future.

2. SUBJECT PREFIXES

Subject prefixes are the only pronominal verb prefixes permitted on the class of intransitive verbs. This class is a fixed set of verbs whose actions are always (or almost always) controlled. It includes verbs such as *tagi*[5] 'walk', *liho* 'go home' and *uti* 'descend'. It also includes, however, some verbs (e.g. *sone* 'die', *cawaro* 'be smart' and *dodo* 'be clear (water)'), similar to the statives to be discussed in section 4. Thus this class is not defined by strict semantic criteria. This sort of irregularity is not uncommon among split ergative languages such as Hidatsa, a Siouan language (Dixon 1979:83). The conditions under which subject prefixes occur on transitive verbs will be discussed in section 3. The subject prefixes are displayed in Table 1.

TABLE 1: PRONOMINAL VERB PREFIXES FOR INTRANSITIVE VERBS

PERSON	SINGULAR	PLURAL
1	*to-*	*mi-*
1&2		*po-*
2	*no-*	*ni-*
3 feminine	*mo-*	*yo-*
3 masculine	*wo-*	
4	*i-*	

The first, second and third person subject prefixes are quite straightforward as they appear on intransitve verbs.[6]

(1) *TO-temo* T4-3.10
1sgS-say
I said

(2) *MI-pane* T4-3.15
1plS-get on
we boarded [the bus]

(3) *PO-golo* T4-6.5
1&2S-request
(if) we request

(4) *NO-tagi* T4-3.4
2sgS-go
(Where are) you going?

(5) *NI-bicara* T4-3.37
2plS-discuss
you (just) chat (idly)

(6) *MO-sano* T4-3.24
3fsgS-ask
she asked

(7) *WO-mau* T4-5.5
3msgS-want
he wants (to go)

(8) *YO-liko* T4-4.9
3plS-hang
they hung (it from their necks)

Following are examples of the fourth person subject prefix referring to non-humans, i.e. animals, concrete items and abstractions.

The fourth person subject prefix *i-* refers to animals:

(9) *I-sore* D1-123
4S-crow
(the cock) crowed

(10) *I-liho* X1-34.2
4S-go home
(the dog) is going home

to concrete items:

(11) *I-hiwa* T4-6.100
4S-not
(my dress) doesn't exist

(12) *I-tura-ka* T4-4.37
4S-fall-CENTRIFUGAL
(the spears and machetes in their hands) fell

and to abstractions:

(13) *I-dodooha* T4-2.2
4S-how
How is it [the news]?

(14) *I-ma-si-diado-ka* T4-5.21
4S-REFLEXIVE-CAUSV-arrive-CENTRIFUGAL
(his time will) surely come

(15) *I-tero-wa* X1-42.2
4S-correct-NEG
that's wrong!

3. COMBINATIONS OF SUBJECT AND OBJECT PREFIXES

Galela transitive verbs may take either subject or object prefixes or both.[7] In this paper, I use the term transitive for verbs which refer to both arguments, unless specified otherwise. The subject prefix of a transitive verb always refers to the actor; there is no passive voice. The object prefix of a transitive verb refers to the undergoer of the clause.

Table 2 presents in a matrix all possible combinations[8] of subject and object prefixes on transitive verbs. When only the subject or only the object is referred to by a potentially transitive verb, the pronominal verb prefix is the same as for the corresponding intransitive or stative verb (discussed separately in section 4), and I use the terms intransitive and stative to include these. Thus the column and row in the matrix which are labelled 'Ø person' indicate the pronominal verb prefixes for intransitive and stative verbs, respectively. The other rows and columns indicate the prefixes which are used when both subject and object are referred to by the verb. I use the term transitive only when both prefixes occur.

TABLE 2: MATRIX OF PRONOMINAL PREFIXES FOR TRANSITIVE VERBS

		OBJECT									
PERSON		Ø	1sg	1pl	1&2	2sg	2pl	3fsg	3msg	3pl	4
	Ø	–	*i-*	*mi-*	*na-*	*ni-*	*ni-*	*mi-*	*wi-*	*ya-*	*da-*
S	1sg	*to-*	–	–	–	*to-ni*	***tini-***	*to-mi-*	*to-wi-*		***ta-***
U	1pl	*mi-*	–	–	–	*mi-ni*	*mi-ni-*	*mi-mi-*	*mi-wi-*		***mia-***
B	1&2	*po-*	–	–	–	*po-ni-*	***pini-***	*po-mi-*	*po-wi-*		***pa-***
J	2sg	*no-*	*no-i-*	*no-mi-*	*no-na-*	–	–	*no-mi-*	*no-wi-*		***na-***
E	2pl	*ni-*	***ni-***	*ni-mi-*	*ni-na-*	–	–	*ni-mi-*	*ni-wi-*		***nia-***
C	3fsg	*mo-*	*mo-i-*	*mo-mi-*	*mo-na-*	*mo-ni-*	***mini-***	*mo-mi-*	*mo-wi-*		***ma-***
T	3msg	*wo-*	*wo-i-*	*wo-mi-*	*wo-na-*	*wo-ni-*	***wini-***	*wo-mi-*	***wi-***		***wa-***
	3pl	*yo-*									
	4	*i-*	***i-***	*i-mi-*	*i-na-*	*i-ni-*	*i-ni-*	*i-mi-*	*i-wi-*		***ya-***

In the above table subjects are set out along the vertical axis and objects along the horizontal axis. Deviant prefixes appear bolded. Referents which require third person plural agreement on non-transitive verbs require fourth person agreement on transitive verbs; no third person plural prefixes occur on transitive verbs.

The basic arrangement of pronominal verb prefixes when both subject and object are referred to is subject prefix followed by object prefix. Thus, in example (16) *wo-na-* '3msgS-1&2O' (found at the intersection of the '3msg' row and the '1&2' column of Table 2) is composed of the subject prefix *wo-* '3msg' followed by the object prefix *na-* '1&2O'.

(16) *WO-NA-hike* T4-6.37
3msgS-1&2O-give
(Jesus) will give us (what we want)

In example (17) *wo-mi-* '3msgS-3fsgO' is composed of the subject prefix *wo-* '3msgS' followed by the object prefix *mi-* '3msgO'.

(17) *WO-MI-sasano* T4-3.29
3msgS-3fsgO-ask
(Aweng) questioned her

The combinations of third or fourth person subject and third or fourth person object prefixes which are listed in Table 2 are for non-coreferential third or fourth person referents. For example, *mo-mi-* '3fsgS-3fsgO' indicates person A is subject, person B is object, and both A and B are definite feminine third person singular referents. Thus completely coreferential combinations of subject and object prefixes do not occur and are, accordingly, blank (–) in Table 2.[9]

Thus the general rule for pronominal prefixes on transitive verbs is to simply join the respective subject and object prefixes. While the general rule holds for most of the combinations displayed in Table 2, there are several deviations of surface forms. These are explained by making six observations.

i) No 3pl prefixes occur on transitive verbs. Referents which require 3pl agreement on non-transitive verbs require 4p agreement on transitive verbs. This will be developed in section 5.

ii) A morphophonemic process elides a set of prefixes, bolded in the rightmost column, involving 4p object (same for both singular and plural).[10]

iii) A former morphophonemic process assimilated the vowel *o* to *i* in four subject prefixes before 2pl object prefixes, but that is no longer a productive process.[11]

iv) A morphophonemic process elides two of the combinations with 1sg object prefixes.[12]

v) A former morphophonemic process elided *wi-* '3msgS, 3msgO' from *wo-* '3msgS' and *wi-* '3msgO'. This is no longer a productive process.[13]

vi) Only some partially coreferential pairs of subject and object prefixes are allowed, as indicated below.

With reference to Table 2, we find that each of the four combinations which are outlined by the irregular box is partially coreferential. Partially coreferential means that at least one, but not all, of the members of the subject set and object set have the same identity.

These four combinations of partially coreferential subject and object prefixes actually have non-coreferential real-world referents. They each involve a first person plural **inclusive** subject or object prefix. They are used as **polite** forms where the formally inclusive prefix actually has **exclusive** reference.

(18) *pipi* *ni-NA-hike*
money 2plS-1&2OINCLUSIVE-give
Please give us some money.
The real referential meaning is:
Please give us (**exclusive**) some money.

Thus (18), for example, might be spoken in a situation where a man asks members of another family to give money to his own family. The members of the other family are referred to by *ni-* '2plS'. His own family is referred to by *na-* '1&2O INCLUSIVE', which is interpreted to mean '1OEXCLUSIVE, polite'. Sociolinguistically, what happens is that by including the addressee grammatically, the man relieves his embarrassment for having to ask for money. It is quite clear that if the request is met, the money will be totally transferred from one family to the other. Nonetheless, by linguistically implying joint receivership, the speaker obligates the addressee to respond for their common good. The four combinations which are used as in (18) are:

no- '2sgS' and *NA-* '1&2O,inclusive'
becomes *no-NA-* '2sgS and 1O,EXCLUSIVE, polite'

ni- '2plS' and *NA-* '1&2O,inclusive'
becomes *ni-NA-* '2plS and 1O,EXCLUSIVE, polite'

PO- '1&2S,inclusive' and *ni-* '2sgO'
becomes *PO-ni-* '1S,EXCLUSIVE and 2sgO, polite'

PO- '1&2S,inclusive' and *ni-* '2plO'
becomes *PIni-*[14] '1S,EXCLUSIVE and 2plO, polite'

4. OBJECT PREFIXES

Object prefixes are the only pronominal verb prefixes permitted on the class of stative verbs. The condition under which object prefixes occur on transitive verbs was discussed in section 3. The class of statives is a fixed set of verbs which take a subject with a patient-like role. It includes:

i) physical states, such as *kiolo* 'be asleep', *topongo* 'be deaf' and *modo* 'be afraid';

ii) experiences, such as *tiiki* 'cough [unintentionally]', *galasahu* 'sweat' and *kongo* '[eyes] water/tear';

iii) attributes, which may be expressed as adjectives in other languages, such as *taro* 'black', *tubuso* 'heavy' and *kiopi* 'sour'.

In Table 3 the object prefixes are listed parallel to the subject prefixes in order to show the formal similarity. Initial consonants of the subject and object prefixes are identical in several person-number slots. Note that the three second and third person singular object prefixes have the vowel /i/ where subject prefixes have /o/.

TABLE 3: PRONOMINAL VERB PREFIXES FOR INTRANSITIVE AND STATIVE VERBS

	SINGULAR		PLURAL	
PERSON	**SUBJECT**	**OBJECT**	**SUBJECT**	**OBJECT**
1	*to-*	*i-*	*mi-*	*mi-*
1&2			*po-*	*na-*
2	*no-*	*ni-*	*ni-*	*ni-*
3 feminine	*mo-*	*mi-*	*yo-*	*ya-*
3 masculine	*wo-*	*wi-*		
4	*i-*	*ḋa-*	*i-*	*ḋa-*

Here are examples, classified first by person and then by number, of the use of first, second and third person object prefixes appearing on stative verbs.

(19) *I-sapi*
1sgO-hungry
I'm hungry

(20) *MI-ruange* HI-8
1plO-three[15]
we are three/three of us

(21) *NA-punu*
1&2O-full
we're full [after eating]

(22) *NI-goga-si*
2O-feverish-CONTINUATIVE
Are you still feverish?

(23) *MI-sirangu*
3fsgO-nose drips
she has a runny nose

(24) *WI-maḋe* H1-7
3msgO-embarrassed
he's embarrassed

(25) *YA-puturu*
3plO-strong
they are strong

The fourth person object prefix *ḋa-* is used for non-human referents with stative verbs.

(26) *ḊA-tetebi* T4-5.66
4O-clean
(the book) is holy

(27) *ḊA-sahu* X1-44.5
4O-hot
(the sun) is hot

5. DISTINCTION BETWEEN THIRD AND FOURTH PERSON

Of special interest are the choices that have to be made between third and fourth person prefixes. With reference to Table 2, we find that no 3pl prefixes occur on transitive verbs; fourth person prefixes agree with 3pl referents. Examples (28) and (29) show the use of third (singular) versus fourth person prefixes on transitive verbs. This is shown in (28) for the subject and in (29) for the object.

(28a) *una* *WO-mi-sepa*
3msg 3msgS-1plO-kick
he kicked us

(28b) *one* *I-mi-sepa*
3pl 4S-1plO-kick
they kicked us

The subjects of (28a) and (28b) differ only in number; (28a) is singular while (28b) is plural. No third person plural prefix may appear on transitive verbs (see Table 2), thus the appropriate fourth person prefix *i-* '4S' is necessary.

(29a) *una* *mi-WI-ngapo*
3msg 1plS-3msgO-hit
we hit him

(29b) *ona* *MIA-ngapo*
3pl 1plS,4O-hit
we hit them

Similarly, the object of (29b) differs from that of (29a) only in being plural. But since no third person plural prefix may appear on transitive verbs, the appropriate fourth person prefix *mia-* '1plS,4O' is used in (29b).[16]

While the third/fourth person distinction point for transitive verbs is between singular and plural referents, the distinction point for intransitive verbs is between definite and indefinite referents. Example (30) shows the use of third versus fourth person prefixes on intransitive verbs.

(30a) *ona* *YO-sone*
3pl 3plS-die
they died

(30b) *nyawa* *I-sone*
person 4S-die
somebody died

Voorhoeve (1984:12-14) reports definite/indefinite distinctions similar to Galela, though in different forms, for two languages of the West Bird's Head in Irian Jaya, both of which are related to Galela. Karon Dori distinguishes indeterminate referents from specific third person singular free pronouns. Tehit distinguishes indefinite from definite possessive pronouns.

Following Comrie 1981 (pp.178-193) and Silverstein 1976, it is useful to represent the prefix choice in terms of an animacy hierarchy as presented in Table 4.

TABLE 4: PRONOMINAL VERB PREFIXES RANKED BY TRANSITIVITY IN A HIERARCHY OF ANIMACY

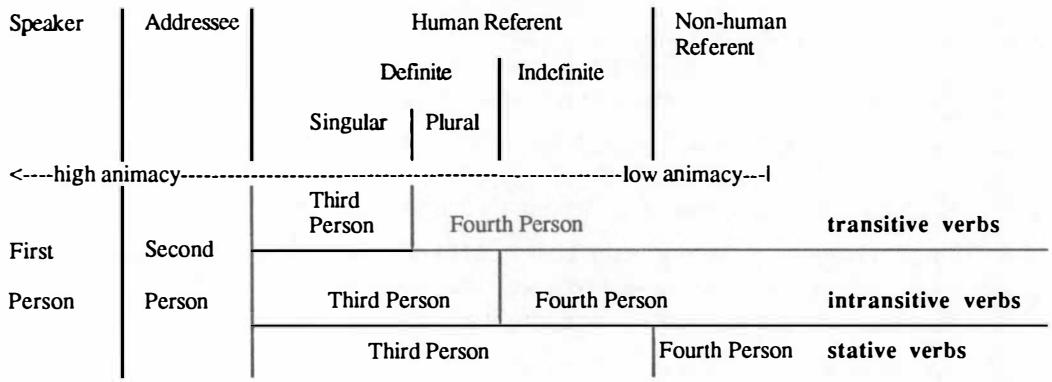

Table 4 shows that plural definite humans are referred to by third person prefixes on intransitive and stative verbs but by fourth person prefixes on transitive verbs. This applies equally to subjects and to objects. Thus the form of the prefixes (i.e. third or fourth person) for the various referents depends on **different** points in the animacy hierarchy, according to whether we are dealing with prefixes on intransitive and stative verbs or on transitive verbs.

With reference to Table 4, the line separating third person from fourth person is stepped rather than vertical, indicating three critical points of distinction in the animacy hierarchy. For stative verbs, the critical point for third/fourth person distinction is between humans and non-humans. For intransitive verbs, the critical point for third/fourth person distinction is between definite and indefinite humans. For transitive verbs, the critical point for third/fourth person distinction is between singular and plural humans. Note that for the critical point, high animacy correlates with high transitivity.

The choice between third or fourth person prefixes is one way in which descriptive and narrative discourse genres differ. Third person subject prefixes are not likely to be used to refer to humans in descriptive discourse, because in such discourse humans are usually indefinite. They may be specified as masculine or feminine, singular or plural, and be described with certain attributes, but they are only indefinitely identified and thus referred to by the fourth person prefixes on intransitive and transitive verbs. By contrast, humans in narrative discourse are often definite individuals who can be identified in the real world and are, accordingly, referred to by third person prefixes. However, third person prefixes are not used for all the humans in narrative discourse; fourth person prefixes will still be used to refer to unidentified or unimportant referents.

Most examples thus far are from narrative texts. For comparison, text (31), describing childbirth in Galela, contains four occurrences of *i-* '4S' referring to humans on intransitive verbs, but no occurrences of *yo-* '3plS'. In each occurrence, the context eliminates the possibility of *i-* referring to a **non-human**. Thus, the humans in (31) are always referred to by the fourth person subject verb prefix.

Text (31) also contains four occurrences of fourth person prefixes referring to indefinite humans on transitive verbs. Twice *mia-* '1plS,4O' refers to a single female object who must be understood as indefinite. Twice *ya-* '4S,4O' refers to a subject who must be understood as indefinite. In the first case of *ya-* '4S,4O', the object as well must be indefinite, whereas in the second case of *ya-*

'4S,4O', the object is soiled clothes and is thus referred to by a fourth person prefix because it is non-human.

(31) *ngomi kana nako I-puo gena ka o dukung*
1pl here if 4S-give.birth that just a midwife
(For) us here if she's (about to) give birth, we just

kampung MIA-aso // nakoso mia rasa bisa-wa
village 1plS,4O-call if 1pl.POS feeling able-NEG
call the village midwife. If our feeling (is that she) is

asa ko-gena ruma saki-ko MIA-aho // kagena
will DIR:sea-there house sick-DIR:sea 1pls,4O-bring there
unable we'll take her to the coastal hospital.

ɗa-bolo-ka dukung kampung
4O-finish-DIR:to/at midwife village
After the midwife

YA-si-puo-ka bilasu manga
4S,4O-CAUSV-give.birth-DIR:to/at should 3pl.POS
helps her give birth she should

bebeke magena I-tagi YA-poka // nako hiwa
soiled.things that 4S-go 4S,4O-wash.clothes if not
go wash her soiled clothes. If not,

bisa manga roka lo ka I-tagi YA-poka //
able 3pl.POS husband also just 4S-go 4S,4O-wash.clothes
her husband must go wash them.

maha ɗa-bolo-ka asa kagena mantri eko la dokter
wait 4O-finish-DIR:to/at will there nurse or so.that doctor
Later, the nurse or doctor

ka I-masunti
just 4S-inject
will give an injection.

6. SUMMARY

In this paper the system of pronominal prefixes which appear on Galela verbs has been described. Subject prefixes are those which appear on intransitive verbs. Object prefixes are those which appear on stative verbs. Subject prefixes followed by object prefixes appear on transitive verbs. Several of the subject-object combinations are formally deviant.

In addition, it has been shown that Galela distinguishes both third and fourth persons in an animacy hierarchy and that the point of distinction correlates with the transitivity of the verb. Thus, stative verbs refer only to non-humans by a fourth person prefix. By contrast, intransitive verbs refer to indefinite human referents as well by a fourth person prefix. Finally, transitive verbs refer to definite plural human referents, as well as indefinite human referents and non-humans, by a fourth person prefix.

NOTES

1. The Galela language has been classified as a member of the Mainland Family of the North Halmahera Stock in the West Papuan Phylum (Grimes and Grimes 1984:20). It is spoken by 60,000 people who live in the northern part of Halmahera Island around Galela Bay and Lake Galela and on Morotai and Bacan Islands in the North Moluccan Islands of Indonesia. Due to centuries of coastal trading, the Galela people have been heavily influenced by other peoples of Indonesia. Very few are monolingual.

2. I owe a great debt to Ivan Lowe, an international linguistic consultant of the Summer Institute of Linguistics (SIL), for patiently reading and commenting on early drafts of this paper. Helpful suggestions were also made by Deidre Shelden, my linguist wife, and by SIL colleages Janet Bateman, Margaret Hartzler, Kenneth Maryott, Helen Miehle and Pete Silzer. My sincerest gratitude goes to Josafat Etha of Duma village who took me into his home for several months and then graciously consented to leave family and other responsibilities for one month to join me at the workshop out of which this paper developed. Much appreciation is also due to my neighbours and countless other Galela speakers who taught me their language while I lived there. None of this would have been possible without the permission and approval of various levels of the Indonesian government and the cooperative agreement between Pattimura University in Ambon and the SIL which sponsored the fieldwork for this study.

3. Van Baarda (1895, 1908) and van der Veen (1915) described the pronominal systems as well. Van Baarda wrote from greater exposure to the Galela language and van der Veen added comparative data. Nonetheless, the present paper contributes significantly in two ways. Firstly, it uses the torch of recent linguistic theory to illuminate the data in a more explanatory way than was possible 75 years ago. And secondly, it makes Galela data available to readers of English who are not fluent in Dutch. The most significant departures from the former writings are briefly noted here and in note 10.

   In place of my notion of fourth person, van Baarda and van der Veen discussed conditions under which the so-called third person non-human prefix applied to referents of other classes of nouns. Comparatively, van der Veen (1915:16-18) noted that Pagu, Modole, Tabaru and Loloda distinguish the noun class of third person plural human from that of non-human *(zaken)*, whereas Tobelo and Galela do not. Moreover, both researchers failed to recognise the definite versus indefinite distinction as a conditioning factor in Galela. They described the structure adequately; I provide an explanation in terms of transitivity and the animacy hierarchy.

   Finally, what I describe as pronominal verb prefixes were described by van Baarda (1895:37) as separate words. This difference can not be adequately discussed here and is not particularly relevant to the present paper.

4. Fieldwork to study the Galela language under the auspices of the SIL and Pattimura University began in October 1983. The data which formed the basis for this analysis was gathered during an eight-month period in the village of Duma, at the interior end of Lake Galela. Most of the examples were taken from transcriptions of tape-recorded text material which is identified with the label T followed by a number. Most of the remaining examples were either transcribed out of context or elicited; they are identified with a field notebook label of H, D or X, followed by a number. Those not bearing any label were elicited specially for this paper and checked with a native speaker. The corpus of data represented by this paper consists of six texts containing

more than 400 verbs. This was supplemented by field notebooks and a lexicon of more than 1000 entries.

5. The phonemes of Galela are

vowels /i/, /e/, /a/, /u/, /o/

voiceless stops /p/, /t/, /tʃ/, /k/

voiced stops /b/, /d̪/, /ḍ/, /dʒ/, /g/

fricatives /ɸ/, /s/, /h/

nasals /m/, /n/, /ɲ/, /ŋ/

lateral /l/

flap /r/

semivowels /w/ /y/

The /d̪/ is realised by a voiced dental stop, the /ḍ/ by a voiced retroflexed stop.

The practical orthography used in this paper is based on the Indonesian orthography and is the same as the phonemic orthography except that

d̈ is used instead of /d̪/

d is used instead of /ḍ/

f is used instead of /ɸ/

c is used instead of /tʃ/

j is used instead of /dʒ/

ng is used instead of /ŋ/

ny is used instead of /ɲ/

6. The following abbreviations are used throughout and prefixes capitalised to highlight them:

Ø	zero person, i.e. the verb either cannot or does not refer to an argument for that particular syntactic function	f	female
		m	male
		NEG	negative
		O	object
1	first person	pl	plural
2	second person	POS	possessive
3	third person	S	subject
4, 4p	fourth person	sg	singular
CAUSV	causative	V	verb
DIR	directional		

7. D. Shelden (1986) describes the discourse constraints which determine the presence or absence of subject and object prefixes on potentially transitive verbs. She demonstrates that, in narrative discourse, topical participants are indicated by the presence of coreferential verb prefixes while non-topical participants are indicated by the absence of coreferential verb prefixes.

8. To date, the following combinations of the subject and object prefixes which are displayed in Table 2 have yet to be confirmed in unambiguous connected text.

subject	**object**	**prefixes**
1pl	3msg	*mi-wi-*
1pl	3fsg	*mi-mi-*
1&2	2pl	*pini-*
2sg	1&2	*no-na-*
2pl	1&2	*ni-na-*
3fsg	1pl	*mo-mi-*
3fsg	1&2	*mo-na-*
3fsg	2sg	*mo-ni-*
4	2pl	*i-ni-*

9. Verbs with a completely coreferential subject and object are reflexive and take a subject prefix followed by the reflexive marker *ma-*.

(32) *wo-MA-gogahu* T4-5.6
3msgS-REFLEXIVE-work for
he (wanted to) work for himself [i.e. be self-employed]

10. Any subject and object combination where the object is fourth person undergoes a morphophonemic process. Such prefixes appear in the last column of Table 2, in the block set off by the vertical line. They are derived from the appropriate subject prefix and *đa-* '4pO' by the following rules.

When *đa-* '4pO' follows a subject prefix, the *đ* is deleted, along with any preceding *o*. Formally, these rules are:

(33a) *Co-* *đa-* ---> *Ca-*
[+S prefix] [+4pO prefix]

(33b) *(C)i-* *đa-* ---> *(C)ia-*
[+S prefix] [+4pO prefix]

When rule (33b) results in the surface form /ia-/, it is represented orthographically as *ya-* (H. Shelden 1989:20).

Van Baarda (1908:61) identified the source of the vowel /a/ as *ya-* '3plO', rather than *đa-* '4pO'. The parallel phenomenon for the subject prefixes in the bottom row of Table 2, however, has *i-* '4pS' which combines with other object prefixes rather than *yo-* '3plS'. Furthermore, there is comparative evidence from the Dodinga dialect of Tobelo that *đa-* '4pO' is the more likely source. In Dodinga, several of the corresponding forms do not undergo morphophonemic change, but retain *λa-* '4pO' (van der Veen 1915:49-52). (Dodinga *λ* shows regular correspondence with Galela *đ*.)

11. These are:

tini- '1sgS,2plO', derived from *to-* '1sgS' and *ni-* '2plO'
pini- '1&2,2plO', derived from *po-* '1&2' and *ni-* '2plO'
mini- '3fsgS,2plO', derived from *mo-* '3fsgS' and *ni-* '2plO'
wini- '3msgS,2plO', derived from *wo-* '3msgS' and *ni-* '2plO'

Comparative data from the Tugutil Lili dialect of Tobelo and from Sahu provide evidence that *ni-* '2sgO' and *ni-* '2plO' were contrastive in a proto-form of the language. In Tugutil Lili, the corresponding object prefixes are *ni-* '2sgO' and *nii-* '2plO' (vowel length; there is no glottal stop here) and there is no assimilation of verb prefixes as described here for Galela, though there is a similar assimilation involving the feminine marker *ngo* and the 2pl possessive pronoun *nia,* which become *ngini* (Keith Miles, personal communication). In Sahu, the corresponding object prefixes are *ni-* '2sgO' and *nu-* '2plO' and a similar assimilation process is less restricted, applying whenever both subject and object prefixes begin with dissimilar consonants (Visser and Voorhoeve 1987:27ff).

12. These are:

    ni- '2plS,1sgO', derived from *ni-* '2plS' and *i-* '1sgO'.
    i- '4S,1sgO', derived from *i-* '4S' and *i-* '1sgO'.

    The process elides adjacent like vowels resulting from juxtaposed subject and object prefixes.

13. Comparative data from the Tugutil Lili dialect of Tobelo shows a productive elision process such that *ow* drops out of combinations with *wi-* '3msgO' (Keith Miles, personal communication). Thus, for Tugutil Lili;

    ti- '1sgS,3msgO', derived from *to-* '1sgS' and *wi-* '3msgO'
    hi- '1&2S,3msgO', derived from *ho-* '1&2S' and *wi-* '3msgO'
    ni- '2sgS,3msgO', derived from *no-* '2sgS' and *wi-* '3msgO'
    wi- '3msgS,3msgO', derived from *wo-* '3msgS' and *wi-* '3msgO'
    yi- '3plS,3msgO', derived from *yo-* '3plS' and *wi-* '3msgO'

14. The irregular form *pini-* where one would expect *po-ni-* is described in note 11.

15. Numbers appear as verbs in Galela since they take first, second and third person prefixes. They are distinguished from stative verbs, however, in that they are not inflected for non-human referents.

16. See note 10 for a description of the morphology of the prefix *mia-* '1plS,4O'.

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DEMONSTRATIVES IN THE BLAGAR LANGUAGE OF DOLAP (PURA, ALOR, INDONESIA)

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Bahasa Blagar yang merupakan bahasa ibu beberapa ribu orang di pulau Pura, pulau Tereweng serta pesisir timur pulau Pantar (kab. Alor, NTT) termasuk bahasa 'non-Austronesia' dan ditandai oleh sistem deiktis yang cukup ruwet. Lima morfem demonstratif (D) muncul dalam sembilan perangkat kata (D dan D+afiks), yang sebagian besarnya berpasangan dengan bentuk yang D-nya diulang satu atau dua kali (D-D, D-D+afiks, D-D-D, D-D-D+afiks). Kata demonstratif yang sama dapat menempati lebih dari satu gatra sintaktis; dengan demikian bahasa Blagar membedakan berbagai jenis modalitas. Tafsiran tentang tempat yang diacu oleh kelima morfem demonstratif tersebut tergantung 1) dari tempat pembicara dan lawan bicara berada pada saat berbicara, dan 2) dari 'ruang' acuan pada saat itu, yang jumlah jenisnya lima. Sebuah teks mencontohi pemakaian kata demonstratif dalam perspektif (pembicara) yang selalu berubah.

1.1

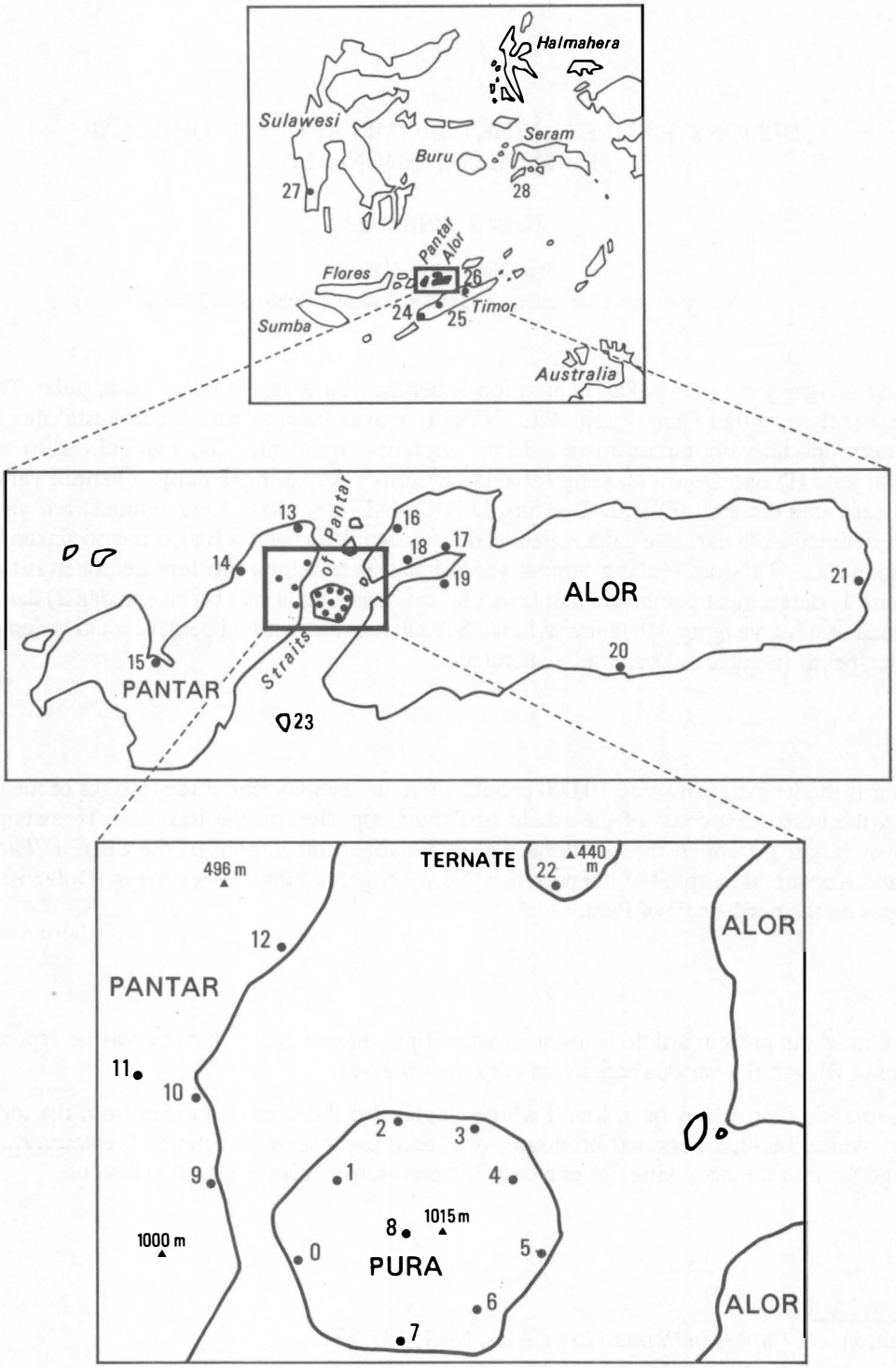
Blagar is the language of some 10,000 people, living in the majority of the villages of the island of Pura, on the north-east coast of the island of Pantar opposite, on the island of Tereweng and in smaller or larger groups in the diaspora, e.g. in Kalabahi, the capital of the district *(kabupaten* Alor*)*, and Kupang, the capital of the province (Nusa Tenggara Timur) – see maps. Dolap is a cluster of villages on the north coast of Pura.[1]

1.2

The aim of the present article is to throw some light on one of the most pervasive aspects of the structure of Blagar, the various paradigms of demonstratives.

No semantic feature has been found which singles out the demonstratives from the total set of deictics, which include personal pronouns, and such expressions as *meleŋ* 'yesterday', *vede* 'a while ago (within the boundaries of one day)'[2], *hama* 'same', *ebeuŋ* 'other' and so on.

Tom Dutton, ed. *Papers in Papuan linguistics,* No.1, 177-221.
Pacific Linguistics, A-73, 1991.


Halmahera
Sulawesi
Seram
Buru
27
28
Pantar
Alor
Flores
26
Timor
24
25
Sumba
Australia
13
16
Pantar
14
18
17
19
ALOR
21
Straits
of
15
PANTAR
20
23
TERNATE
496 m
440 m
22
12
ALOR
PANTAR
11
10
2
3
9
1
4
1015 m
8
1000 m
0
5
PURA
6
7
ALOR

KEY TO MAPS

0.	Melaŋvala	15.	Baranusa
1.	Dolap	16.	Kokar
2.	Abira	17.	Karaŋbai (Kalabahi)
3.	Limarahiŋ	18.	Dulolon
4.	Harilolon	19.	Moru
5.	Puravematan	20.	Batulolon
6.	Reta	21.	Kolana
7.	Mala?al	22.	Ternate
8.	Maru	23.	Teβeran (Tereweng)
9.	?olijahi	24.	Kupan
10.	Ba?alan	25.	Ukusi (OEkusi)
11.	Ubualaban	26.	Parasa (Dili)
12.	Tuaban	27.	Makasar
13.	Muna	28.	Maluku (Central Moluccas)
14.	?abir (Kabir)		

In Blagar demonstratives are distinguished grammatically from other deictics by a recurrent set of morphological oppositions. In the discussion below the recurrent formal elements of these oppositions will be referred to as 'demonstrative morphs'.

The wealth of demonstratives enables Blagar speakers to view a referent from quite different angles. Exploitation of this capacity of the language results in very expressive and vivid pictures of reality.

The present article should be seen as a first inventory of demonstrative deictics in Blagar. As such it is based on morphologically defined oppositions, which means that the semantic analyses can only be of a preliminary nature. The Blagar demonstratives are not grammatically isolated phenomena, but they are intimately interwoven with and directly opposed to other aspects of the grammar, some of which are as yet insufficiently understood and which cannot be dealt with here more than superficially, in any case.[3]

1.3

Short surveys will be given below of phonology and spelling and of the series of demonstratives. These will subsequently be discussed in general and each of them in detail. Finally a short text will be added with translation and annotations to demonstrate the function of the demonstratives in running prose.

2.1

The phonemes of Blagar are /a, e, i, o, u, b, p, m, d, t, n, g, k, ŋ, s, h, v, r, l, j, ?, β/.

/ŋ/ followed by a labial or dental stop tends to undergo assimilation with that stop as regards the point of articulation.

/j/ is a voiced alveopalatal fricative in the pronunciation of some older people, and a voiced alveopalatal affricate with only slight friction in the pronunciation of most speakers.

/ʔ/ is phonemic in most contexts, but frequently alternates with its absence between dissimilar vowels: *buʔaŋ, buaŋ* 'to treat (guests)' in contrast to *buaŋ (*buʔaŋ)* 'to guard'.

/ɓ/ is a voiced bilabial implosive stop.

The other phonemes present no difficulties; their symbols have the expected phonetic values.

Stress is non-phonemic and always on the penultimate vowel/syllable of the phonological word (i.e. word + enclitics if any).

2.2

The vast majority of the examples below are taken from tape-recorded Dolap stories. The spelling used in the examples and in the text at the end of this article is phonemic, with addition of punctuation and hyphens to mark morpheme boundaries within the word. In the interlinear glosses,[4] which are often of a tentative nature, spaces correspond with spaces, hyphens mark Blagar morpheme boundaries and full stops unite two or more words corresponding with one Blagar morpheme. In the free translations categorial choices which are obligatory for English but nonexistent or quite dissimilar for Blagar (such as the choice between singular and plural, or present and past) will be made as much as possible in accordance with the context. On the other hand the translations aim to give an idea of what the Blagar constructions syntactically express, which necessarily results in often rather clumsy English constructions.

References to examples will be made by their number and references to sentences in the text and/or to commentary on these sentences by the relevant number preceded by a capital T.

3.1

The subsets of demonstratives which show the formal oppositions are set out in Chart 1.

	A	B	C	D	E	F	G	H	I
1.	*ʔalaŋ*	*ʔavaŋ*	*ʔahukaŋ*	*ʔanaŋa*	*ʔaʔe*	*ʔa*	*ʔaʔa*	*ʔaŋa*	*ʔaveŋ*
2.	*ʔulaŋ*	*ʔuvaŋ*	*ʔuhukaŋ*	*ʔanaŋu*	*ʔuʔe*	*ʔu*	*ʔuʔu*	*ʔaŋu*	-
3.	*polaŋ*	*povaŋ*	*pohukaŋ*	*ʔanapo*	*poʔe*	*po*	*popo*	*ʔapo*	*poveŋ*
4.	*molaŋ*	*movaŋ*	*mohukaŋ*	*ʔanamo*	*moʔe*	*mo*	*momo*	*ʔamo*	*moveŋ*
5.	*dolaŋ*	*dovaŋ*	*dohukaŋ*	*ʔanado*	*doʔe*	*do*	*dodo*	*ʔado*	*doveŋ*

CHART 1

Alongside *ʔahukaŋ* etc. (series C of Chart 1), *ʔahuɓaŋ* etc. occur. The forms of the series D and H, rows 2-5, also possess alternative forms: *ʔanauŋ, ʔanaŋpo, ʔanaŋmo, ʔanaŋdo; ʔauŋ, ʔaŋpo, ʔaŋmo, ʔaŋdo.* Especially *ʔauŋ* is frequent. I have not found any functional difference between these alternative forms. Both variants may be used by the same speaker, but there are clear individual preferences for the one or the other; those who use *ʔauŋ* at all tend to prefer it before clitics. The preference for *ʔanauŋ* instead of *ʔanaŋu* is more general than that for *ʔauŋ* instead of *ʔaŋu.* Speakers who tend to use the last form do not necessarily prefer *ʔanaŋu;* those who usually apply *ʔauŋ* hardly ever use *ʔanaŋu.*

There is another variant for *ʔanauŋ* and *ʔanaŋu,* and that is *nauŋ.* It is preferred by all speakers in vocative constructions, from where it spread with ideolectal variation to other syntactic positions (see also note 6).

3.2

The oppositions between the forms of each column show a clear parallellism with (1) the personal pronouns and (2) the verbs of 'going' and 'coming'.

The appropriate referents of the personal pronominal forms can only be defined with reference to THE speech-event. THE can be roughly translated as 'being in the forefront of the frame of reference ' (cf. Ebeling 1979:14, and for a formalised semantic description pp.165-166); a direct quotation brings a speech-event other than the actual one into the forefront of the actual frame of reference.

The forms of the first row, i.e. the forms containing the formal element /ʔa/ (or /a/ in series D and H), correlate with the semantic particle 'close to THE speaker'. Those of the second row, i.e. those with the formal element /ʔu/ (or /u/ in series D and H), correlate with the semantic particle 'close to THE hearer'. The forms of the other rows correlate with the semantic particle 'close neither to THE speaker nor THE hearer'.

The parallelism with the verbs of 'going' and 'coming' is a marked characteristic of Blagar and other Alorese languages (cf. Kamengmai and Stokhof 1978 and Stokhof 1987). It holds in particular for the forms of the third to fifth rows of Chart 1.

As with these verbs, the exact interpretation of each of these demonstratives is highly dependent on the spatial frame of reference. I recall matrixes 3, 4 and 5 of Steinhauer 1977:39-40, which illustrate these different spatial frames of reference, and the interpretations the lexemes for 'going' and 'coming' acquire when used in either of these frames. It seems to be impossible to formulate a general meaning for each of these verbs, such that the interpretations given in these matrixes follow from this general meaning and the spatial frame of reference which is valid for the (part of the) utterance in which the verb in question occurs. Yet, in view of the complementary distribution of these interpretations over the various spatial frames of reference, I consider them to have just one meaning. I will refer to these hypothetical meanings by means of one of the more frequent interpretations, i.e. the interpretation of the so-called subsystem 3 of matrix 3:

ʔipa	go down	*ja*	come down
va	go level	*ma*	come level
mida	go up	*da*	come up

The differences between the demonstratives of rows 3-5 can only be explained with reference to a point of orientation. The resulting spatial interpretations are illustrated in Chart 2 below.

As appears from Chart 2 the third row demonstratives of Chart 1 point to a place to which one has to 'go down' from THE orientation point, those of the fourth row to a place to which one has to 'go level' and those of the fifth row to a place to which one has to 'go up'.

Some of the demonstratives of high frequency – expecially *ʔaŋa* and *ʔaŋu, ʔauŋ* – may be used with non-spatial reference. This will be discussed in more detail in the next section, where the differences between the columns of Chart 1 will be dealt with.

The above-mentioned semantic particles 'close to THE hearer' and 'close to THE speaker' should not be interpreted purely spatially. In many contexts this closeness is 'psychological'. The use of the first row forms has the effect that the attention of THE hearer is focussed on information which is explicitly still 'with THE speaker'. The second row forms on the other hand tend to refer to a frame of reference which by the preceding context has been conveyed already to THE hearer. In most contexts therefore their demonstrative function is weakened and their meanings become unmarked: 'THE', 'in THE manner' etc. instead of 'that', 'in that manner' etc. In the glosses, the marked meanings are given for the row 2 forms of Chart 1 and the third frame of reference meanings (Chart 2) are given for rows 3-5.

4. THE PARADIGMS

In this section I discuss the forms of each column of Chart 1, with examples.

4.1 THE A COLUMN

4.1.1

The forms of the A paradigm are demonstratives expressing manner or distance:

ʔalaŋ	1. 'in this way', 2. 'at/covering a distance close to THE speaker'
ʔulaŋ	1. 'in that way (close to THE hearer)', 2. 'at/covering a distance close to THE hearer'
polaŋ	1. 'in that way down there', 2. 'at/covering a distance from THE orientation point to that point below it'
molaŋ	1. 'in that way at the same level as THE orientation point', 2. 'at/covering a distance from THE orientation point to yonder point at the same height'
dolaŋ	1. 'in that way up there', 2. 'at/covering a distance from THE orientation point to that point up there'.

SPATIAL FRAME OF REFERENCE (F) / FORM	Relation between point of orientation (O) and place pointed at (P)				
	1 in F, there is no possibility for orientation in terms of the oppositions land-sea or mountain-valley	in F, orientation in terms of the oppositions land-sea or mountain-valley is possible			
		trajectory O-P is			
		simple		complicated	
		2 in a two-dimensional F	3 in a three-dimensional F	4 within Pura	5 otherwise
third row forms of Chart 1	P lies south of O	P lies closer to the sea or the valley than O	P is lower than O	trajectory O-P is counter-clockwise around the island	unpredictable; apparently dependent on the general trajectory one has to go from O to P (see maps and Chart 3)
fourth row forms of Chart 1	P lies west or east of O	the line O-P is parallel to the shore or valley	P is at the same height as O	-	
fifth row forms of Chart 1	P lies north of O	P lies further away from the sea or the valley than O	P is higher than O	trajectory O-P is clockwise around the island	

CHART 2: MEANING OF THE DEMONSTRATIVES CONTAINING THE SEMANTIC PARTICLE 'CLOSE NEITHER TO THE HEARER NOR THE SPEAKER'

pointing from O —— to P	0.	1.	2.	3.	4.	5.	6.	7.	8.
0. Melanvala	-	*po*	*po*	*po*	*po*	*do*	*do*	*do*	*po*
1. Dolap	*do*	-	*po*	*po*	*po*	*po*	*do*	*do*	*po*
2. Abira	*do*	*do*	-	*po*	*po*	*po*	*do/po**	*do*	*po*
3. Limarahiŋ	*do*	*do*	*do*	-	*po*	*po*	*po*	*po*	*po*
4. Harilolon	*do*	*do*	*do*	*do*	-	*mo*	*mo*	*po*	*po*
5. Puravematan	*po*	*do*	*do*	*do*	*mo*	-	*mo*	*po*	*po*
6. Reta	*po*	*po*	*do/po**	*do*	*mo*	*mo*	-	*do/mo***	*po*
7. Mala?al	*po*	*po*	*po*	*do*	*do*	*do*	*po/mo***	-	*po*
8. Maru	*do*	—>							-
9. ?olijahi									
10. Ba?alaŋ	*mo*	*mo*	*mo*	*po*	*po*	*po*	*do*	*do*	*mo*
11. Ubualabaŋ									
12. Tuabaŋ	*do*	*do/mo*	*do/mo*	*po/mo*	*po*	*po*	*do*	*do*	*mo*
13. Muna									
14. ?abir	*po*	—>							
15. Baranusa									
16. Kokar									
17. Karaŋbai									
18. Dulolon	*do*	—>							
19. Moru									
20. Batulolon	*mo/do****	—>							
21. Kolana									
22. Ternate	*do*	*do*	*do*	*do/mo*	*do/mo*	*do*	*do*	*do*	*do*
23. Teβeraŋ									
24. Kupaŋ	*po*	—>							
27. Makasar									
25. Ukusi	*mo*	—>							
26. Parasa									
28. Maluku	*do*	—>							

Note: The demonstratives of column F of Chart 1 represent all possible demonstratives.
—> means that all other columns are the same as column 0.
*) Dependent on whether one goes clockwise *(do)* or counter clockwise *(po)* around the island to reach P from O.
**) *mo* refers to the old village of Mala?al, which in the 1960s was at the same height as Reta; *do* and *po* refer to the new village of the mid 1970s, which was built along the shore.
***) *mo* is appropriate if one travels over land from O to P, otherwise *do* has to be used.
In other instances of a choice *mo* can semantically be related with 'crossing the sea in a straight line'.

CHART 3: POINTING FROM O (ON PURA) TO P (ON OR OUTSIDE PURA)

Examples are *ʔana molaŋ* '(s)he is as (s)he was/acted as (s)he did over there on the same height as THE orientation point' and *molaŋ ʔaʔe niaŋ* 'ones like those (on the same height as THE orientation point) are not here' *(niaŋ* 'not'*)*. Most frequently they are used as adverbs. As such they are placed either directly before or directly after the subject of a clause; when they occur after the verb – subject and object are always preverbal – only the manner interpretation is possible.

ʔalaŋ and especially *ʔulaŋ* have a high text frequency. The former form is regularly used cataphorically, the latter anaphorically.

(1) *ne aru ia mutu ʔ-i-t-a-tutuk veŋ banaŋ hula ʔalaŋ:*
people two junior senior 3p-pl-REC-to-speak about talk say like.this

'ʔulaŋ se hava ʔaŋa ʔ-ene jaŋkal hava'
like.that when house this 3p.POSS-name Jangkal house
The two men, the younger and the elder one, spoke to each other like this:
'If so, the name of this house should be Jangkal house'.

(2) *unuar hera, batar veŋ hera, mod veŋ hera, taul veŋ hera,*
rain descend maize at descend rice at descend long.beans at descend

ʔulaŋ he nehe na-t eɓeta
like.that only.then human.being eat-AIM/MANNER[5] live
The rain fell, it fell on the maize, it fell on the rice, it fell on the long-beans, so that the people got to eat and stayed alive.

(3) *ʔana ʔ-omi mea-t ʔulaŋ, ʔipa*
3p.sg.SUBJ 3p.POSS-inside put-AIM/MANNER like.that go.down

ʔ-e-dula-t tia, ʔauŋ mu ʔana
3p-sg-smooth-AIM/MANNER lay.down that just 3p.sg.SUBJ

ʔ-omi mea-t ʔauŋ ʔ-adana
3p.POSS-inside put-AIM/MANNER that THE.entity-towards
Having thought so – [i.e. to go down and lie down naked] she immediately acted according to that thought.

(4) *na ʔ-ot boma taʔapari ʔ-e haŋi toʔoniŋ*
I THE.entity-order old.man Taʔapari 3p-sg.POSS chicken chop

mi-ʔosiŋ ʔulaŋ e ʔana hoʔa se ʔana
completely like.that only.then.could.it.be.that 3p.sg.SUBJ come when

ʔ-eteʔiŋ niaŋ
THE.entity-see not
I ordered her to chop Mr Taʔapari's chicken completely, so that when he came he would not be able to recognise it (as his own).

(5) *vaʔal jaŋu ele ʔaŋu veŋ meʔe-t ʔulaŋ mu se, ʔana*
child female big that about hear-AIM/MANNER like.that just when 3p.sg.SUBJ

ʔ-omi *mea:* ...
3p.POSS-inside put
As soon as the elder girl had heard so, she thought...

(6) *ʔana* *hula:* *'ana* *imina* *niaŋ!'* *ʔulaŋ* *di* *se* *boma*
3p.sg.SUBJ say you(sg).SUBJ die not like.that also when
old.man

ʔ-e-ʔea-t *na* *niaŋ*
3p-sg-not.want-AIM/MANNER eat not
He said, 'You won't die!' Nevertheless the old man did not want to eat.

Examples (1), (2), (4) (5) and (6) show the use of clause-final clitics and clitic sequences *(se, he, e, mu se, di se),* which are frequent after anaphoric *ʔulaŋ.* (For these clitics see also T10, T13 and T28.)

In the next example *ʔalaŋ* has spatial reference:

(7) *ataŋ* *aru* *ʔauŋ* *ʔeniŋ* *ʔalaŋ*
your (sg).hand two that do like.this
Keep both your hands like this.
(the speaker is explaining an Islamic prayer)

4.1.2

It is possible to reduplicate the demonstrative morphs of the manner demonstratives, thus adding emphasis: *ʔaʔalaŋ, ʔuʔulaŋ, popolaŋ* etc. If the reference of these forms is spatial, this emphasis implies visibility of the referent. Doubly reduplicated forms of this series (i.e. *ʔaʔaʔalaŋ* etc.) may be used when THE hearer has failed to identify the referent of *ʔaʔalaŋ* etc.

The first syllable of the manner demonstratives may also be lengthened, the effect being that a great distance or a slowly progressing action is suggested.

(8) *ni* *holomaŋ* *ʔaʔe* *karaŋbai* *olol* *mi* *ʔipa,* *ʔulaŋ* *[ʔu:laŋ]*
we(excl).SUBJ first be.here Kalabahi shore in go.down like.that

je *ʔauŋ* *pati-pati-t* *vetaboa* *ʔ-adaŋ* *mida/*
prow that slow-slow-AIM/MANNER Vetaboa THE.entity-towards go.up
first we were here taking off from the Kalabahi shore, in that time-consuming way/
over that long distance the prow went slowly in the direction of Vetaboa

However, the long vowel of *[ʔu:laŋ]* is not discretely opposed to a short one. Therefore I do not assume two parallel series of demonstratives opposed to each other by vowel length.

4.1.3

Finally, two special usages of *ʔulaŋ* should be mentioned in this section. When it occurs in the position before the subject it may have temporal reference ('in a short while'): *ʔulaŋ ʔana hoʔa* 'in a short while he will come'. Preceded by *ʔe* (in other contexts the form for the third person singular possessive) it means 'just like that': *ʔana ʔe ʔulaŋ hoʔa* or *ʔe ʔulaŋ ʔana hoʔa* '(s)he came just like that'. I have not had the opportunity though to check whether *ʔe polaŋ* etc. are also possible.

4.2 THE B AND C COLUMNS

The demonstratives of the paradigms B and C are the only ones whose stems occur as words. Nevertheless they cannot be interpreted as word groups for semantic reasons. The stems mean respectively 'as big as THE object' and 'having the same length/measure as THE object'. THE object is locally specified by the demonstrative morphs: *ʔavaŋ* 'as big as this' etc., *pohukaŋ* 'as long as the one down there' etc.

When the stems occur as words, they should be immediately preceded by a nominal construction expressing the standard for the comparison: *ne hava vaŋ* 'as big as my house', *naiŋ vaŋ* 'as big as me', but *na ʔavaŋ* 'I am as big as this', *ne hava ʔavaŋ* 'my house is as big as this'. Notice also the next two expressions:

(9) *keneiŋ nu ʔ-ataŋ hukaŋ*
little (child) one 3p.POSS-arm as.long.as
as long as a child's arm

(10) *ved (da) tua bololu nu hukaŋ*
sun come.up palmyra.palm high one as.high.as
The sun (rises) as high as a high palmyra-palm.
(i.e. it is about 8 or 9 o'clock)

My data do not show reduplicated forms, but I assume they exist in the same way as with the *ʔalaŋ* series.

4.3 THE D COLUMN

The *ʔanaŋa* series (paradigm D) are mainly used attributively at the end of noun phrases. In spite of the formal and functional correspondences with the *ʔaŋa* series, their morphological make-up cannot be synchronically analysed in a non-ad hoc way.

The forms indicate that the referent of the preceding part of the noun phrase to which they belong is presented as a collective of various individuals or indivicual things taken together and 'localised' in the already familiar way by the demonstrative morphs (cf. (11)-(13)). When the referent of this preceding part of the noun phrase cannot be interpreted as a number of individuals or individual things (e.g. when it is a part of the body), the demonstrative of the *ʔanaŋa* type indicates that it should be seen not as a single locality in space, but as an area or a collection of localities.

(11) *haŋi ʔanauŋ te era nu ʔuʔe tahi ʔ-e*
chicken that.group.of.them wood stem one be.there stand 3p-sg.POSS

ʔ-ataŋ taŋ tia-t piliŋ
3p.POSS-branch on sleep-AIM/MANNER line.up
The (group of) chickens slept in a row on the branch of a tree that was standing there.

(12) *ni na ʔanauŋ ʔila taʔavi*
we(excl) thing that.group.of.them go steal
we went to steal all those things

(13) *jabar ʔaŋu eɓeta; ʔana tahi-t ʔ-ora met*
dog that alive 3p.sg.SUBJ stand-AIM/MANNER 3p.POSS-tail having.taken

ma abaŋ boma ʔanauŋ ʔiŋ veŋ ʔ-i-vi-vili
moving village old.man that.group.of.them 3p.pl at 3p-pl-INTENS-sway
The dog was alive; it stood up wagging its tail at the assembled old men of the village.[6]

(14) *harapaŋ ʔaŋa ʔ-oboi-t ho ʔa piŋ mi-t*
javelin this THE.entity-return-AIM/MANNER come we(incl) in-AIM/MANNER

t-oboʔa ʔanaŋa ibat mi-ʔosiŋ
our(incl)-body all.over.this wound completely
This javelin came back at me, covering my body here all over with wounds.[7]

(15) *na tait ʔ-aɓat ʔanauŋ ʔ-e urak ele*
I.SUBJ start 3p.POSS-wing all.over.that 3p-sg.POSS
attire big

ɓarai-t ɓia
pluck.AIM/MANNER throw.away
I started to pluck the quill-feathers from all over its wings.

The most frequently used form of this series in the texts is *(ʔa)nauŋ;* its use in all the above sentences is anaphoric: in (11), (12), (13) and (15) the chickens, the things, the old men and the wings had already been talked about in the preceding contexts. All the above sentences are examples of attributive use of *ʔanaŋa* etc. Another one is:

(16) *ʔiŋ ʔanaŋdo mida*[8]
they those.up.there.in.a.group go.up
They up there in a group went up.

This construction is opposed to (17) and (18) in which *ʔanaŋdo* has another syntactic position:

(17) *ʔanaŋdo ʔini mida*
Up there in a group they went up I think.

(18) *ʔini mida ʔanaŋdo*
They went up up there is a group.

First of all (17) adds an element of uncertainty and (18) one of warning. In these respects there is a clear parallelism with the *ʔaŋa* series (see 4.7.2 below). Though *ʔanaŋdo* in (17) and (18) is not used attributively, it is semantically connected with the subject (a third person singular pronoun *ʔana* instead of *ʔini* would be impossible in these contexts). The necessary interpretation of *ʔanaŋdo* in (16)-(18) is therefore 'as a collection of individuals up there, each in his own way'. However, when *ʔanaŋa* etc. is followed by *mi* 'in' and when it is not used attributively to a preceding noun phrase, the 'area' interpretation is the only possibility:

(19) *ʔini mida ʔanaŋdo mi*
They went up to a place somewhere up there.

(Here *ʔana* '(s)he' instead of *ʔini* would have been perfectly grammatical.)

Parallel to what we saw in the case of *ʔalaŋ* etc., the demonstrative morph may be reduplicated: *ʔaʔanaŋa, poʔanaŋpo* etc.

4.4 THE E COLUMN

The *ʔaʔe* series form a separate paradigm as they cannot be analysed as a combination of the *ʔa* series with the third person singular possessive pronoun *ʔe*,

1. for phonemic reasons: *ʔe* 'his, her, its' is opposed to *e* 'your (sg)', and its glottal stop never drops, whereas *ʔaʔe* etc. more often than not is pronounced [ʔae] etc.;

2. for semantic reasons: the semantic and syntactic differences between the *ʔa* and *ʔaʔe* paradigms cannot be explained by any conceivable semantic contribution of a 'possessive pronominal' nature.

4.4.1

First of all, the forms of the *ʔaʔe* series may be the verbal head of a predicate. In that case they can be translated as 'to be here' etc. They are semantically unmarked as to the feature visibility by THE hearer, i.e. only in marked usage does 'invisibility to THE hearer' become part of their meaning (see also 4.4.3 and 4.6.1 below).

(20) *ʔ-e tama ʔaŋu ʔ-eɓele, ab ʔaŋu ʔ-e na jasi*
3p-sg.POSS tasty that THE.entity-because.of fish that 3p-sg.POSS thing bad

ʔuʔe di niŋ kudi na heʔi
be.there also we(excl) must eat first
Because of its tastiness, we must eat that fish first, although parts of it are poisonous.

(21) *tura tura ɓil nu doʔe ʔ-ene ʔuhuŋbi*
in.earlier.times in.earlier.times place one be.up.there 3p.POSS-name Uhungbi
Long ago there was a place up there with the name Uhungbi.

(22) *ʔ-e jaŋu ʔ-eŋ uriŋ se haŋi kekar ele*
3p-sg.POSS female 3p.POSS-eye direct when, chicken male(of birds) big

nu ʔuʔe niaŋ
one be.there not
When his wife looked, (she saw) the one big cock was not there.

(23) *al iva ʔ-ar mi e, dumiŋ ele nu ʔuʔe,*
your(sg).penis your(sg).mother 3p.POSS-vagina in EXCL snake big one be.there

te parta-t ʔuʔe
tree bind-AIM/MANNER be.there
Good Heavens, a big snake was there, coiled around a tree it was there.

4.2.2

The most frequent use of the demonstratives of the *ʔaʔe* series is as auxiliaries. As such, they always follow the subject, whether the word order is SOV or OSV; they precede the verbal head of the predicate (and the object if the word order is SOV). Their function is not only to localise the referent of the rest of the (part of the) predicate to which they belong, but also to express that that event is of some duration, and not explicitly visible to THE hearer; that is they are again semantically unmarked as to visibility to THE hearer (see also 4.6.1).

(24) *eneaŋ-eneaŋ ʔana ʔuʔe ʔ-everi hele se, ʔa biŋdaʔali ele*
all.at.once 3p.sg.SUBJ be.there 3p.POSS-ear hang when EXCL elephant big

nu lamal ʔuʔe ma ʔuʔe
one walk be.there come (level) be.there
All at once, when it pricked up its ears: ah, there came a big elephant walking along and it was there (close already).

(25) *ʔana jeduŋ poʔe ab ʔoda sehi*
3p.sg.SUBJ still be.down.there fish catch during.THE.period
He was still busy catching fish down there.

(26) *ʔaŋa se ni botaŋ hoʔa e, ʔaʔe*
this when we(excl)SUBJ again come
only.then.is.it.possible be.here

abanaŋ esenaŋ
worship.thee venerate.thee
Now we have come again in order to be here to worship you and to venerate you.

(27) *ʔauŋ mi var nu ʔuʔe mihi, ʔ-ene hal ʔ-eŋ*
that in stone one be.there sit 3p.POSS-name kettle.drum 3p.POSS-eye
In that place there was a stone lying there, its name was kettle-drum eye.

4.4.3

In the vast majority of instances a form of the *ʔaʔe* series is followed by a specification of the place (bold in the examples), either as final part of the predicate((28),(30)) or not ((29),(31),(32)).

(28) *vaʔal jaŋu kiki ba nu doʔe* ***te taŋ***
child female small EMPH one be.up.there tree on
It was a little girl that was up there in the tree.

(29) *ʔoda edeŋ he boma pastor ʔauŋ moʔe* ***via-era mi***
hour how.many only.then old.man priest that be.over.there (level) courtyard in

mihi-t ʔ-e buku ʔauŋ basa
sit-AIM/MANNER 3p-sg.POSS book that read
At what time is that Father Priest there in his courtyard reading that book of his?

(30) *ʔila hemeriŋ ki-kiri harara poʔe* ***sina hava mi*** *ʔauŋ* ***ɓeli***
go knife INTENS-little flat be.down.there Chinese house in that buy
Go and buy one of those tiny flat knives that they have down there in the Chinese shop.

(31) *roŋpo era nu ʔuʔe* ***ʔauŋ mi*** *tahi*
guava stem one be.there that in stand
A guava tree was standing there in that place.

(32) *ʔ-e ihi ʔauŋ ba-t pres pras ʔeniŋ,*
3p-sg.POSS fruit that fall-AIM/MANNER thudding.sound thudding.sound make

poʔe ***meke veŋ*** *ba*
be.down.there soil against fall
Those fruits of it fell with thudding noises, down there they fell against the soil.

If it is a verb of movement that is preceded by a form of the *ʔaʔe* series which is followed by a specification of place, this whole preceding construction indicates that the movement in question is related to being at the indicated place for some period. The interpretation may range from source to goal/destination. (The relevant forms are bolded.)

(33) *na* ***poʔe*** *makasar por taŋ hoʔa*
I be.down.there Macassar (is) land on come
I came from down there from Macassar.
(The story continues with what happened to the speaker after his return from Macassar to Alor.)

(34) *ʔana ʔ-oʔal ʔ-ot ʔila poʔe umuŋ hava mi;*
3p.sg.SUBJ 3p.POSS-child THE.entity-order go be.down.there meat house in

ʔ-oʔal ʔauŋ di ***poʔe*** *umuŋ hava mi ʔila*
3p.POSS-child that also be.down.there meat house in go
He ordered his child to go down there into the slaughter-house; and his child did go down there to the slaughter-house.

4.4.4

Forms of the *ʔaʔe* series may also occur immediately after verbs of 'coming' and 'going'.[9] (24) is an example of the use of a form of this series after a verb of movement without a further specification of place. Usually, however, such a specification follows in these cases, cf. (34) and (35)-(43). The idea conveyed is that of a movement resulting in a more static activity at the place indicated; 'until' often seems to be an appropriate translation. The static activity mentioned may moreover be made explicit by a regular verb (cf. (37)).

(35) *ʔana mida doʔe ʔ-ajala ʔ-abuŋ se, ʔ-e*
3p.sg.SUBJ go.up be.up.there 3p.POSS-top THE.entity-near when 3p-sg.POSS

ʔ-ataŋ edeŋ ʔaŋu ʔ-e ihi ʔuʔe bala
3p.POSS-branch how-many that 3p-sg.POSS fruit be.there abundant
When she had gone up right near to the top (she saw:) so many branches as there were, they were full of fruits.
(Note the change of perspective in this sentence – from *doʔe* to *ʔuʔe*.)

(36) *ʔaŋ di va moʔe ʔ-e via-era mi*
3p.sg also go (level) be.over.there (level) 3p-sg.POSS courtyard in
She too went over to his courtyard there.

(37) *taŋ da ʔaʔe ʔ-uaŋ era veŋ va*
sea.water come.up be.here 3p.POSS-chest base against go.level
The flood came up until it reached his midriff here.

(38) *ʔana ba-t hera poʔe joʔu ʔ-omi mi*
3p.sg.SUBJ fall-AIM/MANNER descent be.down.there hole 3p.POSS-inside in
He fell down right to the bottom of the hole.

(39) *ʔana ma ʔuʔe joʔu taŋ*
3p.sg.SUBJ come.level be.there hole on
He came there up to the edge of the hole.

(40) *ʔana ʔ-oʔal giriaŋ ʔaiŋ gahiŋ ʔ-ot*
3p.sg.SUBJ 3p.POSS-child raise 3p.sg send.on.an.errand THE.entity-order
ʔila poʔe umuŋ hava mi umuŋ ɓeli
go be.down.there meat house in meat buy
He sent his adopted child to go down to the slaughter-house to buy meat there.

4.4.5

A similar specification of place can be found with subjectless forms of the *ʔaʔe* series, which are used to set the scene at the beginning of a story:

(41) *poʔe makasar por taŋ na ʔapo mi ʔila*
be.down.there Macassar (is)land on I.SUBJ that.down.there in go
karajaŋ arapiŋ
work seek
It happened down there in Macassar, I went down there to look for work.

(42) *tura tura poʔe makasar mi*
in.earlier.times in.earlier.times be.down.there Macassar in
Long ago it happened down there in Macassar.

The following is an example of such a subjectless form of the *ʔaʔe* series without a further specification of place:

(43) *tura tura por jeduŋ kua mi se, doʔe ni*
in.earlier.times in.earlier.times (is)land still dark in when be.up.there our(excl)
abaŋ dol-abaŋ ne uru ved ʔauŋ ʔahi
village bamboo.grove-village human.being moon sun that feed
Long ago, when the island was still in darkness [i.e. when the inhabitants had not been converted yet to any of the world religions], it happened up there that the people of our village Dolabang gave food offerings to the Moon-Sun.

4.4.6

The interpretations of *poʔe* and *doʔe* in the last three examples as 'it happened down there', 'it happened up there' are similar for another syntactic position of the forms of this series, viz. after the 'emphatic' particle *ba* preceded by a predicate. Apart from something like 'that seems to be what is happening there' the construction expresses indignation and/or amazement.

(44) *ne ho?a pi na ta?avi ba ?u?e ee piŋ*
human.being come our(incl) thing steal EMPH be.there whereas we(incl)

kalu-hula ne na ?-at ho?a piŋ ?-abuŋ mea
have.the.idea human.being thing THE.entity-with come we(incl) THE.entity-near put
It looks like somebody has come and stolen our things! And **we** thought that they had **brought** things to store them with us.

(45) *?ana ?-eŋ uriŋ ?alaŋ mida se, va?al jaŋu kiki*
3p.sg.SUBJ 3p.POSS-eye direct like.this go.up when child female little

?ado deko ?-omi mi ta niaŋ,
that.up.there trousers 3p.POSS-inside in wear.below.the.waist not

?ana ?-e-dula ba do?e
3p.sg.SUBJ 3p.-sp-smooth EMPH be.up.there
When he looked up like this, [he saw that] the little girl up there was not wearing underpants, she seemed to be naked up there!

A final example might be the case of sexual impotence, described by the victim like this:

(46) *pi hula karajaŋ ba ?a?e, aruŋ-e na ?aŋa imina*
we(incl).SUBJ want work EMPH be.here but thing this dead
I want to work, that's what I want to do here, of course, but this thing is dead!

4.4.7

In contradistinction to the series of demonstratives discussed before, the *?a?e* series do not have a parallel series with reduplicated demonstrative morphs. As is the case with the other paradigms, the form of the second row, *?u?e*, is again unmarked: only in marked usage should it be interpreted as 'to be close to THE hearer' or a comparable syntactically conditioned interpretational variant; usually, however, it is nothing more than 'to be at THE place'. Notice (47), where *mo?e* 'be over there (level)' in the preceding context identifies the place to which *?u?e* can refer subsequently:

(47) *?ana mo?e ?-e via-era mi mihi-t*
3p.sg.SUBJ be.over.there (level) 3p-sg.POSS courtyard in sit-AIM/MANNER

?-e surat humulaŋ ?auŋ basa ba ?u?e
3p-sp.POSS letter holy that read EMPH be.there
There he was, over there in his courtyard, sitting and reading that holy script of his!

In all the above instances *?a?e* etc. have local reference. A few of the forms of this series may have temporal reference in some set expressions (see 4.7.10 below).

4.5 THE F COLUMN

The demonstratives of paradigm F consist of the 'naked' demonstrative morphs. They are used adverbially in different syntactic positions, with correspondingly different functions.

4.5.1

First of all they may connect a verb of 'going' or 'coming'[10] with a locative expression. In this position they are always stressed. Like forms of the *ʔaʔe* series (column E) in such a position they can often be translated 'up to here' etc. Unlike *ʔaʔe* etc., however, they do not indicate that the movement results in a more static activity at the place they refer to, nor can the (obligatory) locative expression be followed by a verb.

(48) *ʔana ururi-t hera po taŋ ivaŋ mi*
3p.sg.SUBJ dive-AIM/MANNER descend until.down.there sea bottom in
He dived down right to the sea bottom!

(49) *ʔana ʔ-at ʔ-e mehal ʔ-umuruŋ ʔila*
3p.sg.SUBJ THE.entity-with 3p-sg.POSS male THE.entity-follow go

do ɓil pusi mi
until.up.there place uncultivated in
She followed her husband with it right to [that place] up there in the jungle.

(50) *ʔana tiʔimaŋ tiʔimaŋ ʔauŋ mi te ɓenaŋ ʔoa-t mida*
3p.sg.SUBJ quietly quietly that in tree mentioned climb-AIM/MANNER go.up

mida mida ʔila do ʔ-ataŋ taŋ
go.up go.up go until.up.there 3p.POSS-branch on
Then she very quietly climbed the tree going higher and higher up there onto a branch.

4.5.2

Another use of the *ʔa* series parallels the auxiliary use of the *ʔaʔe* series, viz. they may be the non-final part of a predicate, following the subject and preceding the object if there is one and if the word order is SOV. The difference between the *ʔa* series and the *ʔaʔe* and *ʔaʔa* series (see 4.6.1) is that *ʔa* merely indicates the place of the activity or location, not necessarily duration or visibility. Besides that, the *ʔa* forms indicate certainty of THE speaker about the event referred to by the clause in which they occur; so that they can only be used in declarative sentences. The *ʔaʔe* series on the contrary can also be used in questions and (some) imperatives. Finally, forms of the 'preverbal' *ʔa* series cannot be combined with a predicate which is specified by a temporal deictic referring to a period one or more days before or after THE orientation period; in other words, *meleŋ ʔana ʔaʔe tia* 'yesterday (s)he slept/was sleeping here' is grammatical, **meleŋ ʔana ʔa tia* is not.

(51) *boma ʔu te hiba petuŋ medi*
old.man there tree cut.down kind.of.bamboo take
The old man cut wood there and gathered bamboo.

(52) *iva imaŋ ʔ-e have ʔaŋu po ʔola*
your(sg).mother your(sg).father 3p-sg.POSS house that down.there far
The house of your father and mother is far down there.

(53) *ʔana na liʔaŋ ʔ-e ʔ-eŋ di medi utaŋ*
3p.sg.SUBJ thing cook 3p.-sg.POSS 3p.POSS-eye also take vegetables

ʔ-e ʔ-eŋ di medi, mo ab ʔ-eŋ di medi
3p-sg.POSS 3p.POSS-eye also take yonder (level) fish 3p.POSS-eye also take
He took a portion of cooked rice, he took a portion of vegetables and he took there the portion of fish as well.

4.5.3

In most cases, as with the *ʔaʔe* series, the forms of the *ʔa* series are followed by locative expressions:

(54) *haŋi ʔ-e urak ele ʔaŋu ʔana met ma*
chicken 3p-sg.POSS attire big that 3p.sg.SUBJ having.taken moving

po je alap ʔapo veŋ hele
down.there prow stern that.down.there at hang
The big quill-feathers of the chicken, he hung them down there at the stern of the prow down there.

(55) *ʔ-e mehal do ɓil pusi mi ʔila*
3p-sg.POSS male up.there place uncultivated in go
Her husband went up there into the jungle.

In all positions in which forms of the *ʔa* series are followed by such a locative expression the demonstrative may be realised by a lengthened vowel in order to suggest comparative closeness or distance. I do not consider this length phonemic; there seems to be no discrete difference between a long [po:] and a short [po] etc. Yet it is possible that a formal opposition must be assumed. Compare (56) and (57), where – obligatorily stressed and lengthened – *po* and *do* are used to express distance, thus compensating for the fact that *poʔe* etc. cannot be so used. See also section 4.9, point 4.

(56) *ne ʔemangpi motoaŋ ʔila doʔe do* [do:] *uru ved*
human.being all gather go be.up.there far.up.there moon sun

ʔ-e mana ʔado mi
3p-sg.POSS place that.up.there in
All the people went all the way up there and gathered in the place up there of Moon-Sun.

(57) *ʔana lamal poʔe po* [po:] *ʔ-i hava*
3p.sg.SUBJ walk be.down.there far.down.there 3p-pl.POSS house

ʔ-omota mi ʔipa
3p.POSS-back in go.down
She went down walking far down there at the back of their house.

4.5.4

The *ʔa* series forms are also used after predicates. In that position they not only indicate the place (as always, given the spatial frame of reference) of the referent of the predicate, but also that THE

speaker has for some time had evidence that what is expressed by that predicate is indeed the case – evidence which is thought to be accessible to THE hearer. For that reason the clauses in which they occur must be either declarative or imperative. In the latter case THE hearer is thought to expect the order; *ʔa* etc. indicates the place of the referent of the verb and a notion of 'now you can do what you have been waiting for'.

Examples of declaratives:

(58) *o, hari ʔaŋu na liʔaŋ na niaŋ ʔa*
EXCL sea.spirit that thing cooked eat not here.for.sure
Oh, that sea spirit has not touched the rice here apparently.
(Monologue of a man who had prepared an offer of rice to the sea spirit.)

(59) *ʔaʔ, na ʔaŋu na jasi ba ʔuʔe ʔu*
EXCL thing that thing bad EMPH be.there there.for.sure
Ah, that thing, it is poison that is there you know. [i.e. How can you possibly eat it?]
(Said to someone who is about to cook a deadly poisonous toad-fish.)

(60) *ʔ-e jaŋu ʔ-e-dula-t tia po*
3p-sg.POSS female 3p-sg-smooth-AIM/MANNER sleep down.there.as.you.know
his wife was sleeping naked down there as you know
(The hearer had been informed by the speaker of the woman's plan to surprise her husband; see (3) and (87).)

The forms of the *ʔa* series may also be cliticised after noun phrases which can be said to have a predicate function: *hava mo* [hav'a mo] 'it's a house there all right' is an appropriate answer to a question such as *ʔamo hava e naba?* 'is that over there a house or what?', but not to a question like *hava ʔamo?* 'that house over there?'. Note also the following dialogue: A. *ʔado boma gomaŋ* 'the one up there is Mr Gomang', B. *niaŋ* 'No it isn't!' A. *ʔaiŋ do* 'It's him all right!'.

The clauses 'ending' in a form of the *ʔa* series may be turned into subordinate clauses by the addition of a connective particle such as *se* (see T10).

(61) *ʔamau ʔauŋ bau ba mod batar ʔemaŋpi ʔuʔe ʔu se,*
cat that cry therefore rice maize all be.there there.for.sure when
ʔ-e ɓasi ʔosiŋ mamauŋ
3p-sg.POSS chaff empty nothing.but
When the cat miaowed, so that rice and maize and everything appeared, it was nothing but empty chaff.

Within a sentence, a noun phrase may end in a form of the *ʔa* series preceded by what must be considered the predicate of a relative clause.

(62) *ʔana na tama ʔu ba na*
3p.sg.SUBJ thing tasty that-certainly EMPH eat
What he ate was the thing that you and I know to be tasty. [i.e. he enjoyed his wife]

(63) *ʔana ʔ-ataŋ horuk met ma ʔ-e koŋdo*
3p.sg.SUBJ 3p.POSS-arm put.into having.taken moving 3p-sg.POSS shirt

evenin ele ʔu ʔ-e kedevak mi hera
long big that.certainly 3p-sg.POSS pocket in descend
He put his hand down into the pocket of his robe, which as you and I know was long and large.
(The subject of this sentence is a priest.)

4.5.5

Examples (62) and (63) show again the unmarked character of the forms of the second row: *ʔu* does not have local reference, but refers to what has become part of THE hearer's world of experience. This same *ʔu* is very frequent after the words *ɓenaŋ* and *vala*. *ɓenaŋ* may be morphologically related to the sentence-final tag *ɓe*, at least historically (cf. Steinhauer 1977, footnotes 8 and 9). *ɓenaŋ* and *vala* indicate that THE speaker supposes THE hearer to have knowledge of the existence of the referent of the noun or clause preceding them, *ɓenaŋ* by indirect and *vala* by direct perception. As *vala* is becoming obsolete in Dolap, this difference is no longer preserved.

(64) *venedaŋ tue na n-oʔal ʔ-at mida ɓenaŋ*
number.of.days.ago three I my-child THE.entity-with go.up mentioned

ʔu, kancil[11] *ʔ-ot ʔaiŋ ajar ɓenaŋ ʔu,*
as.you.know mousedeer THE.entity-order 3p.sg teach mentioned as.you.know

kancil ʔaŋa ia-t na-t ʔila ee
mousedeer this roast-AIM/MANNER eat-LIG already EXCL
Three days ago I went up with my child as you know, and ordered mousedeer to teach him as you know, and blow me down if this mousedeer did not roast and eat him!

(65) *ni na na, ab ʔ-e jar vala ʔu maks*
we(excl) thing eat fish 3p-sg.POSS water observed as.you.know Max

ʔana ʔ-e-tura-t hu
3p.sg.SUBJ 3p-sg-before-AIM/MANNER ladle
We ate, and the broth of the fish in question you know, Max was the first one to ladle it out.

(66) *uru ved ʔauŋ ʔahi ʔ-e boma ɓenaŋ ʔu ʔana*
moon sun that feed 3p-sg.POSS old.man mentioned as.you.know 3p.sg.SUBJ

ʔaŋa se uru ved ʔauŋ ʔ-a-tutuk
this when moon sun that 3p-to-speak
The aforesaid leader of the offering ceremony for Moon-Sun now spoke to that Moon-Sun.

4.5.6

Finally *po, mo* and *do* may have specific temporal reference when they are cliticised to the demonstrative adverbs of time, *tobaŋ* 'the next day, tomorrow', *meleŋ* 'the previous day, yesterday': *tobaŋ do* [tob'aŋ do] 1. 'tomorrow up there for sure' (e.g. in answer to a question like 'Is the party up there tomorrow!'), 2. 'one of the next days' (also *tobaŋ mo*); *meleŋ po* 1. 'yesterday down there for sure', 2. 'one of the previous days' (also *meleŋ mo*[12]).

4.6 THE G COLUMN

4.6.1

The forms of the *ʔaʔa* series parallel *ʔaʔe* etc. in three syntactic positions.

First of all they may be the predicates of clauses meaning 'to be here/there etc., visible to THE speaker at the moment of speaking'. In contradistinction to the forms of the *ʔaʔe* series they can only be used – because of that meaning – in declarative clauses; besides, they cannot refer to a period other than the one which is characterised by the speaking of THE speaker (i.e. **tobaŋ ʔana dodo* is impossible). Being the main verbs, they cannot be followed by *niaŋ* 'not', which would deny their visibility aspects, the entailed 'being there'.

Like the *ʔaʔe* series, however, they can be combined with aspect markers (see Steinhauer 1977:43), e.g. *ʔana dodo-t ʔila* '(s)he is already up there visible to THE speaker'.

Secondly, they may be used as auxiliaries, just like the forms of the *ʔaʔe* and *ʔa* paradigms, with the following correspondences and differences: *ʔaʔa* etc. indicate again the place of the event referred to by the predicates in which they occur. Together with *ʔaʔe* etc. they indicate that that event is of some duration (the forms of the *ʔa* series do not). Together with the *ʔa* series they indicate sure knowledge by THE speaker about the existence of the event, because of which they are used only in declarative clauses (the *ʔaʔe* series are neutral in this respect). While the forms of the *ʔaʔe* series do not confine the event to any specific period, the *ʔa* series do (viz. to THE period of orientation); the *ʔaʔa* series are even more specific: the event coincides with THE speech moment, while it is visible to THE speaker.

The third syntactic position in which the *ʔaʔa* series occur is after the verbs of 'going' and 'coming'. In this position their forms are in direct opposition with those of the *ʔaʔe* series, along the same lines as described above. (Note that the *ʔa* series behave differently in this position.)

(67) *ʔana ʔila momo (te ivaŋ mi (mihi))*
3p.sg.SUBJ go be.visibly.over.there (level) tree bottom in sit
he/she went over there where I see him/her now (under the tree (sitting))

moʔe instead of *momo* in (67) would result in a translation 'he/she went there and stayed there (under the tree (sitting))'.[13]

Other usages of the *ʔaʔe* series are not parallelled by *ʔaʔa* etc.

4.6.2

Lengthening of any of the vowels of *popo, momo* or *dodo* to suggest distance does not occur. I have no evidence of constructions such as (56) and (57) with *popo* etc. instead of *poʔe* etc., but

I assume that they are possible. In any case, combinations of forms of the *ʔaʔa* (and *ʔaʔe*) series with unstressed corresponding forms of the *ʔa* series are possible: *ʔana dodo (mihi) do* 'he is up there visible to me, (sitting), obvious for some time' and also (59). Such combinations seem to imply surprise or amazement on the part of THE speaker.

Finally, there is a reduplicated series parallel to the *ʔaʔa* series. They are used to emphasise place and visibility, for instance when THE hearer has failed to localise the referent of the non-reduplicated form. Note the following dialogue: A. *ʔana dodo* 'he is up there, I can see him', B. *taʔaŋ mi* 'where?', A. *dododo* [dod'odo] 'up **there**, look!'. Certainly in the case of *ʔuʔuʔu,* but most likely also in the case of *ʔuʔu* it is impossible to analyse the meaning as unmarked or anaphoric, *'to be at THE place, visible to THE speaker, (look!)'; what they indicate is indeed the visible place that is spatially near THE hearer.

4.7 THE H COLUMN

The forms of the *ʔaŋa* series have by far the highest text frequency of all Blagar demonstratives.

4.7.1

First of all they are used attributively in noun phrases, in which case they close such a phrase unless they are followed by *ɓenaŋ (ʔu)* or *vala (ʔu).* In the vast majority of instances *ʔauŋ* and *ʔaŋu* are used anaphorically and are semantically unmarked, that is their meaning will be just 'THE'. Examples of attributive use in (68)-(75) are bolded.

(68) *aiŋ hari* ***ʔaŋu,*** *ana naiŋ jaga naiŋ buaŋ, ʔulaŋ*
you(sg) sea.spirit that you(sg).SUBJ me guard me protect
like.that

ʔejehiŋ-ʔemeaŋ, ne olaŋ di ʔ-ot a ʔuŋ ne
for.ever.and.a.day my search.for.a.living also THE.entity-order good my

lamal tahi ***ʔaŋa*** *di ʔ-ot aʔuŋ*
walk stand this also THE.entity-order good
You, spirit of the sea there, you guard me and protect me, and that for ever and a day, you order my search for a living to be successful, you order whatever I do to be successful also.
(Note the opposed worlds in this prayer to the sea spirit: *aiŋ hari* ***ʔaŋu*** versus *ne lamal tahi* ***ʔaŋa.***)

(69) *ʔana na liʔaŋ* ***ʔauŋ*** *met ma taŋ* ***ʔapo*** *mi*
3p.sg.SUBJ thing cooked that having.taken moving sea that.down.there in

ʔoda-t ʔipa
throw-AIM/MANNER go.down
He threw that cooked rice down into the sea down there.

(70) *vaʔal jaŋu kiki* ***ʔaŋa*** *ʔana tait ʔauŋ mi ʔ-ataŋ horuk*
child female little this 3p.sg.SUBJ start that in 3p.POSS-arm stretch

ʔ-e ihi ***ʔauŋ*** *ʔ-e iɓa ia-t medi*
3p-sg.POSS fruit that 3p-sg.POSS some pick-AIM/MANNER take
This little girl started there to stretch her arm to pick and take some of those fruits of it.

(71) *boma pastor ʔana ʔ-eŋ uriŋ ʔalaŋ mida se vaʔal*
old.man priest 3p.sg.SUBJ 3p.POSS-eye direct like.this go.up when child

jaŋu kiki ***ʔado*** *deko ʔ-omi mi ta niaŋ*
female little that.up.there trousers 3p.POSS-inside in wear.below.the.waist not
Father priest, he looked up like this (and saw that) the little girl up there was not wearing underpants.

The last two sentences, which are from the same story, are a good example of the constant change of perspective that is so typical of Blagar utterances: from *ʔaŋa* for the girl to *ʔalaŋ* for the priest and *ʔado* for the girl again, but this time seen through the eyes of the priest.

4.7.2

The demonstratives of the *ʔaŋa* series are often found as the final part of noun phrases which for the rest consist of a (pro)noun and a (relative) clause.

(72) *na tutuk* ***ʔaŋa*** *n-ene bui-veni*
I speak this my-name Buiveni
I who am speaking here, my name is Buiveni.

(73) *roŋpo moʔe tahi* ***ʔamo*** *na ʔoa-t*
guava.tree be.over.there (level) stand that.over.there (level) I climb-AIM/MANNER

ʔ-e ihi na sehi
3p-sg.POSS fruit eat during.THE.period
I was busy eating the fruits of the guava tree that was there, standing.

(74) *vaʔal kiki vede doʔe te taŋ tahi* ***ʔaŋu*** *ʔ-e-dula,*
child little just.now be.up.there tree on stand that 3p-sg-smooth

deko ta niaŋ
trousers wear.below.the.waist not
The little child that had been standing up there in the tree was naked, she was not wearing pants.

(75) *ʔaiŋ hera niaŋ, ne ebeuŋ ba hera; ne ebeuŋ*
3p.sg descend not human.being other EMPH descend human.being other

hera ***ʔaŋa*** *leki di nu ʔ-iŋ ʔ-at hera*
descend this monkey also one 3p-pl THE.entity-with descend
He did not descend, it was other people; among these other people that descended, also one monkey descended.

4.7.3

Forms of the series discussed here, especially *ʔaŋu* and *ʔauŋ*, may be used to nominalise clauses.

(76) *ʔana ʔauŋ mi mihi ʔaŋu ved kanak*
3p.sg.SUBJ that in sit that day each
That he was sitting there happened each day.

(77) *ni jeduŋ ʔaʔe ia ivaŋ ataŋ ivaŋ;*
we(excl) still be.here your.(sg).foot bottom your.(sg).hand bottom

ni ʔaʔe ia ivaŋ ataŋ ivaŋ ʔaŋu
we(excl) be.here your.(sg).foot bottom your.(sg).hand bottom that

ʔ-eɓele, ni botaŋ hoʔa abanaŋ esenaŋ
THE.entity-because.of we(excl) again come worship.thee venerate.thee
We are still here under thy feet and hands [i.e. under thy protection]; because of the fact that we are under thy feet and hands, we have come again to worship and venerate thee. (from a prayer to Moon-Sun)

Without the nominalising *ʔaŋu* (or its equivalent *ʔauŋ*) example (76) would be ungrammatical: *ved kanak* can only be interpreted as a predicate in a clausal context [Nominal –], whereas otherwise it could only be an adverbial and as such it would have to precede the predicate (either immediately before or after the subject). The same ungrammaticality would arise for (77): *ʔeɓele* only occurs in a context [Nominal –]. Apparently it holds that the clauses embedded in (76) and (77) can be so in the given contexts only because of the presence of the demonstrative.

4.7.4

Often demonstratives of this series (again most regularly *ʔaŋu* or *ʔauŋ*) conclude clauses, which only in an ad-hoc way can be called nominalised, and which are a summary of a preceding more 'foregrounded' message, functioning as the background for the information given by the rest of the sentence of which they are the initial part.

(78) *ʔana hari ʔahi* ***ʔaŋu,*** *ʔana mod ʔaŋu ʔ-e jaŋu*
3p.sg.SUBJ sea.spirit feed that, 3p.sg.SUBJ rice that 3p-sg.POSS female

ʔ-ot kua kua veŋ se tapa-t seŋ
THE.entity-order dark at when pound-indirectly.observed finish
Whenever he offered food to the sea spirit like that, he ordered his wife to pound that rice fine early in the morning.
(hari ʔahi is the topic of the story this sentence is taken from.*)*

(79) *ʔana na liʔaŋ ɓenaŋ na-t hera mi*
3p.sg.SUBJ thing cooked mentioned eat-AIM/MANNER descend approximately

hama-hama se as minisa! as minisa ***ʔaŋa,*** *ʔana hu*
in.the.middle when turd smell turd smell this 3p.sg.SUBJ spoon

met ma bakuŋ da ɓenaŋ se – iva
having.taken moving rise come.up as.can.be.expected when your(sg).mother

ole moka! – na liʔaŋ ʔ-e ebeuŋ ʔaŋa as ba iviiŋ
both.of.you fuck thing cooked 3p-sg.POSS other this turd EMPH full
He had eaten the rice approximately half way down, when he smelled shit! Smelling shit as he did, he lifted his spoon and then – damn it! – this rest of the rice was full of shit!

(80) *'pi ʔaŋa ba mi mihi'; ʔini ʔaŋu mi mihi* ***ʔaŋu,*** *ʔ-i*
we(incl).SUBJ this EMPH in live 3p.pl.SUBJ that in
live that 3p-pl.POSS

na liʔaŋ ba umuŋ
thing cooked EMPH meat
'Let this be the place for us to live'; and while they lived there, it was meat that was their food.

Such 'nominalised' clauses can also be connected to a following main clause by one of the clitics/sequences of clitics, mentioned in 4.1.1; look at (81).

(81) *ana taʔaŋ mi hoʔa niŋ veŋ jara, niŋ ʔ-at hula*
you(sg).SUBJ which in come we(excl) at shine we(excl) THE.entity-with want

ʔila ʔauŋ he, ni ʔila
go that only.then we(excl).SUBJ go
Only when you want to go with us from whatever place you have come to shine upon us, do we go.
(from a prayer to Moon-Sun)

4.7.5

As is shown by many of the examples given so far, the forms of the *ʔaŋa* series are not only used attributively as part of a nominal(ised) construction or of a backgrounding construction, but they may also occur as nominal constructions themselves. The entity/state of affairs which is referred to can be inferred by THE hearer from context and situation. The forms in question are bolded in the next few examples.

(82) ***ʔauŋ*** *ab jasi*
that is a bad [i.e. poisonous] fish

(83) *kotok lelaŋ ʔaŋu ʔ-e ʔ-umuruŋ* ***ʔaŋa:*** *oaŋ*
skull dancing.place that 3p-sg.POSS THE.entity-follow this pond

ʔ-omi nu ʔuʔe ʔauŋ mi tediŋ
3p.POSS-inside one be.there that in lie
What is next to that dancing place for head-hunting ceremonies is this: a pond lies there.
(Mark the cataphoric *ʔaŋa* in this example.)

(84) a. *naiŋ ʔaŋa oʔal, aruŋ-e na taʔaŋ mi hoʔa*
I this your(sg.).child but I.SUBJ which in come
I here am your child, but where did I come from?

(84) b. *aiŋ ʔaŋa* ***ʔaŋa*** *mi hoʔa*
you(sg) this this in come
You here came from here.

(Note alongside *ʔaŋa mi* the use of *ʔaŋa* after the stressed forms of the first and second person singular pronoun (cf. T19). *naiŋ ʔaŋa* underlines the difference and distance between speaker and hearer, *aiŋ ʔaŋa* on the other hand is a 'verbal embracement'.)

(85) *ʔauŋ mu se ʔ-i-naŋ taliŋ* ***ʔauŋ*** *mi tait ʔoto ʔauŋ taŋ ʔila*
that only when 3p-pl-total.number six that in start car that on go

poʔe sina hava era ʔauŋ mi
be.down.there Chinese house base that in
Immediately after that the six of them went ahead from there in that car down to the yard of the shop.

(86) ***ʔaŋa*** *ba na veŋ nevera ba, na veŋ pelela-t hoʔa*
this EMPH I about glad therefore I because smile-AIM/MANNER come
This is what I am happy about, so I have come home smiling because of it.

(87) ***ʔaŋa*** *se ʔana ʔipa ʔ-e hava mi ʔ-e-dula-t*
this when 3p.sg.SUBJ go-down 3p-sg.POSS house in 3p-sg-smooth-AIM/MANNER

tia
sleep
Now she goes down to her house to lie down naked.

aa, memet poʔe tia, ***ʔaŋa*** *se pi botaŋ*
EXCL old.woman be.down.there lie.down this when we(incl).SUBJ again

boma ɓenaŋ veŋ tutuk
old.man mentioned about speak
So, the woman is lying down there, now let us talk again about the man.

(88) *ʔemaŋpi ʔila uru ved ʔ-e var era mi* ***ʔado*** *mi taiŋ*
all go moon sun 3p-sg.POSS stone base in that.up.there in each.other

veŋ kodoru
with gather
All went to the altar of Moon-Sun to assemble up there.

4.7.6

Forms of the *ʔaŋa* series at the beginning of a sentence – without a following clitic and without being the subject or the object – may be coreferential with the subject of that sentence, adding a notion of uncertainty on the part of THE speaker about the truth of the referent of the predicate of that sentence (cf. (17), but also T26):

(89) *ʔado ʔana tia*
the one up there, he is (I think) sleeping

4.7.7

The forms of the *ʔaŋa* series may also immediately follow a predicate at the end of a sentence. The function of such constructions is to emphasise the fact of the event referred to by the clause which immediately precedes the demonstrative, at the same time indicating its location. The effect is that in a question the amazement of the speaker is expressed ('how could it be that...' and the like); in a declarative construction the message conveys a warning often mixed with amazement about the event being the case or having happened.

(90) *aiŋ ʔauŋ naba veŋ nevera ba pelela ʔaŋa?*
you(sg) that what about glad therefore smile this
You there, what are you so glad about that you are smiling like this?

(91) *ʔaŋa ba pi ʔeteʔiŋ niaŋ ʔaŋa*
this EMPH we(incl).SUBJ know not this
This is what we do not know!

(92) *goŋ ele ʔu hili ʔauŋ*
gong big there hang that
There hangs the big gong [how can you miss it]!

(93) *aiŋ kiki ʔaŋa vede-ʔaŋa ana pe-pelela sehi ʔaŋa*
you(sg) little this today you(sg).SUBJ INTENS-smile during.THE.period this
You little one, today you are smiling all the time! [Why is that?]

Again *ʔaŋa* functions as a 'verbal embracement' (cf. (84) and the opposite of an 'embracement' in (90)).

In the same position *ʔaŋa* etc. may have their nominalising function:

(94) *ʔana hula do mihi ʔado*
3p.sg.SUBJ want up.there sit that.up.there
He wants that one that is sitting up there.

When *ʔaŋa* etc. after a predicate is further followed by a sentence-final particle *se* THE speaker expresses regret about the event referred to by the preceding construction:

(95) *na hula tia ʔaŋa se*
I.SUBJ want sleep this unfortunately
I am sorry but I have to sleep now.

4.7.8

The forms of the *ʔaŋa* series also occur clause finally after a predicate, but separated from the predicate by the particle *ba*.[14]

Their function is to emphasise that the referent of the preceding clause is the case and at the same time to indicate the location, which is more often than not 'psychological' rather than spatial. The difference with the plain *ʔaŋa* series after a predicate (when they do not have their nominalising function) is that the latter draw the attention of THE hearer to the state of affairs expressed by the clause which is modified by *ʔaŋa* etc., a state of affairs which was not, or was insufficiently, recognised by that hearer; the *ba ʔaŋa* series on the other hand emphasises that the state of affairs referred to by the preceding clause is already known by THE hearer. A translation 'this is why...' is sometimes possible. In all instances, when this explanatory function is less clearly supported by the context, *ba ʔaŋa* etc. add a notion of 'as you see here' etc., which can be considered the general meaning.

(96) *tubar ʔana n-oto kokal veŋ pina* ***ba ʔaŋa***
crab 3p.sg.SUBJ my-penis ball at seize
A crab has got hold here of my balls as you see!

(97) *ʔaŋu ʔoma bata ba ʔuʔe, ʔaŋu ba vavar veŋ dumuŋ*
that probably wound EMPH be.there that therefore fly at swarm

ba ʔaŋu
That is a wound probably [the indications are there]; that is why flies are swarming around it as you see.

(98) *iŋ ʔaŋa nuba ba mod batar ʔ-at hoʔa met ma*
you(pl) this who EMPH rice maize THE.entity-with come having.taken moving

iŋ ʔ-enaŋ ***ba ʔaŋa***
you(pl) THE.entity-give
You here, who has brought and given you all this rice and maize?

(99) *ni ʔamau ʔaŋa ba, ʔana bau ba, ni mod batar*
our(excl) cat this EMPH 3p.sg.SUBJ cry therefore our(excl) rice maize

di veŋ ni hava di kalaar ***ba ʔauŋ***
also with our(excl) house also ready
Our [magic] cat here, it miaowed, so we had rice and maize and our house was finished also as you see!
(This sentence is the answer to (98).)

(100) *ʔaŋa nuba ba po ʔapo mi dari-t oraŋ*
this who EMPH down.there that.down.there in dance-AIM/MANNER sing.loudly

ba ʔaŋpo
This (noise), who is it who is down there doing all that dancing and singing that I can hear down there?

4.7.9

In the context of (100) it is impossible to decide whether *po* is a word with the function of an auxiliary (see 4.5.3 above), or the reduplicated demonstrative morph. Example (101) is a clear example of the latter.

(101) *ʔauŋ mu se ne do-ʔado di ʔaiŋ jaŋba;*
that just when human.being that.further.up.there in.his.turn 3p.sg kick

ʔaiŋ jaŋba-t ʔipa; ʔaŋ di po-ʔapo mi jaŋba,
3p.sg kick-AIM/MANNER go.down 3p.sg in.his.turn that.further.down in kick

do-ʔado taŋ jaŋba, va jaŋba ma jaŋba – oo,
that.further.up.there again kick go (level) kick come (level) kick EXCL

misigit mi nehe iɓa seŋbeyaŋ[15] *di ʔahala*
mosque in human.being any pray also unable
Immediately after that the one further up [i.e. in front] kicked him in turn, kicked him backwards; he in his turn kicked at the one further down [i.e. the one behind him], kicked again at the one in front, kicked left, kicked right – oh, in the mosque no one was able to pray any more.

The reduplicated forms imply a comparison as (101) clearly indicates. The exact nature of this comparison needs further investigation.

There is another meaning of the reduplicated and doubly reduplicated forms of the *ʔaŋa* series, which parallel the *ʔaʔa* series and their reduplicated forms: *ʔaʔaŋa* 'this one here, visible', and with more emphasis, when THE hearer has failed to localise the referent: *ʔaʔaʔaŋa* '**here, this** one, look!'.

These reduplicated forms cannot be used therefore with other than purely spatial reference. Note the following dialogue:

(102) A. *ʔana ʔado mi,* B. *taʔaŋ ba mi,* A. *do-ʔado mi,*
A. '(S)he is up there', B. 'Where?', A. 'Up **there**!',
B. *doʔe niaŋ do,* A. *do-do-ʔado mi*
B. '(S)he isn't, I don't see her/him', A. 'Up **there**, look!'

4.7.10

When *ʔaŋa* and *ʔaŋu/ʔauŋ* have temporal reference, their opposition is one of 'near period' versus '(more) distant period':

vede ʔaŋa	today; just now
vede ʔaŋu	a while ago[16] (see also note 2)
ʔaŋa se	now
ʔaŋu se	then

In some temporal expressions *ʔaŋa* is opposed to *ʔamo* as follows:

tobaŋ	tomorrow[17]
tobaŋ ʔaŋa	tonight, tomorrow (already close)
tobaŋ ʔamo	one day in the future
meleŋ	yesterday
meleŋ ʔaŋa	this (past) afternoon, yesterday just past
meleŋ ʔamo	one day in the past
tuŋ ʔ-e va ʔila	last year, the year gone *(tuŋ* 'year', *va* 'go (level)', *ʔila* 'already'; for the use of *ʔe* in a context such as this, cf. Steinhauer 1977:43*)*
tun ʔ-e va ʔila ʔaŋa	last year recently
tuŋ ʔ-e va ʔila ʔamo	in a/the past year
tun ʔ-e moʔe ma	the coming year, next year *(moʔe* 'be there (level)', *ma* 'come (level)'),
tuŋ ʔ-e moʔe ma ʔaŋa	next year (already close),
tuŋ ʔ-e moʔe ma ʔamo	in a/the coming year (still in the (rather) distant future)

4.8 THE I COLUMN

The *ʔaveŋ* series deviate from the paradigms discussed so far in the absence of a second row form, at least in the dialect described here. They imply a comparison of at least two locations in terms of level and of distance in relation to the same orientation point:

ʔaveŋ	on this side of THE orientation point (the comparison may be with *moveŋ, poveŋ* or *doveŋ*)
moveŋ	on the other side seen from THE orientation point, on the same level (the comparison is with *ʔaveŋ*)
poveŋ	on the lower side with respect to THE orientation point (comparison with *ʔaveŋ* or *doveŋ*)
doveŋ	on the higher side with respect to THE orientation point (comparison with *ʔaveŋ* or *poveŋ*)

When more than two levels are compared, reduplication and double reduplication of the demonstrative morph occur:

do-doveŋ	further away from THE orientation point on a higher level than *doveŋ*
ʔa-ʔa-ʔaveŋ	closer to THE orientation point than *ʔa-ʔaveŋ* etc.

The function of this reduplication and double reduplication is therefore different from that described for (double) reduplication in the other series of demonstratives, although there may be correspondences with the reduplicated forms of the *ʔaŋa* series (further research is necessary).

The orientation point may be referred to explicitly by a preceding possessive personal pronoun: *ʔ-e ʔaveŋ* 'for THE entity on the nearby side' versus *ʔ-e moveŋ* 'for THE entity on the other side (on the same level)' etc.

Another way of specifying the location intended is the addition of demonstratives of the *ʔaŋa* series:

moveŋ ʔaŋa	on the other side (seen from THE orientation point and at the same level, close to THE speaker)
moveŋ ʔaŋu	on the other side (seen from THE orientation point and at the same level, close to THE hearer) (the latter addition is relevant in marked usage only, e.g. when the form is opposed to *moveŋ ʔaŋa;* in unmarked usage it should be replaced by 'at THE place'
moveŋ ʔamo	on the other side (seen from THE orientation point and at the same level, close neither to THE hearer nor THE speaker)

(Combinations such as **moveŋ ʔapo* do not occur.)

For the sake of completeness I mention that the forms of this series are opposed to constructions such as *ʔamo veŋ* 'along/via/because of/about/against that, close neither to THE hearer nor THE speaker, on the same level as THE orientation point', while they cannot be analysed as combinations of a member of the *ʔa* series and the word *veŋ* (see T4).

Further research is necessary with regard to this series in a number of respects. There seems to be an overlap with forms such as *mida-ŋ ʔoa* 'on the side to which one has to go up from THE orientation point' (cf. Steinhauer 1977:41). In the second place there appears to be an overlap between constructions such as *ʔ-e moveŋ* and forms such as *ʔ-e-moʔa*[18] (*moʔa* etc. replace *moveŋ* etc. in the dialects of East Pura, but in Dolap the unprefixed forms do not exist).

Finally, the syntax of the series under discussion needs further investigation. The text frequency of the forms is low, so that I can only give two examples:

(103) *abaŋ moveŋ veŋ jehi met ma abaŋ ʔaveŋ*
village at.yonder.side (level) at put.down having.taken moving village at.this.side

veŋ jehi veŋ ʔini t-at miliɓar
at put.down with 3p.pl.SUBJ REC-with wage.war
The village on that side and the one on this side waged war with each other. (*A met ma B veŋ* is the usual expression for 'A with B together'.)

(104) *leki ʔana bapa ʔ-a-tutuk: 'seraŋ, ʔaŋu n-ia*
monkey 3p.sg.SUBJ crocodile THE.entity-to-speak friend that my-leg

niaŋ, n-ia ba moveŋ ʔaŋu'
not my-leg EMPH on.that.side (level) that.near.you
The monkey, he said to the crocodile, 'My friend, that is not my leg, my leg is at the other side there (close to you)'.

4.9

The above survey of Blagar demonstratives leaves many questions pertaining to them undiscussed. Some have been mentioned in passing. This is the place to mention some more.

1. My field notes contain a form *donoaŋ* 'as much/many as up there', which suggests another paradigm; *toaŋ* 'much, many' seems to be morphologically related, although there are no other instances of a similar morphophonemic change.

2. It is a matter of future investigation to determine which combinations of syntactically and morphologically different demonstratives are possible and whether there are constraints on combinability which are of a grammatical nature.

3. The existence and functions of reduplication and double reduplication need to be checked and compared for the various paradigms.

4. Finally, further research is needed on the necessity of distinguishing a stressed and/or lengthened *ʔa* series from an unstressed one; in any case it needs to be investigated which locative expressions (including demonstratives themselves) can be preceded by these stressed and/or lengthened forms of the *ʔa* series.

Constructions such as *ʔana ʔa, ʔaʔa mihi* [ʔ'a:, ʔ'aʔa] '(s)he sits here (visible, closer to THE speaker than *ʔaʔa*') and *ʔana do, do mihi* [d'o:, do m'ihi] '(s)he sits up there (relatively far up)' compensate for the fact that the reduplicated forms of the *ʔaʔa* series (i.e. *ʔaʔaʔa* etc.) cannot express comparative closeness or distance, and for the non-existence of lengthened or reduplicated forms of the auxiliary *ʔa* series, which could have had such a function. Related to these questions is of course the problem of whether *ʔa* and *ʔu* behave exactly the same way as *po, mo* and *do* with regard to the ability to be stressed and/or lengthened.

5. TEXT WITH ANNOTATIONS

The following text is an example of the constantly changing frame of reference, as it appears from the use of the demonstratives. The story was tape-recorded in Kupang (Timor) in November 1975, when it was told by Rudolf Lumba, a retired officer of the Alor branch of the Indonesian Ministry of Information and Dolap's most famous story-teller. With the assistance of H.D.R. Gomang some loan-woards have been replaced by their Blagar equivalents, when there was one (e.g. instead of *saboŋ* from Indonesian *sabun* 'soap', *na ʔ-e ul veŋ* (lit. 'thing having lather') has been used. Further, some obvious mispronunciations and repetitions have been omitted.

It should be remarked in this connection, however, that it is a characteristic of Blagar narrative prose to repeat part of a preceding clause, when the situation or event it refers to is presented as the background of what follows.

The moral of the story, summoning the women of Alor to be aware of the dangers of wearing knickers that are too loose, has been left out here.

The text is presented in the same way as the examples given above. It is followed by a list of numbered annotations, the numbers referring to the corresponding numbers of the text sentences.

5.1 TEXT

(1) *ʔ-ar ʔ-e mulal*
3p.POSS-vagina 3p-sg.POSS eel
Vagina-eel

(2) *ada ne jaŋu keneiŋ nu, doʔe alul por taŋ*
there.was human.being female adolescent one be.up.there Alor (is)land on
Once there was a girl, on the island of Alor.

(3) *abaŋ ʔauŋ ʔ-ene velai*
village that 3p.POSS-name Velai
The name of the village was Velai.

(4) *ku-kua veŋ ʔana pakiaŋ ɓaiŋ ʔila jar mi veŋ*
INTENS-dark against 3p.sg.SUBJ clothes carry go water in against

ɓai
wash.by.beating
Early in the morning she brought (her) clothes to the water and started washing them.

(5) *jar halu-ŋ jar mual mi totu*
water leak-QUAL water river.bed in stream
The water was running water, it flowed in a river-bed.

(6) *ne jaŋu keneiŋ ʔauŋ ʔ-e tuŋ ʔari nu belta tuaru*
human.being female adolescent that 3p-sg.POSS year decade one and eight
That girl was eighteen years old.

(7) *ʔana ʔila jar ʔ-omi mi mihi*
3p.sg.SUBJ go water 3p.POSS-inside in sit
She went into the water and sat down.

(8) *ʔ-e noaŋ ʔ-e lipa ʔ-e koŋdo ʔ-e*
3p-sg.POSS men's.sarong 3p-sg.POSS check.sarong 3p-sg.POSS shirt 3p-sg.POSS

deko ʔ-e kutaŋ ʔemaŋpi ʔauŋ mi mihi-t veŋ
trousers 3p-sg.POSS bra all that in sit-AIM/MANNER against

ɓai
wash.by.hitting
She washed the men's sarongs, the check sarongs, the shirts, the trousers, the bra's, all those things, sitting there.

(9) *ʔana veŋ ɓai-t na ʔ-e ul veŋ*
3p.sg.SUBJ against wash.by.hitting-AIM/MANNER thing 3p-sg.POSS lather with

ma oson oson, ʔemaŋpi seŋ
moving rub rub all finish
She washed rubbing and rubbing with soap until all was finished.

(10) *ʔana ʔauŋ mi ʔeniŋ humulaŋ humulaŋ sehi se,*
3p.sg.SUBJ that in make clean clean during.THE.period when

ʔana mihi se, ʔana ʔ-ava baiŋ se, na nu
3p.sg.SUBJ sit when 3p.sg.SUBJ 3p.POSS-chin fell when
thing one

poʔe ʔ-ar ʔ-omi ʔauŋ mi liglig
be.down.there 3p.POSS-vagina 3p.POSS-inside that in wriggling.movements

ʔeniŋ, poʔe ʔ-e pulula ʔ-omi ʔauŋ mi
make be.down.there 3p-sg.POSS genitals 3p.POSS-inside that in

liglig ʔeniŋ
wriggling.movements make
While she was busy washing there, while she was sitting there she felt something something down there in her vagina was making wriggling movements, was making wriggling movements in her genitals.

(11) *ʔana ʔ-eŋ uriŋ hera se, jar ʔ-e mulal nu*
3p.sg.SUBJ 3p.POSS-eye direct descend when water 3p-sg.POSS eel one

ʔ-ora ba ʔuʔe hera hili
3p.POSS-tail EMPH be.there descend hang
When she looked down (she saw), it was the tail of an eel that was hanging down there.

(12) *ʔ-oŋ ʔ-e boʔa ʔemaŋpi doʔe ʔ-e pulula*
3p.POSS-head 3p-sg.POSS body all be.up.there 3p-sg.POSS genitals

ʔ-omi *mi* *mida* *ʔila*
3p.POSS-inside in go.up already
Its head and its body had gone up there into her genitals.

(13) *ʔ-e* *pulula* *ʔ-omi* *mi* *mida* *ʔila* *ʔulaŋ* *di* *se,*
3p-sg.POSS genitals 3p.POSS-inside in go.up already like.that also when

holomaŋ *ʔuʔe* *dira* *niaŋ* *ba,* *ʔana* *veŋ* *kilaŋ*
in.the.beginning be.there be.ill/painful not therefore 3p.sg.SUBJ about not.care
Although it had gone up like that into her genitals, it did not hurt her at first so she did not mind.

(14) *ʔana* *ʔulaŋ* *ʔuʔe* *mihi*
3p.sg.SUBJ like.that be.there sit
She was sitting there like that.

(15) *ʔ-e* *noaŋ* *ʔ-e* *na* *ʔanauŋ* *ʔana* *veŋ*
3p-sg.POSS men's.sarong 3p-sg.POSS thing those.in.a.group 3p.sg.SUBJ against

ɓai-t *ʔeniŋ* *alus* *alus* *seŋ,* *lamiŋ* *humulaŋ* *humulaŋ*
wash.by.beating-AIM/MANNER make fine fine finish rinse clean clean

sen, *ʔana* *medi-t* *met* *ma* *noaŋ* *mi,*
finish 3p.sg.SUBJ take-AIM/MANNER having.taken moving man's.sarong in

ʔauŋ *mi* *parta-t* *ʔeniŋ* *aʔuŋ* *aʔuŋ* *se,* *ʔana* *ɓaniŋ* *doʔe*
that in bind-AIM/MANNER make good good when 3p.sg.SUBJ carry be.up.there

ʔ-oboi-t *ʔ-e* *hava* *mi* *mida*
THE.entity-turn-AIM/MANNER 3p-sg.POSS house in go.up
Her men's sarongs, all those things of hers, she finished washing them, making them all beautiful, she finished rinsing them all clean, she took them and put them into a men's sarong, finished binding them in it, making it all tidy, (and then) she carried them up there back to her house.

(16) *ʔana* *mida* *ʔ-e* *hava* *mi,* *ʔana* *noaŋ* *na*
3p.sg.SUBJ go.up 3p-sg.POSS house in
3p.sg.SUBJ men's.sarong thing

ʔanauŋ *poriŋ* *niaŋ,* *ʔana* *mida* *mu,*
those.in.a.group put.to.dry.in.the.sun not 3p.sg.SUBJ go.up just

ʔoda-t *ʔipa* *deʔi* *taŋ* *mea*
throw-AIM/MANNER go.down bamboo.cot on put
She went to her house, she did not lay out the sarong and all the things to dry in the sun, she just went in and threw them down onto the bamboo cot.

(17) *ʔana* *ʔ-iva* *ʔ-e* *ʔaru:* *'n-iva,* *n-iva!'*
3p.sg.SUBJ 3p.POSS-mother 3p-sg.POSS call my-mother my-mother
She called her mother, 'Mother, mother!'

(18) *ʔ-iva* *hula:* *'naba* *ʔeniŋ'*
3p.POSS-mother say what make
Her mother said, 'What is the matter?'

(19) *'ee, ana bake ma he?i, ana bake user*
EXCL you(sg).SUBJ please come (level) first you(sg).SUBJ please quick
ma!'
come (level)
'Please, come here a minute, please, come here quick!'

(20) *?-iva hula: '?eh, aiŋ ?auŋ di naba ?eniŋ'*
3p.POSS-mother say EXCL you(sg) that also what make
Her mother said: 'Eh, you...! what is the matter now?'

(21) *'niaŋ-ba, user ma he?i memet, user ma!'*
I.can't.help.it quick come (level) first elder.woman quick come (level)
'I can't help it, hurry mother, come quick!'

(22) *?-iva ?ana ma se, ?ana ?auŋ mi tait*
3p.POSS-mother 3p.sg.SUBJ come (level) when 3p.sg.SUBJ that in begin
?-iva ?-a-tutuk hula:
3p.POSS-mother THE.entity-to-speak say
Her mother came, and there she began to tell her mother [what had happened], saying

(23) *'n-iva e, n-e pulula ?aŋa!'*
my-mother EXCL 1p-sg.POSS genitals this
'Oh, mother, my genitals here!'

(24) *na vede ?ila po?e jar ?-omi mi mihi-t*
1p.sg a.while.ago go be.down.there water 3p.POSS-inside in sit-AIM/MANNER
noaŋ veŋ ɓai ɓenaŋ ?u, jar ?-e
men's.sarong against wash.by.beating mentioned you.know water 3p-sg.POSS
mulal nu ?a?e ?ila n-e pulula ?-omi mi mida
eel one be.here go 1p-sg.POSS genitals 3p.POSS-inside in go.up
'I went down this morning to do the washing, sitting in the water, you know, and then there was this eel going here, up into my genitals.'

(25) *?-oŋ ?-e bo?a do?e mi mida-t ?osiŋ*
3p.POSS-head 3p-sg.POSS body be.up.there in go.up-AIM/MANNER completely
e, ?-e ?-ora ?-e-naŋ kolaŋ ?a?e hili ?aŋa!
EXCL 3p-sg.POSS 3p.POSS-tail 3p-sg-total.number only be.here hang this
'Its head and its body are up there, they've gone right up inside, only its tail is hanging here!'

(26) *?aŋa pi ?eniŋ tatalaŋ*
this we(incl).SUBJ make how
'What must we do now?'

(27) *niaŋ-ba, ʔ-iva ʔana ʔauŋ mi ʔila ne*
it.couldn't.be.helped 3p.POSS-mother 3p.sg.SUBJ that in go human.being

ʔ-e ʔaru, ne memet ebeuŋ ʔanauŋ
3p-sg.POSS call human.being elder.woman other those.in.a.group

ʔ-i ʔaru-t hoʔa
3p-pl call-AIM/MANNER come
Her mother could do nothing but go there and call somebody, call the other women to come.

(28) *misiriŋ misiriŋ misiriŋ, ʔ-ora ʔauŋ veŋ pina-t misiriŋ*
pull pull pull 3p.POSS-tail that at seize-AIM/MANNER pull

hera di hera-t ʔahala
descend also descend-LIG unable
[They] pulled and pulled and pulled, holding it by its tail, [they] pulled it downwards, but [they] could not get it out.

(29) *mi anamaŋ doʔe jehi e!*
in strong be.up.there stuck EXCL
It's got really stuck up there!

(30) *mi anamaŋ doʔe jehi-t ʔulaŋ ʔulaŋ ʔulaŋ mi*
in strong be.up.there stuck-AIM/MANNER like.that like.that like.that period

ʔedaŋ aru tue se, jar ʔ-e mulal ɓenaŋ ʔu
its.number.of.days two three when water 3p.sg.POSS eel mentioned you.know

ʔ-e pulula ʔ-omi mi musi-t seŋ
3p-sg.POSS genitals 3p.POSS-inside in decay-indirectly.observed finish
Stuck tight up there as it was, after two or three days, the eel mentioned had decayed inside her genitals!

(31) *ʔ-at hera-t ʔahala ba, ne ʔauŋ mi ʔaiŋ*
THE.entity-with descend-LIG unable therefore human.being that in 3p.sg.

tevaŋ ʔila doʔe dira-ŋ hava paramaʔasi karaŋbai mi
carry.on.a.pole/litter go be.up.there ill-QUAL house Paramaʔasi Kalabahi in
As it was impossible to get it out, the people then carried her up to the Paramaʔasi hospital in Kalabahi.

(32) *ʔ-at ʔila doʔe paramaʔasi karaŋbai mi, boma dokter di*
THE.entity-with go be.up.there Paramaʔasi Kalabahi in, old.man doctor also

ʔeniŋ ʔahala
make unable
They took her up to Paramaʔasi in Kalabahi, but the doctor could not do anything either.

(33) *vaʔal ɓenaŋ dira-ŋ hava ʔauŋ mi imina*
child mentioned ill-QUAL house that in die
The girl herself died there in the hospital.

(34) *ne ɓaniŋ botaŋ tevaŋ ho?a ?a?e ?-e abaŋ*
human.being carry again carry.on.a.pole/litter come be.here 3p-sg.POSS village

velai mi he, ?aiŋ toro?u
Velai in only.then 3p.sg bury
The people carried her back here to her village Velai and then they buried her.

5.2 ANNOTATIONS TO THE TEXT

(1) *-ar* belongs to the class of inalienable nouns, like the words for most other parts of the body and words denoting kinship relations; that is, their stems are obligatorily preceded by a possessive prefix, such as *?-* for the third person singular.

-e marks a singular possessor which is at least expressed by a possessive prefix, but if necessary made explicit by an immediately preceding noun phrase; if the possession is not given by the context it is expressed by an immediately following noun phrase.

'Her vagina its eel' is the literal translation of *?-ar ?-e mulal.* This is an untranslatable Blagar pun on *jar ?-e mulal* 'fresh water eel', a kind of eel only occurring in fresh water (*jar* 'fresh water' as opposed to *taŋ* 'sea (water)').

(2) *ada* is an Indonesian loan; it is commonly used to introduce the main character at the beginning of a story: 'once upon a time there was'.

ne jaŋu keneiŋ nu exemplifies a possible structure of a Blagar noun phrase: noun ± adjective (± adjective...) ± numeral.

do?e: seen from Kupang, Alor lies 'up there'.

por regularly follows names of islands or countries.

taŋ 'on' may be a post-nominal (like *mi* and *veŋ* – see (4)); in that case its nominal argument is made explicit by the preceding noun phrase; if such post-nominals are not cliticised to a preceding noun phrase, they are proclitics to the verb, while their nominal argument should be inferred from the frame of reference; as an adverb *taŋ* can be translated 'again' (cf. English *besides, on top of that)*; in spite of their clitical character *taŋ, veŋ* and *mi* may be the heads of predicates, and as such they have features in common with transitive verbs.

(3) *-ene* 'name' is another inalienable noun.

?auŋ should be interpreted as approximately 'the one in question'; from the frame of reference evoked by the preceding context the image of a village where the girl lived is implied.

(4) *kua* 'dark'; *kua veŋ* and *kukua veŋ* or *kuakua veŋ* are set expressions, meaning 'in the morning' and 'early in the morning' (lit. 'bordering on the dark').

veŋ is an obligatory proclitic with certain verb stems such as *ɓai* 'wash by beating (against a flat stone for instance)'; otherwise it may be a post-nominal clitic with a wide range of interpretations: 'about, against, along, with, because of, bordering on, touching'. Following a noun phrase which is preceded by a possessive pronoun, it can be translated 'have': *?-e hava veŋ* '(s)he has a house' (lit. 'her/his house with'); see also what has been said about *taŋ* in (2).

ɓaiŋ alternates with *ɓaniŋ*, see T15; I have not been able to detect a functional difference.

ʔila 'go' is neutral with regard to the oppositions illustrated in Chart 2; the same form is used as an aspect marker with the approximate meaning 'already' (see Steinhauer 1977:43).

mi 'in, (in)to' belongs to the same group of words as *taŋ* (see (2)) and *veŋ*, above.

(5) Verbs and adjectives with a stem ending in a vowel may have derivatives in *-ŋ*, which may be used as nouns or adjectives with the approximate meaning '(person) qualified by an unspecified relation to the action or quality referred to by the stem'.

halu-ŋ as an adjective is not only 'not stagnant' but also 'not drying up in the dry season'.

(6) *ʔauŋ:* the girl has been introduced to the audience and can now be referred to anaphorically.

belta 'and' is used in numerals larger than ten before the units, if any.

tuaru 'eight' (and *turinu* 'nine') seem to be historically of the *delapan-sembilan* type: they contain the morphs *aru* 'two' and *nu* 'one'; synchronically, however, *tu* (and *turi*) cannot be analysed.

(7) *-omi* 'inside, heart' also belong to the class of inalienable nouns; *jar ʔ-omi* is literally 'water its inside'.

(8) *ʔauŋ mi* is anaphoric: 'in that (said) place'.

Verbs other than those of 'coming' and 'going' with a stem that ends in a vowel may have *-t* suffixed to their stems before a following verbal expression; in that case the referent of the latter is the aim of the referent of the former, or the referent of the former is the manner or circumstance pertaining to the execution of the referent of the latter; for these and other functions of *-t* see Steinhauer 1977:41-44.

(9) *na ʔ-e ul veŋ:* literally 'thing its lather with'; a noun (phrase) followed by a relative clause (such as here *ʔ-e ul veŋ*) has the same structure in Blagar as a main clause.

ma is a clitic such as *taŋ, mi* and *veŋ* (see (2) and (4)), but in contradistinction to these it cannot be used as the head of a clause; if *ma* seems to be the head of a clause it is the homophonous *ma* 'come from the same height as the point of destination, etc.' (see Steinhauer 1977:39).

(10) *ʔauŋ mi,* see (8).

sehi, when used sentence finally, denotes that the event expressed by the preceding predicate is continuing during THE period (which is given by the frame of reference).

se is a particle, one of the functions of which is to relate two clauses, the first setting the temporal or conditional stage for the second; intonationally it is part of the first clause. If it is used as an enclitic after a noun phrase its function is conditional: *hava se,...* [hav'a se] 'if it is/were a house'. At the beginning of a sentence it means approximately 'and then'. As a sentence (with rising intonation) it can be translated as 'and then?' or as 'is that so?'. If *se* follows *sehi,* the period *sehi* refers to is the one implied by the preceding predicate.

As will be seen from this text also, Blagar narrative prose may contain long sequences of clauses relating events that are temporally or otherwise connected. Formally these clauses are often related by *se* or another particle and at least by a non-falling intonation at the end of the non-final clause(s).

-ava 'chin' and *-oaŋ* 'breast' are inalienables that are regularly used to express reflexive notions; as yet the difference between them is unclear to me; *-ava baiŋ* may be translated as 'to become aware of'.

poʔe 'be down there': if awareness in this case is indeed located in one's chin or head for that matter, the frame of reference would locate events around one's genitals 'down there'.

ʔauŋ: the genitals have been brought now into the forefront of the frame of reference, if they had not been so all the time.

liglig: as other phonaesthetic and onomatopoeic words it shows reduplication and an unusual phonemic structure (in the Blagar of Dolap *g* does not occur at the end of a syllable in other words).

(11) *-eŋ* 'eye' and *-ora* 'tail' are inalienables.

ba after a noun phrase is either an emphasising enclitic or a particle such as *se* (see (10), connecting clauses, the first of which refers to the reason for the event which is the referent of the second; as a sentence (with rising intonation) it means 'so what?'.

ʔuʔe: 'be there (near you)'; the audience is as it were invited to have a closer look.

(12) *-oŋ* 'head' also belongs to the class of inalienable nouns.

doʔe 'be up there': the audience had acquired in T11 a new point of orientation, the hanging tail; now a close-up is presented from that perspective.

mida 'go up' corroborates this vision.

(13) *ba:* see (11).

veŋ is obligatory with *kilaŋ* in this meaning.

The clitic *di* 'also' (especially if it is followed by *se*) acquires a concessive meaning: 'although THE event or situation being the case'; the preceding (part of the) utterance, if any, refers to the event or situation meant. See also (28). If *di* is used sentence initially (the sentence being longer than one word), it is stressed and always followed by *se;* the event or situation which is conceded must be inferred in that case from the frame of reference. As a sentence (with rising intonation) *di* means 'what else?'.

(14) *ʔulaŋ* and *ʔuʔe* refer back to the scene which has been depicted in the preceding sentences.

(15) *na ʔanauŋ* refers back to the things enumerated in T8.

met replaces in many contexts *medi-t;* often it is followed by *ma;* its exact function in this context is unclear to me. *X (met) ma Y mi* means 'to put X into Y' (here X and Y stand for optional noun phrases); likewise *X (met) ma Y veŋ* 'to add X to Y' and *X (met) ma Y taŋ* 'to add X onto Y'.

ʔauŋ mi probably refers back to *noaŋ mi.*

doʔe: from the perspective of the girl's activities near the water, her actions that follow the beginning of the carrying event *(ɓaniŋ)* take place on a higher level, 'up there'. Preceding *doʔe* one would have expected a verb for 'going', e.g. *ʔila,* as *ɓaniŋ* itself does not express movement; here one must assume the 'going' is implied.

-oboi belongs to a class of verbs with an obligatory object marker; here the prefix *ʔ-* is coreferential with *ʔana*.

mida 'go up' is the regular word for 'go into' a house; traditionally houses were built on posts; the opposite is *hera* (not *ʔipa*), see Steinhauer 1977:39.

(16) The enclitic *mu* is opposed to the non-clitic and preposed *maŋ;* the former means that 'THE other event does not take place' (besides the one that is characterised by *mu*), whereas the latter indicates that 'instead of the event characterised by it nothing else happened'.

(17) *-iva* 'mother' is an inalienable noun; its range of appropriate referents is described in Steinhauer (forthcoming).

ʔaru belongs to a small class of verbs which, if transitive, acquire an immediately preceding object marker in the shape of a possessive pronoun: here this is *ʔ-e*, in T27 it is *ʔ-e* and *ʔ-i*.

(18) *hula* may have different functions; cf. *ʔana hula ʔila* '(s)he wants to go' *hula ʔana ʔila* '(s)he will go; in case (s)he goes'. Followed by a direct or indirect quotation, it means 'say(ing)': *ʔana hula na ʔila* 1. '(s)he says: "I go"', 2. '(s)he says that I go'. *(ʔana hula ʔila* can also be interpreted as '(s)he says: "go"'.*)* After verbs which refer to a speech act, and preceding the quotation (such as in T22) its presence seems to be pleonastic vis-à-vis its absence (which is also possible).

(19) *ee* is an exclamatory particle, which functions to draw THE hearer's attention.

ana is the subject form of the second person singular personal pronoun, which is neither emphasised nor specified by an attribute; as such it is opposed to *aiŋ* (see also (20)). For a survey of the personal pronouns see Steinhauer 1977:47. It should be remarked here that the reduplicated forms in the lower columns of the chart in that article had been inserted as a last minute change, based on information which could not be corroborated afterwards. Further research is necessary, also with regard to the function of the prefix *t-*. Stokhof's solution seems inspired too much by formal parallelisms in Woisika (cf. Stokhof 1984:158); at best it is only part of the picture.

bake means in general 'if only' or 'try', but in a clause with a second person agent it can be translated as 'please'.

ma within the enclosed space of the house means 'come from a point which is at the same height as the point of destination, the trajectory being parallel to the shore'; the girl has located her mother by her voice, so she is able to select the specific verb that is appropriate.

(20) *ʔeh* is an interjection expressing annoyance.

ʔauŋ, used attributively after the second person singular pronoun (which therefore can only have the shape *aiŋ*), expresses that the speaker here distances herself from the hearer. The collocation *aiŋ ʔauŋ di* expresses speaker's annoyance: '**you** (again)!'.

(21) *niaŋ-ba,* as used here, seems to be semantically different from the *niaŋ ba* which occurs for instance in the following dialogue: A. *ana ʔila?,* B *niaŋ ba, aiŋ ba ʔila* A. 'are you going?', B. 'no, therefore **you** must go'; however, Blagar speakers readily translate it in any context into Indonesian as *tidak, jadi* 'no, therefore...'. Probably the construction can best be considered idiomatic in cases such as T21 as well as T27.

memet 'old (of women); old woman' is used as a term of address to married women who do not yet belong to the generation of grandparents.

(22) The first *ʔana* is coreferential with the immediately preceding *ʔiva*, the second one refers to the girl. The function of such a noun phrase followed by a coreferential personal pronoun is to underline the introduction of a new acting personage, on a par with the one(s) already introduced. In T18 and T20, where *ʔ-iva* is not followed by *ʔana*, she (the mother) is not yet presented as participating in the main stream of events. Compare also T27, where *ʔana* appears again.

ʔauŋ mi most likely has temporal reference here: (her mother having come) 'at that moment'.

There are no other verbs that parallel *-a-tutuk* 'talk to' as to the make-up of its stem; this is obligatorily preceded by a personal prefix; comparison with *tutuk* 'be talking, be able to talk (of little children)', *veŋ tutuk* 'talk about' and *-at tutuk* 'talk with' show the necessity of distinguishing a prefix *-a-*.

(23) The enclitic *e* indicates speaker's emotion.

Although *n-e pulula* is specific enough, *ʔaŋa* is added to draw the attention of the mother emphatically to the location it refers to; *ʔaŋa* 'this' instead of *ʔaŋu* 'that near you' or *ʔapo* 'that down there' indicates that the girl identifies herself with the location in question; *ʔaŋu* and *ʔapo* would have implied dissociation from it, *ʔaŋu* moreover having the additional implication 'you deal with it'.

(24) *vede:* see note 2.

poʔe is the opposite of *doʔe* in T15.

ʔaʔe: note what has been said about *ʔaŋa* in (23); the perspective is clearly different from the one of the story teller in T12, or that of the still unconcerned girl in T11.

ɓenaŋ ʔu: see 4.5.5 above.

(25) Here two relative positions are compared with each other: the visible tail is the place the girl identifies with, seen from which the activities of the eel's head and body are happening 'up there'. Compare the parallel relation of perspectives in T11 and T12.

Although *-ora* is an inalienable stem, it can be combined not only with the obligatory possessive prefix but in addition also with a free possessive pronoun; this implies dissociation of the part from the whole to which it 'inalienably' belongs.

-naŋ preceded by a personal pronominal prefix, formally similar to the possessive pronouns, indicates a total of entities: *ʔ-e-naŋ kolaŋ* '(s)he/it alone', *ʔ-i-naŋ kolaŋ* 'they alone', *ʔ-i-naŋ tue* 'the three of them'. For the plural form these entities must be human.

(26) *ʔaŋa:* 'this being the case'.

tatalaŋ is formally related to the 'manner' series of the demonstratives; the morph *ta-* is found in a number of interrogative pronouns: *ta-ʔaŋ* 'which?', *ta-ʔaŋ mi* 'where?', *ta-vediŋ* 'when?', *ta-vaŋ* 'how big?' etc. (the morph *vediŋ* does not occur in other words, however).

(27) *ʔauŋ mi:* the context does not allow a definite choice between a temporal or a spatial interpretation, perhaps 'there and then' conveys the correct idea.

ʔanauŋ: the women of 'that' village.

(28) The agent is not made explicit. The effect is an impression of hectic and chaotic activity, an impression which is reinforced by the repetition of *misiriŋ*.

hera 'descend, (with preceding verbs) downwards': the point of orientation is the hanging tail; the head and body of the eel have to be pulled down.

Here *di* is concessive, although it is not followed by *se*, the function of which in this connection needs further investigation.

-t in *hera-t* is obligatory because of the following *ʔahala* (cf. Steinhauer 1977:42).

(29) *doʔe:* the point of orientation is still the hanging tail.

(30) *ʔulaŋ* 'like that (near you)', that is, as the audience has been told; the repetition of *ʔulaŋ* suggests that the situation described continued without change.

musi-t seŋ: before the aspect marker *seŋ* the affix *-t* (only possible after stems ending in a vowel) indicates that the referent of the preceding stem has been indirectly observed (cf. Steinhauer 1977:42-43).

(31) *-at* 'together with' belongs to a class of verbal auxiliaries, the stems of which are obligatorily preceded by a personal pronominal prefix: *n-at* 'together with me' etc.; *ʔ-at hera* 'descend with it', i.e. 'get it down'.

ʔauŋ mi, see (27); another possibility is: (the people) 'who were there'.

ʔaiŋ has the same relation to *ʔana* as *aiŋ* has to *ana*, see (19).

tevaŋ like *ɓa(n)iŋ* does not imply movement (see (15)) and is therefore followed by *ʔila* 'go'.

doʔe: either one has to 'go up' to get from Velai to Kalabahi (I have not been able to check this, but if so Velai may be the point of orientation), or the perspective is the same as the one of T2, in which case Kupang is the point of orientation, seen from which Kalabahi lies 'up there'.

dira-ŋ 'illness', cf. *dira* 'ill, painful' and the note on *halu-ŋ* in (5); *diraŋ hava* 'hospital' (literally 'illness house').

(32) *boma* 'old (of men), old man' is the male equivalent of *memet* (see (21)).

(33) *ʔauŋ* 'that (near you)': the audience has now become acquainted with the hospital.

(34) Both *hoʔa* 'come' and *ʔaʔe* 'be here' show that Velai is the point of orientation and probably was so from T31 onwards.

he is a particle like *se* (see (10)), but it is never used sentence initially or in combination with a particle such as *di* or an adverb (?) such as *sehi;* after a noun phrase it is again conditional 'only in case of'.

NOTES

1. The dialect of these villages is the mother tongue of Hendrik Daniel Rudolf Gomang, who was my main informant when I did fieldwork on Blagar (in the years 1974-1976) with a grant from the Dutch Foundation for the Advancement of Tropical Research (WOTRO). I am grateful to WOTRO for its support and to Mr Gomang for his enthusiasm, patience and understanding.

2. Compare *ved* 'sun, day (24 hours)'; as a Blagar day begins at sunset, *vede ɓil kua* means 'yesterday evening, this (past) night' *(ɓil* 'time, period, place', *kua* 'dark'*)*. Synchronically, a morphological relation between *vede* and *ved* cannot be proved: whatever the function of *-e* would be, *vede* would be the only example of its occurrence.

3. To mention a few problems which need to be solved before a more satisfying semantic analysis can be achieved:

   – the function of particles such as *ba* and *se* (see 5.2 (10) and (11));

   – the exact function of the various forms of the personal pronouns (see also 5.2 (19));

   – the role of topicalisation and other discourse strategies;

   – the function of word order (e.g. SOV versus OSV).

4. Abbreviations used in the interlinear glosses are:

1p	first person
2p	second person
3p	third person
EMPH	emphasising particle
excl	exclusive
EXCL	exclamatory particle
incl	inclusive
INTENS	reduplicated morph 'intensifying' the meaning of the stem
LIG	ligature
pl	plural
POSS	possessive prefix or proclitic
QUAL	nominalising suffix expressing a thing or person qualified by the referent of the stem, or adjectivising suffix resulting in a form expressing THE quality that is related to the referent of the stem
REC	reciprocal prefix
sg	singular
SUBJ	subject

5. For the function of *-t* see 5.2 (8) and (28), also Steinhauer 1977:41-42.

6. Instead of *boma ʔanauŋ, boma nauŋ* could have been used. Apparently *nauŋ* can be used as an alternant of *ʔanauŋ* only after nouns denoting human beings. It is typical of vocative constructions. Audiences for instance are usually addressed in one of the following ways: *ne nauŋ* 'people!', *boma nauŋ, memet nauŋ* 'ladies and gentlemen!' or *i nauŋ* 'you (pl)!'. Because of the latter construction *(i* is the second person plural possessive pronoun*)*, I consider *nauŋ* a noun and the head of a noun phrase rather than an attribute to a nominal head; as **i ʔanauŋ* does not occur, *nauŋ* cannot be analysed as a variant of *ʔanauŋ*.

7. In this context, in which the speaker reproaches the hearer, first person inclusive pronominal forms are used, although the event referred to occurred to the speaker only.

8. Personal pronouns followed by an attribute can only have the *-ŋ* form. Opposed to *ʔiŋ* is *ʔini;* see also (19) and 5.2 (19) and (31).

9. These verbs of 'coming' and 'going' – in contradistinction to other verbs – do not add *-t* when their stems end in a vowel. Apart from the verbs mentioned in section 3.2, *hera* 'descend', *ʔila* 'go' and *hoʔa* 'come' belong to this group of verbs, see Steinhauer 1977. The verbs meaning 'go' are combined with *poʔe, moʔe* or *doʔe,* those meaning 'come' with *ʔaʔe* and *ʔuʔe,* while *hera* (being neutral as regards the opposition 'moving away' versus 'moving towards THE orientation point') can be combined with all of them.

10. *hera* 'descend' is the only other verb of movement which belongs to this group of verbs. The possible combinations with the demonstratives discussed here are parallel to those set out in note 9.

11. I have not included /c/ as a separate phoneme in the list of phonemes above; *kancil* is of course an unassimilated loan-word.

12. It may be questioned whether the rather unexpected *mo* in (53) does not in fact have temporal reference: 'after that'.

13. Because of the feature of visibility to THE speaker, negation of *momo* would again be impossible: **ʔana ʔila momo niaŋ.*

14. Only exclamatory particles may follow.

15. /y/ is a loan phoneme and is not included in the list of phonemes in 2.1.

16. The forms are opposed to *ʔaʔe vede* 'just now' and *ʔuʔe vede* 'just now', but the exact semantic difference is as yet uncertain.

17. In Blagar a new day starts at sunset (see note 2). The glosses given here should be understood accordingly.

18. I do not know whether *ʔemoʔa* is part of a complete or even only of a partial paradigm in the Blagar of Dolap. The form itself seems to have the same meaning as *ʔe moveŋ:* 'for THE entity on the other side (on the same level)'.

I am grateful to D.J. Prentice for his valuable suggestions during the final stages of the preparation of this article.

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THE TERNATE LANGUAGE

F.S. WATUSEKE

(TRANSLATED, EDITED AND WITH A FOREWORD AND POSTSCRIPT BY C.L. VOORHOEVE)

The Ternate language (Bahasa Ternate) adalah tatabahasa singkat yang ditulis oleh Watuseke, seorang ahli bahasa dari Manado Indonesia, pada tahun 1958.

Karangan ini cukup menarik karena ini merupakan deskripsi bahasa Ternate yang pertama, dan satu-satunya yang ada sampai sekarang.

Penerjemahan dan penyuntingan dilaksanakan oleh C.L. Voorhoeve, dan terjemahannya dilengkapi dengan beberapa catatan tambahan. Tatabahasa ini berisi pokok-pokok dasar mengenai fonologi, pronomina, numeralia, verba, dan konstruksi posesif.

FOREWORD

In July 1985 when I was in Manado to attend the Seminar Penelitian Indonesia Bagian Timur hosted by the Universitas Sam Ratulangi, Mr Watuseke whom I already knew as the author of articles on Manado Malay and the West Makian language approached me with a manuscript which, he said, might interest me. Written in Indonesian and entitled *Bahasa Ternate* it contained a short grammar sketch of the Ternate language and a Ternate-Indonesian wordlist. The manuscript dated from 1958 and had been shelved for more than 25 years before its author decided to give it to me. I was pleasantly surprised because it appeared to be a neat little sketch and, since the scanty notes in de Clercq 1890, the first description of the Ternate language worth that name. I therefore proposed to have it published in *Pacific Linguistics* after translating it into English and some minor editing. Mr Watuseke agreed and so, in consultation with him, the grammar sketch was prepared for publication. The wordlist which accompanied it was not included as a more comprehensive wordlist of the Ternate language is already in the making and scheduled to appear as a separate publication. Mr Watuseke's lexical data will form an acknowledged contribution to this list.

The sketch is based on work with one Ternate-speaking informant and unavoidably contains a number of gaps even within the limits set by the author. I have therefore added a short postscript in which some necessary supplementary data are given.

C.L. VOORHOEVE

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1. INTRODUCTION

The Ternate language, which is one of the languages spoken in the Halmahera area in the North Moluccas, has not yet been properly studied. There is not even one publication which deals exclusively with the Ternate language. In F.S.A. de Clercq's *Bijdragen tot de kennis der residentie Ternate* (1890) one can find a section devoted to the language,[1] and in the Adatrechtbundel XLII, 1943, p.268 *Kitab arti logat Ternate* is mentioned but I have not yet come across that book.[2] Publications which deal wholly or in part with other languages in the Halmahera area are Adriani 1981, Adriani and Kruyt 1914, Baarda 1895, 1908, Fortgens 1912, 1917, Hueting 1907, 1908, 1935, 1936, Schmidt 1900-1901 and Veen 1915.[3] Finally there is a list of 'Ternate terms of traditional law'[4] in Adatrechtbundel VII, p.166-192, but the legal terms given in this list have been culled from Hueting's Tobelo-Dutch dictionary and are not Ternate words. I have to mention this here because of my analysis of that list in my article 'Bahasa-bahasa di daerah Minahasa' (1956). Of the publications mentioned above only Adriani 1918, Adriani and Kruyt 1914 and Adatrechtbundel VII, 1913, were available to me.

For the present preliminary investigation which I conducted early in 1958 I had as my informant Mr Ibrahim, a student of the P.T.P.G. (F.K.I.P.)[5] in Tondano, a native of Ternate who spoke his mother tongue fluently. I should like to express here my heartfelt gratitude for his willingness to assist me in all I wanted to know about the language during the investigation.

The Ternate language is important because of its influence on many languages in the North Moluccas, in North Sulawesi and in the eastern part of central Sulawesi. Its influence is related to the role played by the sultanate of Ternate in the 16th and 17th centuries. The sphere of influence of this sultanate extended from the island of Mindanao in the south Philippines to the island of Sumbawa in Nusa Tenggara.[6] In another way its influence extended even further, that is, through the Moluccan Malay language which had absorbed many Ternate words and which, possibly because it was used by the 'Borgos',[7] was brought to many places on the coast of north Sulawesi where it became the local form of Malay, now known as Manado Malay.

Thus we see that the Ternate language influenced not only the languages of Halmahera, but also a number of languages which belong to the Austronesian language group. The Malay language on the other hand was also influenced by Arabic (in the Islamic religious context), Portuguese, Spanish and Dutch. As a mother tongue the Ternate language is spoken in the city of Ternate itself except in those quarters which are inhabited by immigrants, such as the kampung Makasar, kampung Palembang, kampung Tiong Hoa, kampung Sarani. Further, it is spoken in about 20 villages on Ternate island and in several places on Halmahera, viz. Susupu (kecamatan[8] Sahu), Ibu (kecamatan Ibu) and in the kecamatan Jailolo in the township of Jailolo and the villages Tuada, Todowong, Tataleka, Tauro, Sidangoli, Payo, Saria and Bobuo. All those villages are located on the west coast of Halmahera.

The grammatical sketch which follows is divided into seven parts: The sound system, Word structure, The genitive construction, Pronouns, Numerals, The preposition *toma*, and Some notes on the verb.

2. THE SOUND SYSTEM

2.1 VOWELS

There are five vowels: *a, e, i, o, u.* They can all occur at the beginning, the end and in the middle of words.

a is usually a fairly long vowel. Examples are:

ake	water	*ngana*	you (sg)
ace	footprint	*rara*	six
ara	moon	*wange*	sun
ata	chest	*hira*	to lose
alo	cold	*besa*	rain
afa	don't (prohibitive marker)	*banga*	forest
adi	also, again	*guraka*	ginger
raha	four	*guraci*	gold

The vowel *a* is long when it is word final and stressed.[9] A long *a* is written *aa* as in *papáa* 'frog', *taláa* 'a file'.

e is pronounced in almost the same way as the vowel *e* in Javanese. It is a little shorter than the Dutch vowel *ee* in words such as *mee, zee.* Examples are:

ese	to rub	*dehe*	tired
ema	uncle	*hena*	areca nut
tego	to sit	*wange*	sun
tege	to drip	*popoje*	bag

i is a rather long vowel. Examples are:

ira	bad	*bifi*	ant
ing	tooth	*dungi*	tinea
ici	small	*konyihi*	to chase away
ari	to cry	*kufiri*	thick
pila	wing		

In the word *kursíi* 'chair', which is a loan from Indonesian but has shifted the stress to the last syllable, the vowel *i* is long and is written *ii.*

o is rather long except in closed syllables. Examples are:

ogo	quiet, still	*cako*	to beat
otu	dry	*ngolo*	the sea
oke	to drink	*podo*	short
oho	to eat	*dowong*	sand
wosa	to enter	*dotolo*	sparrow
sone	dead		

u is also rather long. Examples are:

uku	fire	*kulano*	sultan
uge	vegetables	*gunaga*	face
uga	sugarcane	*gumuru*	waist
ugu	buttocks	*susahu*	hot
butu	market	*salawaku*	shield
nguti	mouse		

In a stressed open syllable at the end of a word *u* is long and is written *uu* as for instance in *kukúu* 'to crow'.

2.2 CONSONANTS

The consonants are the velars *k, g, ng;* the labials *p, b, m;* the dentals *t, d, n;* the palatals *c, j, ny;* the fricatives *f, s, h;* the liquids *l* and *r;* and the semivowels *w* and *y*. They are generally pronounced as in the Indonesian language except for *f* which is pronounced as in Dutch, and *w* which in word-initial position is bilabial, but in word-medial position is labiodental. The consonant inventory is about the same as that of Indonesian, but it should be noted that Indonesian *f* is not original to that language and that the glottal stop which very frequently occurs in Austronesian languages is not found in Ternate.

2.2.1 VELARS

The voiceless velar stop *k* occurs word initially and word medially:

keho	rusty	*rumbaka*	beach
kokotu	black	*salawaku*	shield
kokehe	to cough	*joko*	to step on
kololi	around	*duduku*	midwife
kanyigo	yesterday	*jiko*	cape

The voiced velar stop *g* likewise occurs word initially and word medially:

gucefa	raft	*agi*	sauce
gofu	grass, weeds	*wigo*	to shake
gogola	sick	*sogili*	eel
gurahe	oath, curse	*tego*	to set
gogo	body hair	*tagi*	to go, walk
gia	arm, hand	*gaga*	fever
duga	only	*ruregu*	different

The voiced velar nasal *ng* is found word initially, word medially and word finally:

ngana	you (sg)		
ngon	you (pl)	*tufkange*	eight
ngofa	child	*pongo-pongo*	cheek
ngolo	sea	*jang*	good
ngongare	young man	*hang*	not yet
ngara	door	*ing*	tooth
wange	sun	*lahang*	palm wine
janga	to sparkle	*kolong*	to embrace
banga	forest	*nong*	charcoal

Prenasalised *k (ngk)* and *g (ngg)* are not found in the Ternate language. The only word containing *ngg* that has come to my attention is *tinggalu* 'civet cat', but this probably has been borrowed from an Austronesian language, as it occurs in several of these, e.g. Sunda *tinggalung*, Jawa *trenggalung*, Bare'e *tinggalu*, Bikolo *singgalung*, Malau *tenggalung*.

2.2.2 LABIALS

The voiceless bilabial stop *p* is found in word-initial and word-medial positions:

pilo	blind	*turpopo*	explosion
polulu	round	*popare*	kind of plant
pongo	deaf	*pompom*	kind of bamboo
pilatu	to squeeze	*tapu*	anchor
pajeko	plough	*dopolo*	head
papáa	frog	*yoyoga*	crazy
tutapa	winnow		

The voiced bilabial stop *b* also occurs in word-initial and word-medial positions:

butu	market	*dabu-dabu*	kind of side-dish
bati	boundary	*hoba*	to visit
bato	only	*gabu*	foam
boki	princess	*babu*	to fall
boboho	tired, weak	*matobo*	to swim
nyabo	wound	*laba*	to flee

The labial nasal *m* is found in all positions:

mari	stone	*namo*	bird
muru-muru	epilepsy	*ngama*	firefly
meme	forehead	*dofoma*	provisions
moho	fathom	*gam*	village
moi-mói	all	*curum*	to cook
mancia	people	*gamam*	dark
hema	prow	*malom*	to come together
gomutu	palm fibre	*cum-cúm*	riddles
suramo	fog, cloud	*tabam*	water-barrel
amo	breadfruit	*pompóm*	kind of bamboo

The prenasalised stops *mp* and *mb* do not occur. In the few cases in which a sequence *mp* or *mb* is found other factors are at work. The word *pompom* 'kind of bamboo' contains *mp*, but is a reduplication of the form *pom: pom-pom*. Reduplication is a very frequent phenomenon in the Ternate language. The sequence *mb* is found in the words *sambiki* 'pumpkin' and *rumbaka* 'beach' but it is possible that at one stage there was a vowel between the two consonants which now has disappeared as we can see in the word *golfino* 'afraid' which is also pronounced *golofino*. The word *pombo* 'pigeon' is of foreign origin.

2.2.3 DENTALS

The voiceless dental stop *t* occurs word initially and word medially:

tano	to peep at	*toho*	to sharpen to a point
tera	to settle (of birds)	*toti*	to cut
torifu	replete	*titi*	base, foot
toca	candle	*huhati*	to angle
toru	to withdraw	*rete*	to pile up
tare	to crawl	*ngute-ngute*	stairs, ladder

The voiced dental stop *d* also occurs word initially and word medially:

dehe	cape	*kado*	to arrive
dogo	to increase, add	*idi*	voice
dudeso	knot	*makusedu*	to joke
dibo-dibo	middleman, purchasing agent	*podo*	low, short
		kolotidi	worm
diti	house-lizard	*dudai*	a chest
ngido	deep (water)	*mahodo*	to bathe

The dental nasal *n* is found in all positions:

ne	this	*kulano*	king
naro	pull, drag	*ino*	hither
nonau	man, male	*tuniru*	to play
namo	bird	*gunaga*	face, front
nong	charcoal	*bobane*	anchorage
nora	pillow	*sone*	dead
nao	firm	*ngon*	you (pl)
nonako	to know	*ngun*	nose
nane	dream	*fin*	seed
tono	to soak	*gan*	louse
gono	fill with water	*ngan*	to boil

Prenasalised stops *nt* and *nd* do not occur, although they are found in loan words such as *kintal* '(front) yard'.

2.2.4 PALATALS

The unvoiced palatal stop *c* occurs in word-initial and word-medial positions:

cako	to weave, to beat	*ici*	small
cilu	to shave	*toca*	candle
cama	throat	*gucefa*	raft
curum	to cook	*kacoa*	narrow
cobi	to close the eyes	*paceda*	armband
cafala	diligent	*pece*	mud
cabúu	little, few	*maguci*	former

The voiced palatal *j* is found in word-initial and word-medial positions:

jujaru	woman	*loloji*	sour
jaha	to sink, drown	*ija*	price
jou	lord	*faja*	dirty
jara	horse (from Javanese)	*luja*	clean
joa	to scold	*popoje*	bag
jiko	bay	*gaji*	grease
jungihi	place	*fajaru*	I (female speaking)
jongutu	sleeping mat		

The palatal nasal *ny* is also found only in initial and medial positions:

nyagimói	ten	*nyiha*	to permit
nyiku	above	*konyihi*	to chase away
nyinga	heart, feeling	*sonyiha*	kind of tree
nyao	fish	*gonyira*	right (side)
nyabo	wound	*kanyigo*	yesterday
nyodi	to look	*sonyinga*	to think of, love

2.2.5 FRICATIVES

The labiodental fricative *f* which is pronounced as the Dutch *f*[10] is only found at the beginning and in the middle of words:

fira	sister	*kefe*	shoulder
fin	seed	*nyefo*	smoke
fiaro	scattered	*difutu*	tomorrow
foko	pregnant	*dofoma*	provisions
foro	sit on eggs	*totofore*	to shiver
fala	house	*kafo*	dull
fana	roof-ridge	*gofu*	grass
dofu	many		

The *f* in foreign words is retained in Ternate whereas in the Indonesian language it becomes *p:* Indonesian *kopi, sekap, pikir, paham* = Ternate *kofe, skaf, fikir, faham,* etc.

The voiceless alveodental fricative *s* is found in word-initial and word-medial positions:

seho	sugar palm	*gasa*	to bring
soho	pig	*kaso*	dog
sodidi	earthquake	*gasi*	salt
sara	forked	*duso*	hole
supu	to go outside	*gosora*	nutmeg
saki	tasty	*ngasu*	pole
sabua	shed, shelter	*hisa*	hedge
susahu	hot	*tusa*	cat
haso	heavy	*kusu-kusu*	alang, or sword grass

The glottal fricative *h* is found in word-initial and word-medial positions:

hang	not yet	*laha*	good
hoku	snot	*guhi*	flood in river
hotu	to sleep	*koho-koho*	thorn
hito	kitchen	*ahu*	to live
hako-hako	to scratch	*keho*	rusty
hafo-hafo	dark	*romtoha*	five
hira	lost, disappeared	*raha*	four
hohe	to laugh	*moho*	fathom
seho	sugar palm	*kokehe*	to cough

2.2.6 LIQUIDS

The liquid *l* occurs in word-initial and word-medial positions:

loloji	sour	*palaka*	turned over
lae	thread	*pulia*	ragged
lamo	big	*polulu*	round
lule	to roll	*tela*	maize
logi	to bite	*hale*	to lick
lom	to come together	*pilo*	blind
lako	eye	*dopolo*	head
loleko	aslant		

In a very small number of words we find *l* at the end, e.g. in *trosol* 'to disturb' and *kintal* 'yard', but these two words are borrowings from other languages.

The liquid *r* occurs only in word-initial and word-medial positions:

roriha	red	*toru*	to withdraw
raku	to fold	*goroho*	oil
romtoha	five	*gura*	garden
roro	slow	*dero*	to find
ruregu	other	*mari*	stone
romdidi	two	*ara*	moon
reno	to slice	*bira*	rice
raga-raga	finger	*fere*	to climb
rimoi	one	*dudara*	pity
rara	six	*guraka*	ginger
ratumoi	one hundred		

2.2.7 SEMIVOWELS

The semivowel *y* is found in all positions but it occurs only in a few words. The *y* which is heard after the vowel *i* when it is followed by another vowel is not written in the spelling used here. Word-final *y* which is preceded by a vowel is written *i*. Some examples are:

yaya	mother	*hio*	to blow
yoyoga	crazy	*kai*	to marry
saya	flower	*hai*	grub
mia	monkey	*koi*	banana
kie	island	*doi*	to carry on the shoulder
bia	oyster		

The semivowel *w*, as mentioned above, is bilabial in word-initial position and is then preceded by a weak *u*, that is, it is similar to the English *w* and the *w* in Buli (South-Halmahera). Word medially, however, *w* is labiodental. Some examples are:

wange	sun, day	*wola-wola*	loose
wehe	to dry in the sun	*woka-woka*	crow
wigo	to shake	*dowong*	sand
wele	to hang	*salawaku*	shield
waho	rotten	*siwasu*	to send, instruct
wosa	to enter	*diti dawana*	gecko
walomoi	once		

3. WORD STRUCTURE

The only consonants which can occur in word-final position are the nasals *m, n* and *ng*. We can therefore characterise Ternate as a vocalic language. The words which now end in a nasal consonant may originally have ended in a vowel as well. This would be in agreement with the fact that the word *kanang* 'a moment ago', which now has become archaic, is pronounced as *kanange* by the old people. Further proof can be found in old loan words which originally ended in a nasal consonant but have lost it in the Ternate language. For example:

jara	horse	(Jawa *jaran*)
manjanga	deer	(Jawa *menjangan*)
tinggalu	civet cat	(Sunda, Jawa *tinggalung*)
kurunga	cage	(Indonesian *kurungan*)

If words which were borrowed long ago from other languages originally ended in a consonant, either they have lost it or they have received a final vowel:

tafi	sieve	from Indonesian	*tapis*	
ratu	hundred	" "	*ratus*	
raci	poison	" "	*racun*	
lasa	kind of fruit	" "	*langsat*	
capati	quick	" "	*cepat*	
sababu	because	" "	*sebab*	
asali	origin	" "	*asal*	
kapa	cotton	" "	*kapas*	
bonci	bean	" "	*boncis*	(from Dutch *boontjes*)
kanci	button	" "	*kancing*	
tapa	patch	" "	*tampal*	

But recent loan words generally retain the final consonant although they have been adapted to the Ternate pronunciation:

gamber	kind of plant	from Indonesian	*gambir*
walirang	sulphur	" "	*belerang*
kabal	immune	" "	*kebal*
kapal	boat	" "	*kapal*
kaptenlaut	admiral	from Malay	*kaptenlaut*
kas	cupboard	from Dutch	*kast*

There are not many monosyllabic words in the Ternate language and they usually end in a nasal consonant, for example:

nong	charcoal	*ngan*	to boil
hang	not yet	*hal*	expensive (Indonesian *mahal*)
fin	seed		
gam	village	*tum*	to dive
jang	beautiful	*ngo*	pulp
ing	tooth	*ne*	this
lom	to meet	*ge*	that
gan	louse	*ma*	its

The majority of the root words are bisyllabic. Several of these are reduplications of monosyllabic roots such as *pompom* 'bamboo water container', *cumcum* 'riddle'. There are also many trisyllabic words. Possibly they originally consisted of a bisyllabic root plus a monosyllabic affix which has become petrified and can no longer be recognised, for example:

nongoru	younger brother	*gurumi*	shadow
durure	threshold	*dofoma*	provisions
pilatu	pair of tongs	*gabura*	kind of duck
suramo	cloud	*fiaro*	scattered
dokasáa	how		

There are only a few root words with more than three syllables, for example:

tabadiku	bamboo	*cakelele*	war dance
galafea	fish holder	*koloomi*	kind of millepede
kolotidi	worm	*golofino*	afraid
cakaiba	masked person	*tulubutu*	to bargain
cafaruni	filthy		

The origin of some of these is still clear, of others it is not.

Sequences of consonants are found only in the middle of words, as in:

tufkange	eight	*pancona*	torch
romdidi	two	*gulcifi*	(finger) nail
tomdí	seven	*gurmakusu*	lemon grass
turpopo	explosion, thunder	*golfino*	afraid
mancia	people		

It is very well possible that such sequences came into being by the joining of a final consonant and an initial consonant of two words which formed a compound. If we compare the numeral *romtoha* 'five' with the Galela word *motoha* 'five' in which the element *mo* is a numeral formant and *toha* the numeral root, then it is clear that *toha* in *romtoha* is the root and *rom* is another word, or at least some kind of formative. Based on this we see that *romdidi* 'two' and *tomdí* 'seven' may contain the roots *didi* and *di* and the formatives *rom* and *tom*. By analogy we can analyse the form *tufkange* 'eight' as *tuf* + *kange*, etc.

Another possibility is that originally there was a vowel between the two consonants which was the final vowel of the first constituent of the compound. This is very clear in the word *golfino* which has an alternant form *golofino*. Also the word *mancia* 'people' is an adaptation of the Malay word *manusia* in which the vowel *u* has disappeared and the resulting cluster *ns* has become *nc*.

4. THE GENITIVE CONSTRUCTION

In the Ternate language the genitive construction is as follows:

uku ma detu	(fire its embers)	embers
diso ma ngofa	(mortar its child)	rice pounder
lako ma gogo	(eye its hair)	eyebrow
Kamis ma wange	(Thursday its day)	Thursday
wange ma lakilaki	(sun its shine)	sunshine
hohu ma lako	(foot its eye)	ankle
namo ma au	(chicken its blood)	chicken blood
gia ma sahadat	(hand its *'sahadat'*[11])	index finger
ragaraga ma hera	(finger its mother)	thumb
cama ma dola	(throat its base)	neck
dudu ma hera	(back its mother)	spine
ngau ma iho	(ear its dirt)	ear-dirt
fala ma fana	(house its ridge)	the roof-ridge of the house

The genitive, which is used very often, is formed by placing the modifying noun in front, followed by the particle *ma* and the modified noun. We see here that the genitive construction in the Ternate language is the so-called reversed genitive. The reversed genitive is a feature of all the languages which are reckoned to belong to the North Halmahera-Ternate group of languages (Adriani and Kruyt 1914:300).

In addition I came across the form *saha gia* (palm + hand) 'palm of hand', = *saha ma gia*. It refers to the gesture of stretching out the arm upwards with the hand open and the palm facing up as is done by Muslims when they pray. I have not been given any other examples of this construction.

5. THE PRONOUNS

5.1 GENERAL

The personal pronouns have free and bound forms. This feature is not only found in the languages of the North Halmahera-Ternate group, but also in the Austronesian languages of South Halmahera, for example in the Buli language. In contrast with the Austronesian languages which do not possess a gender distinction in the personal and possessive pronouns, such a distinction is present in the Ternate language. It is found in the third person singular and in the polite forms first person singular and plural. The inclusive-exclusive distinction in the first person plural which is present in the Austronesian languages is also found in Ternate. The free and the bound forms of the personal pronouns are:

		Free form	Bound form	
Singular	1st person	*ngori*	*to-*	I
	1st person masc. pol.	*fangare*	*to-*	
	1st person fem. pol.	*fajaru*	*to-*	
	2nd person	*ngana*	*no-*	you (sg)
	2nd person pol.	*ngon*	*ni*	
	3rd person masc.	*una*	*o-*	he
	3rd person fem.	*mina*	*mo-*	she
Plural	1st person excl. masc. pol.	*fangare-ngom*	*mi-*	we
	1st person excl. fem. pol.	*fajaru-ngom*	*mi-*	
	1st person excl.	*ngom*	*mi-*	
	1st person incl.	*ngone*	*fo-*	
	2nd person	*ngon*	*ni-*	you
	3rd person	*ana*	*i-*	they

fangare and *fajaru* are polite forms. *fangare* is used only by male speakers; the word contains a prefix *fa* and a root *ngare* which in its reduplicated form, *ngongare*, means 'young men'. Female speakers use *fajaru* which consists of the prefix *fa* and the root *jaru* which in its reduplicated form, *jujaru*, means 'young woman, maiden'. *ngori* is not used in polite conversation.

ngana 'you' is used only when one addresses someone younger and lower in status or rank – an elder brother uses it when speaking to his younger brother. On the other hand a younger brother uses *ngon* when speaking to his elder brother; the same applies when someone of low rank addresses a person of higher rank. *ngana* therefore is the 'low', *ngon* the 'high' or polite form. There is no gender distinction in the second person.

In the third person a gender distinction is present: *una* 'he', *mina* 'she'. The first person plural has an exclusive-inclusive distinction: *ngom* 'we (but not you)', *ngone* 'we (you included)'. In polite speech a gender distinction is introduced in the first person plural exclusive by the addition of *fangare* or *fajaru: fangare ngom* 'we (men)', *fajaru ngom* 'we (women)'. In the second person plural the form *ngon* is used. As we saw above, this word is also used as the polite form of the second person singular. The third person plural pronoun is *ana* 'they' without a gender distinction.

5.2 SUBJECT MARKING PREFIXES

When a personal pronoun functions as subject the verb takes the corresponding bound form as a prefix:

ngori to-gulaha	I make it
fangare (fajaru) to-gulaha	I (male, female) make it (polite)
ngana no-gulaha	you (sg) make it
ngon ni-gulaha	you (sg, polite) make it
una o-gulaha	he makes it
mina mo-gulaha	she makes it
fangare ngom mi-gulaha	we (men) make it (polite)

fajaru ngom mi-gulaha	we (women) make it (polite)
ngom mi-gulaha	we (excl) make it
ngone fo-gulaha	we (incl) make it
ngon ni-gulaha	you (pl) make it
ana i-gulaha	they make it

In sentences the free subject-pronoun can be omitted, leaving only the bound form:

kitab ne fangare to-haka se mina book this I I-give to her *kitab ne to-haka se mina*	I (male) gave this book to her.
kitab ne fajaru to-haka se mina *kitab ne to-haka se mina*	I (female) gave this book to her.
kitab ne ngana no-haka se mina *kitab ne no-haka se mina*	You gave this book to her.

As we can see in these sentences the dative case is constructed by placing the particle *se* in front of the personal pronoun.

se fangare	to me	*se mina*	to her
se fajaru	to me	*se ngom*	to us
se ngana	to you (sg)	*se ngone*	to us
se ngon	to you (sg, pol.)	*se ngon*	to you (pl)
se una	to him	*se ana*	to them

5.3 THE POSSESSIVE CONSTRUCTION

In the possessive construction the personal pronoun is followed by the possessed noun and between them is placed a possessive particle which corresponds with the preceding pronoun.

fangare	*ri*	
fajaru	*ri*	
ngana	*ni*	
una	*i*	
mina	*mi*	+ possessed noun
ngom	*mi*	
ngone	*na*	
ngon	*na*	
ana	*nga*	

For example:

fangare ri kitab	my book	*fangare ri dué*	mine
fajaru ri kitab	my book	*fajaru ri dué*	mine
ngana ni kitab	your book	*ngana ni dué*	yours
una i kitab	his book	*una i dué*	his

mina mi kitab	her book	*mina mi dué*	hers
ngom mi kitab	our book	*ngom mi dué*	ours
ngone na kitab	our book	*ngone na dué*	ours
ngon na kitab	your book	*ngon na dué*	yours
ana nga kitab	their book	*ana nga dué*	theirs

5.4 INTERROGATIVE PRONOUNS

The interrogative pronouns are:

nagé	who
koa	what
wangerao	when
ngairao	how many (objects, animals)
naruo	how many (people)
dokasáa	how
kasáa	where

Examples are:

nagé na dué
whose (is it)

haiwán nagé ma ronga koa
animal that its name what
What is the name of that animal?

wangerao ngone fo-tagi toma Ternate
when we incl. we-go to Ternate
When are we going to Ternate?

fala daka ngairao
houses there how many
How many houses are over there?

mancia naruo i-tagi toma ngoko ma daha
people how many they-walk on road its inside
How many people are walking on the road?

gulaha dokasáa momami ge
make how cakes those
How does one make those cakes?

ma ija dokasáa
its price how
What's the price?

The word *haiwán*, which is a borrowing from Arabic, not only means 'animal' but also 'goods, stuff'.

6. THE NUMERALS

6.1 CARDINAL NUMBERS

The numerals one to ten are as follows:

1	*rimói*	6	*rara*
2	*romdidi*	7	*tomdí*
3	*raange*	8	*tufkange*
4	*raha*	9	*sio*
5	*romtoha*	10	*nyagimói*

nyagimói 'ten' contains the root *nyagi* 'unit of ten' and *moi* 'one' a shortened form of *rimói*. Contrary to the Austronesian languages which place the digits before the tens, the Ternate language places them after:

nyagimói	ten
nyagiromdidi	twenty
nyagiraange	thirty
nyagiraha	forty
nyagiromtoha	fifty, etc.

The same applies to numerals with *ratu* 'hundred' and *cala* 'thousand':

ratumói	one hundred	*calamói*	one thousand
raturomdidi	two hundred	*calaromdidi*	two thousand
raturaange	three hundred	*calaraange*	three thousand
raturaha	four hundred	*calaraha*	four thousand
raturomtoha	five hundred, etc.	*calaromtoha*	five thousand

The numerals from eleven to nineteen, twenty-one to twenty-nine etc., are formed by the numerals for ten and multiples of ten, followed by *se* 'and' and the digit:

11	*nyagimói se rimói*
12	*nyagimói se romdidi*
13	*nyagimói se raange*
14	*nyagimói se raha*
15	*nyagimói se romtoha*
21	*nyagiromdidi se rimói*
22	*nyagiromdidi se romdidi*
31	*nyagiraange se rimói*
44	*nyagiraha se raha*
56	*nyagiromtoha se rara*
67	*nyagirara se tomdí*
78	*nyagitomdí se tufkange*
85	*nyagitufkange se romtoha*
99	*nyagisio se sio*
201	*raturomdidi se rimói*
232	*raturomdidi nyagiraange se romdidi*
1564	*calamói raturomtoha nyagirara se raha*
9999	*calasio ratusio nyagisio se sio*
10000	*calanyagimói*
35600	*calanyagiraange se romtoha se raturara*

6.2 ORDINAL NUMBERS

The ordinal numbers are nowadays usually formed as in Indonesian, that is they are preceded by *yang ka-:*

yang karimói	the first
yang karomdidi	the second
yang karaange	the third, etc.

6.3 MULTIPLYING NUMERALS

Multiplying numerals are formed by placing *walo* before the numeral:

walo-mói	once
walo-romdidi	twice
walo-raange	three times
walo-nyagimói	ten times
walo-ratumói	a hundred times
walo-calamói	a thousand times, etc.

6.4 FRACTIONS

There are no numerals with a fractional value in the Ternate language, but fractions can be expressed in the following way:

ma sunanga	$\frac{1}{2}$ (one half of something)
gakimói	$\frac{1}{4}$

A *gaki* is a quarter part of a smoked tuna fish.

Another way of expressing fractions is by adding *suka ka-* or *sibula ka-* to the cardinal numerals, (*suka* means 'to split', *sibula* means 'to divide'):

sibula ka-raha *suka ka-raha*	one fourth
sibula ka-romtoha *suka ka-romtoha*	one fifth
sibula ka-nyagimói *suka ka-nyagimói*	one tenth

6.5 SPECIAL NUMERALS

In addition to the basic numerals there are also special numerals for counting human beings, animals and objects. The following numerals are used when counting human beings:

amói	one person	*narura*	six persons
namdí	two persons	*natomdí*	seven persons
narukange	three persons	*natufkange*	eight persons
naruha	four persons	*nasio*	nine persons
namtoha	five persons	*nanyagimói*	ten persons

In principle the numerals for counting people are derived from the basic numerals by adding the prefix *na-*. But *amói* has lost the *n* of *na-*, and the first syllable of *rimói* is always lost when it is combined with another numeral; *amói* therefore derives from **narimói*. In *namdí* we see that *romdidi* has been shortened to *mdi*. In *narukange, naruha, narura,* the first syllable *ra* of the basic numeral has become *ru,* and the hiatus in the form *raange* has been strengthened by inserting *k*.

All numerals higher than ten just take the prefix *na-:*

nanyagiromdidi	twenty people
nanyagiraange se amoi	thirty-one people
nacalamói	one thousand people

When counting animals or objects one adds the prefix *ngai-* to the basic numeral except for *rimói* 'one' which becomes *ngaimói:*

ngairomdidi	two objects/animals
ngainyagimói	ten objects/animals
ngairatumói	hundred objects/animals
ngaicalamói	a thousand objects/animals

7. THE PREPOSITION *toma*

One preposition that I found in the Ternate language is *toma.* Its equivalents in the Indonesian language are *di* and *ke,* as it encompasses the meanings 'being present at the designated spot' and 'moving towards the designated spot'. As in Indonesian it occurs before the noun:

toma daha	in the inside, inside
toma gunaga	at the front
toma dite	at the side
toma dudu	at the back
toma adu	below, underneath
toma dopolo	on the head
toma ngute ma adu	at the foot of the ladder
toma ngolo ma nyeku	on the surface of the sea
toma ngolo ma gonora	in the middle of the sea
toma dodika	on the fireplace
kado toma rumbaka	to arrive at the beach

fangare	*to-welewele*	*tas*	*tagi*	*toma*	*sekola*
I	I-swing	bag	go	to	school

Swinging my bag I went to school.

8. SOME NOTES ON THE VERB

8.1 VERB ROOTS

Ternate verbs are not much used with affixes as the root by itself is adequate. Examples of verbs without affixes are:

fangare waro ua
I know not
I don't know.

ngana waro nagé?
you know that
Do you know that?

fangare lefo raima
I write already
I have already written.

mancia palisi ika
people go past there
(Some) people went past to that place over there.

namo temo
cock crow
The cock is crowing.

In addition to the roots several affixes have been recognised, amongst others *ma-*, *si-* and *maku-*.

8.2 VERBS WITH *ma-*

The prefix *ma-* is used in the same way as *me-*, *ma-* etc. in the languages of Indonesia, only in the Ternate language it is not often used:

fangare to-malefo	I am writing.
fangare to-madorio una	I am helping him.
to-malule se mi nyiho	I am lying in her lap.

There are verbs which occur only with this prefix *ma-*, such as:

maruru	to float downstream	*malom*	to come together, meet
maruku	to stoop	*mafato*	to form a row
maria	to be noisy	*madoto*	to learn

8.3 VERBS WITH *si-*

The prefix *si-* is used in the imperative:

siwasu	(from *wasu* 'to order')	order (him)!
sidika	(from *dika* 'to leave, abandon')	leave it! don't bother!
sidurari	(from *turari* 'to present')	present it!
sipasa	(from *pasa* 'free, loose')	let it go! set it free!

8.4 VERBS WITH *maku-*

The prefix *maku-* is used to form reciprocal verbs:

makudagimói	to be friends
makudero	to meet each other
makumote	to walk together
makusedu	to make jokes with each other
makudusu	to chase one another
makuginado	to ask each other

This prefix has entered the Malay variants spoken in Ternate and Manado as *baku-: baku-dapa* 'to meet each other', etc.

POSTSCRIPT

In the following, more information is given on some of the topics dealt with by Mr Watuseke. The numbers in the margin refer to the (sub)sections in the grammar sketch.

2.1 The terms long and short used here have been borrowed from traditional Dutch grammar in which 'long' and 'short' vowels contrast not only in length but also in degree of openness. Thus, long [a:], [e:], [i:], [o:], [u:] contrast with short [ɑ], [ɛ], [ɪ], [ɔ], [u]. In Ternate vowels are phonetically short except when stressed and word-final, and the terms long and short should be interpreted as 'close' versus 'open'. Thus, Ternate /a/ = [a] or [ɑ]; /e/ = [ĕ] or [ɛ] (in closed syllables); /i/ = [i]; /o/ = [o] or [ɔ] (in closed syllables) and /u/ = [u].

Word stress on the ultimate syllable is found in:

1. words formed by prefixing or reduplication on the basis of a monosyllabic root, for example *o-dín* 'he is sewing', *maku-cúm* 'to entertain one another with riddles', *cum-cúm* 'riddles', *ngai-mói* 'one (object)', *ngam-dí* 'two (people)'.

2. compounds with a monosyllabic second constituent, for example *dagimói* 'friend' (from *tagi* 'to walk' and *moi* 'one, together'), *falalóm* 'servant' (from *fala* 'house' and *lom* 'be together'), *enané* 'this here' (from *ena* 'it' and *ne* 'this').

3. A small residue of words which cannot be subsumed under the above rules, amongst them a number of Indonesian loans which originally carry the stress on the penultimate, such as *kursí* 'chair', *Hamís* 'Thursday' (from *Kámis*).

2.2 A non-phonemic glottal stop is often heard preceding a word-initial vowel and between two like vowels, as in *raange* [ra'ɑ́ngĕ] 'three'.

5.1, 5.2 There are in fact three major noun classes in Ternate: a non-person class manifested in the use of the pronoun *ena* 'it', the subject marker *i-*, the possessive marker *ma* and the numerals with the prefix *ngai-;* a masculine person class; and a feminine person class. The only noun which denotes a human being and belongs to the non-person class is *ngofa* 'child': *ngofa i-tego* 'the child sits', *ngofa ma gia* 'the child's arms'.

5.3 The possessive particle for the 1st person incl. pl., 2nd person pl. and 3rd person pl. is either *na* or *nga. na* is felt to be more refined or cultured than *nga* and is therefore

found in polite conversations and formal texts. The same connotational difference is found between the *na-* and *nga-* prefixes to the numerals, see below, 6.5.

6.2 The true Ternate way of saying 'the first' is *ma sosira: fala ma sosira* 'the first house'.

6.5 The person-marking prefix with numerals higher than one is *na-* or *nga-*. As with the homophonous possessive markers, *na-* is felt to be more refined than *nga-*. So beside *namdí* 'two' we find *ngamdí;* beside *naruha* 'four' we find *ngaruha* etc. This difference extends to the interrogative numeral counterpart *naruo/ngaruo* 'how many people'. Moreover, some nouns referring to large, longish objects require the numeral classifier *hutu: fala hutu mói* 'one house', *guae hutu mói* 'one mango tree'.

8. The morphology of the Ternate verb is much more complex than is described here. I shall deal with this part of Ternate grammar in a separate paper.

NOTES

1. See part C (pp.191-318) which contains a short introduction to the language (191-196), some grammatical notes (197-202), three texts in Jawi inserted between pages 244 and 245 preceded by a free Dutch translation (202-244), and a Ternate-Dutch wordlist to the texts (245-318). A transcription in Roman script of the texts, accompanied by a more literal translation was published by Fortgens (1930).

2. This is the Ternate-Indonesian-Dutch wordlist published by J. Fortgens in 1917; see the bibliographical references.

3. New publications on the same area which have appeared since I wrote this article are: Collins 1982; Collins, ed. 1983; Collins and Voorhoeve 1983; Lucardie 1980; Salzner 1960; Stokhof, ed. 1980; Taylor 1983; Voorhoeve 1981, 1982, 1983, 1987, 1988; Wada 1980; Watuseke 1976; and Wurm and Hattori 1983. A bibliography of the North Moluccas which is complete up to 1981 has been compiled by K. Polman (1981).

4. In the Dutch original: Ternataansche adatrechtstermen.

5. P.T.P.G. = Perguruan Tinggi Pendidikan Guru

   F.K.I.P. = Fakultas Keguruan Ilmu Pendidikan

   They can be seen as the forerunners of the present Institut Keguruan Ilmu Pendidikan (I.K.I.P.).

6. In the Luwuk-Banggai district the influence of the Ternate language was felt till 1908. Up to that year that district fell under the sphere of influence of the sultanate of Ternate.

   In the city of Manado, north Sulawesi, there still exists a Ternatan quarter (kampung Ternate), but the Ternate language is no longer spoken there.

7. Borgo: adaptation of the Dutch word *burger.*

8. *kecamatan:* District.

9. Word stress, here indicated by an acute accent on the stressed vowel, is usually carried by the penultimate syllable *(áke, píla, turífa, golofíno).* In a small number of words the last

syllable is stressed, e.g. *kursíi*. In the spelling of the Ternate words stress is indicated only when it falls on the last syllable.

10. That is, it is a voiceless labiodental fricative.

11. The index-finger is called *sahadat* 'confession' because Muslims, when uttering the confession of faith during their prayers have to stretch the index-finger of the right hand. This gesture is widespread in the areas that have been influenced by Ternate and Tidore (see Adriani and Kruyt 1914:338).

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A-73:223-244. Pacific Linguistics, The Australian National University, 1991. DOI:*10.15144/PL-A73.223*

TENSE, ASPECT, MOOD AND MODALITY: VERBAL MORPHOLOGY IN MENYA[1]

CARL R. WHITEHEAD

1.0 THEORETICAL CONSIDERATIONS

In his introductory essay to the volume on tense and aspect (Hopper, ed. 1982), Hopper (1982:3) begins with the following paragraph:

> In any utterance a peculiar importance is universally attached to the temporal contour of the state or action and the speaker's attitude towards it. The grammatical correlates of these contours and attitudes are the categories of Tense, Aspect and Modality; they are pervasive, they are universal (in that no language lacks all three), and every speech event must incorporate one or more of them.

Slobin and Aksu (1982:186), in the same volume, go further by stating that 'in practice these categories cannot be studied in isolation from one another'. Accordingly, the purpose of this paper is to study these and related categories as they are represented in the verbal morphology of Menya, a non-Austronesian language of Papua New Guinea which will be more fully introduced in section 2.

Before beginning the language-specific explication of these categories, however, it is necessary to specify what is meant by these terms and to demonstrate the ways in which they relate to each other. This is necessary because (i) the terms in general are not always used in the same way by different authors, (ii) mood and modality in particular are not always distinguished and (iii) the categories have so often been treated as distinct categories within language-specific description and analysis.

A primary point for discussion is whether these terms refer to formal (morpho-syntactic) distinctions or to semantic/conceptual domains. I believe it is accurate to state that they are used more frequently to refer to formal distinctions, and especially different categories of verbal morphology. For example, the dictionaries of linguistic terms produced by Crystal (1985) and by Hartman and Stock (1972) define tense, aspect and mood in terms of verb markings, forms and paradigms. Modality, however, they do recognise as primarily a semantic category (Crystal actually treats mood and modality as synonyms, emphasising that they refer to both syntactic and semantic categories). It needs to be recognised that all of these terms can be used to refer to both formal categories and semantic domains but that there is not necessarily a one-to-one correlation between the language-specific formal distinctions and the more universal semantic distinctions. As Lyons (1977:682) states it:

Tom Dutton, ed. *Papers in Papuan linguistics,* No.1, 245-311.
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> A fairly clear distinction can be drawn in the metalanguage of general linguistic theory between the terms 'tense', 'mood' and 'aspect'. Not only do particular languages differ, however, with respect to the semantic distinctions that are grammaticalised in terms of the categories of tense, mood and aspect. What is classified as a tense, a mood or an aspect in any particular language may have a range of functions, some or all of which may fall outside the scope of the general definition of the grammatical category in question.

In studying any or all of these categories in a specific language, therefore, one could either begin with the semantic domains and discuss all features of the lexicon, morphology and syntax which relate to the category, or one could begin with any or all of the lexical, morphological or syntactic features and describe their varied meanings and functions, including those elements of meaning which are beyond the primary semantic domain of that element.

Comrie (1985), in his volume on tense, favours the latter option. He defines tense as 'the grammaticalised expression of location in time' (p.9) and, further, defines grammaticalisation to mean, prototypically, 'the interaction of two parameters: that of obligatory expression, and that of morphological boundedness' (p.10). Thus the expression of location in time other than through obligatory affixes is beyond the scope of his discussion.

In defining my use of the terms in this section, I am concerned with the semantic domains. In describing the specifics of Menya, I follow Comrie's example of expounding the meaning and function of the relevant bound morphemes which occur on the verb.

1.1 TENSE

Since tense is the easiest to define, and since we already refer to it more specifically above, it provides a logical starting place. Extracting from Comrie's definition, the semantic domain of tense can be defined as location in time of the situation being predicated.

Reichenbach (1947:289-298), in his work on symbolic logic, proposes that there are three time points significant in the analysis of tense in any utterance. These three times are the speech time, the reference time and the event time. The speech time is the time of the utterance of the proposition; the event time is the time at which the predicated event took place; and the reference time is that from which the speaker chooses to view the event. Thus, in the sentence 'As of yesterday, I had been here three weeks', the speech time is now, the reference time is yesterday and the event time is the three weeks prior to yesterday.

In Reichenbach's schema, every utterance has all three of these times though the reference time is frequently identical to either the speech time or the event time. Comrie (1981) has criticised this analysis, proposing that, whereas speech time and event time are ubiquitous, on the one hand there is no point in postulating a reference time where only two times are involved, and on the other hand there are times when more than one reference time is needed to locate the event in time. It is not my purpose to present the relevant arguments here but, for the sake of simplicity, I adopt Comrie's position.

For location in time to be meaningful, there needs to be some given or known time for the event time to be related to. In the unmarked case, this deictic anchor is the speech time and the subcategory is called 'absolute tense'. The event time can be the same as the speech time (present tense), varying lengths of time before the speech time (past tense), or varying lengths of time after the speech time (future tense). In the marked case, some time other than the speech time (i.e. the reference time) is

the point to which the event time is related giving rise to categories of 'relative tense' which encode the event time/reference time relationship and, also, the reference time/speech time relationship. For example, in the sample sentence used above – 'As of yesterday, I had been here for three weeks' – the 'pluperfect' relative tense indicates that the event time (ET) is prior to the reference time (RT) which, in turn, is prior to the speech time (ST). The adverbial phrases serve to make the times more specific.

Tense can be graphically represented by use of a time line. In Figure 1, (a) represents time extending indefinitely both into the past (PA) and into the future (FUT) relative to the time of any particular utterance (ST), (b-d) illustrate the three most basic absolute tenses (RT = ST) and (e,f) illustrate two of many possible relative tenses (RT ≠ ST). The terms to the right are the names given to the respective tense forms in standard grammars of English.

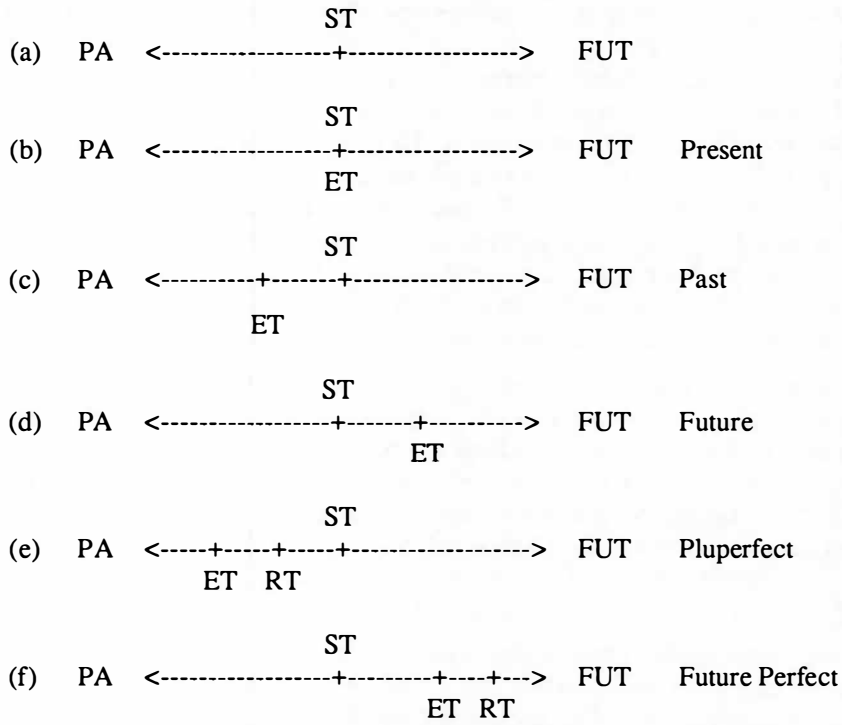

FIGURE 1: REPRESENTATION ON TIME LINE OF SOME CATEGORIES OF TENSE

1.2 ASPECT

Aspect is also a temporal category but, whereas tense pertains to the time of the event relative to some other time, aspect pertains to the temporal nature of the event itself. Comrie (1976:3) defines it as 'different ways of viewing the internal temporal constituency of the situation'. There is both an objective and a subjective element to aspect. The objective element includes such information as how much time the situation lasted and, where the situation is not an instantaneous event, whether the situation was constant, developing or intermittent through its duration. The subjective element indicates whether the speaker views the situation as a complex whole regardless of any internal

temporal complexity or focuses on the internal complexity. The contrast within the subjective element is, in Comrie's terminology (1976:4), perfective versus imperfective.

The Hopper volume cited in the opening paragraphs of this paper puts forward evidence for and characteristics of tense and aspect as discourse features rather than sentence features. Specifically reiterated throughout the volume is the association between perfectivity and foreground material on the one hand, and between imperfectivity and background material on the other hand. It is my belief that, whereas the speaker's selection of perfective/imperfective aspectual perspective does closely correlate with the relative foregrounding of the so-marked sentence (especially in narrative discourse), this does not negate the temporal element in the meaning of these forms. That is, while an imperfective marking on a clause may well serve to background that clause, it also contributes to the determining of the objective aspectual status of the situation.

As mentioned above, the main distinctions made objectively about the aspectual status of a situation concern its duration and its constituency. The simplest aspect is the punctiliar or punctual and refers to situations that are instantaneous, or virtually so. Typical examples are 'hit', 'sneeze' and 'arrive'. Comrie (1976:42-43) points out that most of these situations can be demonstrated by slow-motion film not to be literally instantaneous. He goes on to point out that, in spite of this, most languages do distinguish between these events and those situations which clearly take some time to perform (continuous or durative aspect). Situations having duration can be distinguished as being with or without change throughout their duration. Those without change are referred to most frequently as stative or non-progressive, typical examples being 'sit', 'stand' and 'have' (in those languages where 'have' is expressed verbally). Those changing or developing through time are usually called progressive and are exemplified by 'work', 'eat', 'run'.

Other parameters to consider are the number of occurrences and the particular part of the situation being referred to. A single occurrence of an event can be referred to as semelfactive, but it would be highly unusual for a language to overtly mark this aspectual category since referring to just one instance of an event is the normal or unmarked case. Multiple occurrence can give rise to either iterative or repetitive aspect, or to habitual aspect; it should be noted, however, that habituality involves more than just aspect and so is frequently coded as modality. Finally, a sentence can refer specifically to the commencement or to the completion of a situation, thus giving rise to inceptive or ingressive aspect, or completive or resultative aspect, respectively.

Distinguishing between the subjective and objective elements of aspect, as I do, should help to clarify why some languages can encode a situation as both perfective (viewing the situation as a whole) and having internal complexity as elaborated by Comrie (1976:21-24). It should be obvious also that any situation can be classified on more than one of the above objective parameters resulting, for example, in the repetition of a punctiliar event or the inception of a progressive event.

Aspect can, like tense, be graphically represented on a time line, as illustrated in Figure 2, where (a-c) represent the primary categories of aspect and (d-f) some of the combinations along different objective parameters. Since a single instance of a punctiliar event can not be viewed imperfectively, (a) would have to be considered to also be perfective. Allowing (b-f) to represent the imperfective viewpoint, the perfective can be shown as in (g,h), which are the counterparts to (c,d) respectively.

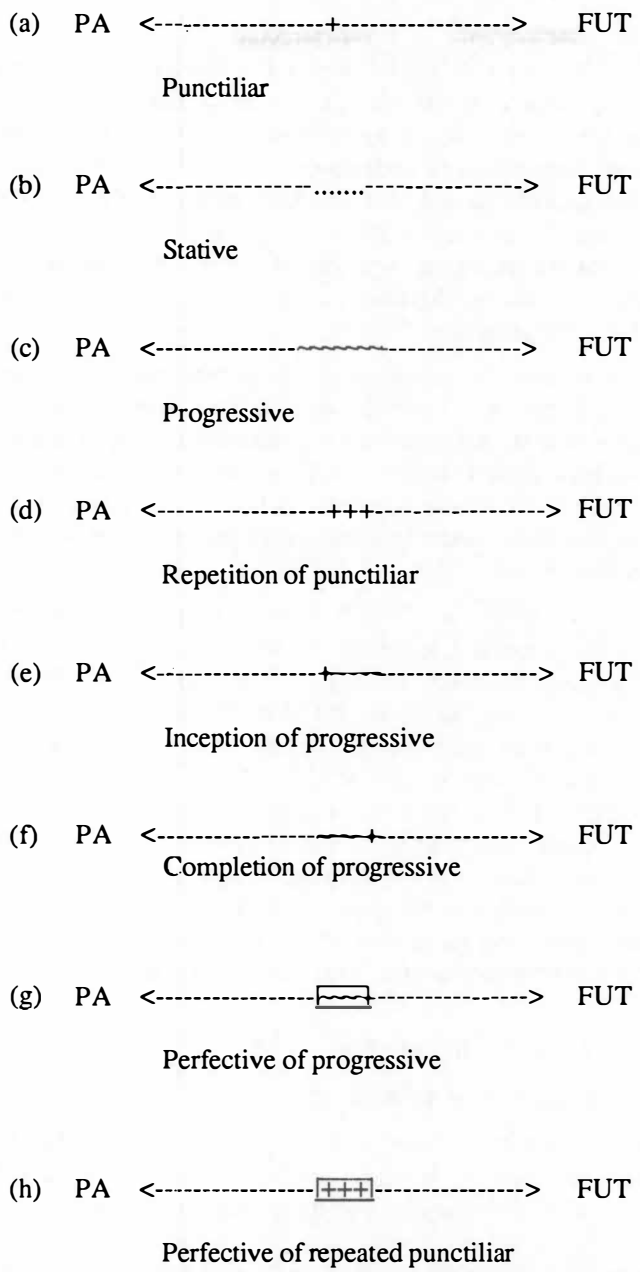

FIGURE 2: REPRESENTATION ON TIME LINE OF SOME CATEGORIES OF ASPECT

1.3 MODALITY

As mentioned in the introductory paragraphs, mood and modality have suffered greatly from underdifferentiation, both as what is to be included in each and as to how they can be sub-categorised; indeed, they are frequently used as synonyms. In his discussion of mood and modality, Crystal (1985:198) states that 'Semantically a wide range of meanings is involved, especially attitudes on the part of the speaker towards the factual content of his utterance, e.g. uncertainty, definiteness, vagueness, possibility'. As the terms are used in this paper, modality refers to the speaker's estimation of the factuality of the utterance, whereas mood refers to the nature of the speaker's motivation for the utterance. Mood is, therefore, closely associated with speech act theory, in general, and illocutionary force, in particular.

A modally unmarked or non-modal sentence is one which has a definite truth value and, conversely, a modally marked sentence is one in which there is some uncertainty about the truth value. This contrast is the basis of the realis/irrealis opposition found in so many languages. Along with tense and aspect, modality can be related to the time line. If the time line itself is taken to be reality, then any situation which the speaker presents as fact can be positioned on the line. Such situations are normally not marked for modality in natural languages and it is on this basis that I refer to them as modally unmarked or non-modal.

If a second line, parallel to the time/reality line is drawn to represent negation, or the assertion of non-factuality, then any modally marked situation can be located between the two lines with the positioning relative to the two lines indicating the degree of probability/improbability of the situation. This gradation is, however, only one parameter for classifying the information included under modality. In addition to the degree of relationship to reality, modality also includes the nature of the relationship to reality such as possibility, necessity, ability and willingness. Degrees of possibility and necessity are usually referred to as epistemic and deontic modality respectively. Degrees of ability and willingness are not as consistently classified; Palmer (1979) has called them 'subject-oriented dynamic modality' and Halliday (1970) 'active modulation'. With these kinds of modality, it is necessary to differentiate between asserting the factuality of the ability or willingness of the performer to do some deed on the one hand, and stating the potentiality of the deed based on the performers ability/willingness on the other hand. This contrast is illustrated in the following English sentences:

I can help him.	*I am able to help him.*
I will help him.	*I am willing to help him.*

The sentences to the left are ambiguous with the focus being upon either the ability/willingness or on the *helping*. Where the focus is on the subject's ability/willingness, then a definite truth value is being asserted and the sentence is, semantically, non-modal just as the sentences to the right are non-modal. Where the focus is on the activity of the main verb, however, the factuality of the event is undetermined and the sentence is, therefore, both syntactically and semantically modal. The non-modal sentences to the right can be modalised, as in *I may be able to help him.* The fact that the sentences to the left can have either meaning is an idiosyncratic feature of English probably arising, diachronically, through metaphoric extension of the meanings of *can* and *will.*

Returning to the time line representation, it should be obvious that, semantically, no future event can be positioned on the line. For example, even the existence of the sun can not be asserted as definitely factual relative to tomorrow (unless uttered by an omniscient, all-powerful deity). Thus,

semantically, all future situations should be situated both to the right of the speech time and off the time/reality line. This is why many languages do not have a future tense marker but indicate all such events as irrealis. Those languages which do have a future tense marker are extending factuality/realis to include high probability and/or definite intention.

I have suggested that negation, as assertion of non-factuality, be represented as a line parallel to the time/reality line. Situations asserted to be false clearly have in common with the modalities outlined above the fact that they are removed from the time line. However, they have in common with situations on the time line the property of having a definite truth value – albeit definite non-truth. This helps account for the fact that some languages treat negation as modal and others as non-modal.

Givón (1982,1984) uses the term 'modality' in a broader sense, reserving the term 'irrealis assertion' for what I have elaborated as modality. In his view, modality includes everything pertaining to factuality – that is, the degree of factuality of the situation and whether or not the speaker is asserting that degree of factuality. (A closely related factor is the source of the speaker's evidence for evaluating the factuality, usually called evidentiality.) Thus, in his schema, the primary categories of modality are:

presupposition	– factuality treated as a given and,therefore, not asserted
realis assertion	– situation asserted as a fact
irrealis assertion	– situation asserted as a possibility
negative assertion	– situation asserted as false

I have chosen to maintain a restricted definition for modality because it seems to me to be more in line with what most linguists refer to as modality – the categories of meaning encoded in English using 'modal verbs'. Admittedly there is circularity in using English modal verbs to define modality but I believe that there is also a semantic commonality, as outlined above. Nevertheless, the factors of assertion/denial and strength of assertion are concepts closely related to modality and are encoded on the Menya verb (albeit in a distinct manner) and so are included in the scope of this paper under the topic of assertion (section 5).

1.4 MOOD

As stated in the preceding section, I am defining mood as referring to the nature of the speaker's motivation for uttering a sentence. This, I believe, is in keeping with the traditional use of the term in speaking of indicative, imperative, subjunctive and interrogative moods.

As a semantic category, it pertains to speech act theory as developed by Austin (1962) and Searle (1969) – especially what have been called illocutionary acts, defined by Lyons (1977:730) as acts 'performed in saying something: making a statement or promise, issuing a command or request, asking a question, christening a ship, etc.' .

Relating this to what has gone before, there are some natural correlations between certain moods and certain tenses and modalities, when viewed semantically. For example, commands and requests necessarily encode situations that are both future to the speech time and off the time/reality line. Therefore, just as we noted that future events may in different languages be marked as future tense, irrealis or both, similarly, commands and requests may be marked as future tense, irrealis, imperative mood or any combination thereof. As will be demonstrated below, the indicators of commands, in Menya, pattern as a modality rather than as a mood or tense.

1.5 RELEVANCE

Another verbal category which is often discussed in relationship to tense and aspect is that of the perfect. Comrie (1976:52) defines it as 'the continuing present relevance of a past situation'. Anderson (1982) discusses in detail the relationship between a large range of concepts that are frequently grouped together (in different combinations) and marked as 'perfect' in different languages. Central to this range of concepts are current relevance and anteriority. The perfect thus indicates a relationship between two events that is more than temporal, and is, therefore, neither a tense nor an aspect as these terms have been described.

In his article *Shifters, Verbal Categories, and the Russian Verb,* Jakobson (1971) attempts to define the different categories of meaning frequently marked on verbs. He does so in terms of features of and relationships between four types of entities: the speech event (Es) and its participants (Ps), and the narrated event (En) and its participants (Pn). One of his categories is the relationship between two narrated events which he calls taxis (EnEn). In his discussion of taxis in Russian, he points to the distinction between temporal relationships and what he calls consequential or internal relationships. This difference can be seen by contrasting *When I arrived, Bill was happy* with *Because I arrived, Bill was happy* in which the relationships between the clauses are temporal and consequential respectively. In his discussion of the relationship between the speech event and a narrated event (EsEn), however, he sees only a temporal relationship as reflected in the term he uses – tense. I suggest that the perfect is the atemporal (consequential or internal) equivalent of tense. And, just as tense can indicate the temporal relationship between the narrated event and either the speech event (absolute tense) or another narrated event (relative tense), so the perfect can indicate the relevance, or consequential, relationship between the narrated event and either the speech event or some other narrated event. As will be demonstrated in section 6, the markers of relevance can be either absolute or relative, and do not necessarily refer to the relevance of an anterior event. Admittedly, this is somewhat different from the typical 'perfect', but as Anderson (1982) points out the perfect does not lend itself to a single definition that applies cross-linguistically, and 'though most uses of the English Perfect fit the meaning "current relevance of anterior event/situation", a few do not...' (p.232).

1.6 METHODOLOGICAL CONSIDERATIONS

There are a number of principles which I consider basic to the nature of language and which underlie my analysis of the Menya verb. Most are related to the general concept of iconicity which posits that the lexicon and syntax of a language are not purely arbitrary but to some degree symbolic of the meaning which they represent. It is not my intention to elaborate or argue for these principles here since this has been ably done by Haiman (1980a, 1980b, 1983) and Langacker (1982a, 1982b, 1987) among others. Suffice it to mention them so that the reader will be aware of these basic motivating principles. They are:

i) True homonymy is rare. Homophonous morphemes are, therefore, assumed to have related, and possibly identical, meanings unless proven otherwise. This arises from the motivating principle of one form-one meaning in the lexicon. It is recognised that diachronic changes can lead to separate meanings or functions for any lexeme, giving rise to 'systematic homonymy' as opposed to 'accidental' or true homonymy.

ii) The structure of a language reflects semantic relationships to a certain degree. Therefore, morphemes which are structurally substitutable for each other should represent distinctions within a single category of meaning. Here, and in the two following points, the potential influence of diachronic change, resulting in the skewing of these principles, is recognised.

iii) As the converse of (ii), morphemes which can co-exist in a single sentence/clause or which occupy different positions in the structure represent different categories of meaning (though possibly related) unless proven otherwise.

iv) As a further application of (ii), the relative proximity of morphemes to each other is indicative of closeness of meaning. Thus, for example, morphemes closer to the verb stem when multiple affixation exists should be more closely associated with the basic proposition than morphemes more distant from it.

v) Semantic and syntactic categories are not discrete entities but the extremes of various continua.

> Membership is therefore a matter of degree: prototypical instances are full, central members of the category, whereas other instances form a gradation from central to peripheral depending on how far and in what ways they deviate from the prototype. (Langacker 1987:17)

Because the prototypes are arranged in semantic space rather than as isolated entities, the further one moves from one prototype the closer one comes to another, making categorisation difficult or even arbitrary.

2.0 AN OVERVIEW OF MENYA

As already mentioned, the purpose of this paper is to study the categories of meaning introduced in section 1 as they are represented in the verbal morphology of Menya. The data was collected during eight years in Papua New Guinea under the auspices of the Summer Institute of Linguistics, 36 months of which were spent in the Menya village of Akwanja.

One native speaker assisted throughout in language learning and analysis, and six others were co-assistants at various times, such that input was available from two native speakers on most occasions. Crucial to the analysis and this presentation has been the use of a wide variety of discourse types from a similarly broad range of authors. The body of texts includes traditional stories, historical narratives, personal experiences, customary behaviour, and descriptions of bird and animal species. Some were oral and others written in their original form, and, while most of the texts were elicited rather than spontaneous, there are some examples of more natural discourse such as in public meetings and home conversations. The analysis is, in some parts, still somewhat tenuous and a number of questions remain unanswered, especially in the areas of mood and modality. At the relevant points, therefore, it will be stated that the analysis is only a tentative suggestion rather than an assertion of fact.

The Menya language is a member of the Angan Family of central Papua New Guinea and is spoken by between 13,000 and 15,000 people. The Angan Family is considered by some to be a stock-level family of the Trans-New Guinea Phylum proposed by Wurm (ed.1975; 1982). This classification is, however, open to debate, as is the very existence of the Trans-New Guinea Phylum.

Franklin (1973:17) refers to this saying '...the relationship of the Angan Family within the Trans-New Guinea Phylum is tenuous at best'. Lloyd (1973:33) reports the following cognate relationships with neighbouring languages of the proposed phylum: East New Guinea Highlands Stock, 5%; Kunimaipan Family, 4%; Pawaian Stock-level Isolate, 3%. Clearly, such figures could result from borrowing, a very common occurrence in Papuan languages.

In common with most Papuan languages, Menya has SOV as its basic sentence-constituent order, and exhibits a morphological and semantic contrast between 'final verbs' and 'medial verbs'. These are so named because they normally occur at the end of sentences and in the middle of conjoined sentences respectively. Also typical of Trans-New Guinea Phylum languages, the medial verbs indicate whether the subject of the following clause is the same or a different entity as the subject of the marked clause. Thus the two simple sentences of (1) can be conjoined into the single sentence (2) with the final verb form *äŋgäqe* becoming the medial form *änäqe* if the same person is referred to, or into the single sentence (3) with the medial form *näqaŋgi* if different people are referred to.

(1) *Iqu buayä äŋgäqe.* *Iqu woŋuäŋqä äukäqe.*
he food ate he garden.to went
He ate. He went to the garden.

(2) *Iqu buayä änäqe, woŋuäŋqä äukäqe.*
he food ate.and garden.to went
He ate and (then) went to the garden.

(3) *Iqu buayä näqaŋgi, woŋuäŋqä äukäqe.*
he food ate.and garden.to went
He ate and (then) the other went to the garden.

This paper is restricted in scope to the final verb forms, since they encode all of the relevant categories of information, whereas the medials encode only a subset of them and add categories relating to the nature of interclausal relationships. The specific objective here is to explain the meaning of the individual morphemes and also of those composite forms whose meaning and usage are not simply a natural product of the constituent morphemes themselves. Medial verb forms will be referred to only as they help in determining and explaining the form and meaning of the morphemes which also occur in final verb forms.

On both morphological and semantic grounds, the final verb forms can be classified as either realis or irrealis. Realis verb forms are used to encode events which are both non-future and definite, the latter term indicating that a specific, factual event or state is being predicated about a specific entity or group thereof. Irrealis verb forms, conversely, refer to events which are potential, future or generic, where generic includes statements referring to events or states predicated of classes of entities, whether timeless or restricted to a specific time period. For example, statements descriptive of traditional behaviour which is no longer practised are normally encoded with irrealis forms, as are statements describing the normal behaviour of various animal species. (For further evidence of habituals patterning with future and potentials, see Haiman 1974.) The realis-irrealis distinction is formalised as non-modal versus modal.

Morphologically, the structure of the two types of forms could be united into a single formula, but it would require complex statements of co-occurrence restrictions and nothing would be gained by such an exercise. The structure of the realis forms is as follows (parenthesis indicating absence in certain forms):

(assertion)-verb nucleus-tense/aspect-subject-(mood)

		ASS	VN	T/A	S	MD
(4)	*Iqu woŋuäŋqä*	*ä-*	*w*	*-k*	*-qä*	*-i.*
	he garden.to	ASS-go-PA/PFV-3SG/ASOC-INDIC				
	He went to the garden.					

		ASS	VN	T/A	S	MD
(5)	*Iqua aŋä*	*ä-*	*mät*	*-miŋ*	*-uwä*	*-ta?*
	they house	ASS-build-PA/IPFV-3PL/DSOC-POLQ				
	Were they building a house?					

		ASS	VN	T/A	S
(6)	*Nyi mbäqä*	*ä-*	*ma*	*-ŋ*	*-ä.*
	I money	ASS-get-PR/IPFV-1SG/ASOC			
	I have money.				

The irrealis forms differ in that, normally, they have one of seven combinations of morphemes in place of 'tense/aspect-subject' in the realis structure. Occasionally aspect is marked in the immediate post-nucleus position; the assertion and mood affixes remain the initial and final affixes respectively.

Involved in these combinations of morphemes are three distinct sets of subject person/number affixes and two positionally differentiated suffixes; various co-occurrence restrictions result in only the seven accepted complexes. The subject marker closest to the verb nucleus is the only morpheme common to all the complexes and is, therefore, called the irrealis subject marker. Table 1 gives the third person singular of the verb *i* 'do' for each of these seven sets, (a) without aspect marking and (b) with the perfective aspect *-q*. The last form given differs from the others in that it only occurs with the aspect marker. The glosses given are only generalisations; the meanings are further delineated in section 4.

	q	S1	*n(i)*	S2	*ŋqä*	S3	3SG form	gloss
1a	-	+	-	-	-	-	*iä*	he must do
1b	+	+	-	-	-	-	*iqo*	he may be doing
2a	-	+	+	-	-	-	*yän*	he can do
2b	+	+	+	-	-	-	*iqon/iqotän*	
3a	-	+	-	-	+	-	*yätäŋqä*	he is going to do
3b	+	+	-	-	+	-	*iqoŋqä/iqotäŋqä*	
4a	-	+	-	-	+	+	*yäŋqi*	he's bound to do
4b	+	+	-	-	+	+	*iqoŋqi*	
5a	-	+	+	+	-	-	*yäniqe*	he will do, later
5b	+	+	+	+	-	-	*iqoniqe*	
6a	-	+	+	+	+	-	*yäniŋqe*	he will do, later
6b	+	+	+	+	+	-	*iqoniŋqe*	
7a	+	+	+	-	-	-	*iqoninji/iqoniŋgä*	he was going to do

TABLE 1: THIRD PERSON SINGULAR IRREALIS FORMS OF *i* 'DO'.

Notes:
1. The third person singular forms of the three subject markers are-*ä(t)*, *-qä* and *-i* respectively.
2. The meaning of *-n(i)* has not yet been determined.

3. The suffix *-ŋqä* has many uses, the common element of meaning being 'potentially affected or effected'.

The following examples illustrate the use of some of the irrealis forms.

		VN	S1	ŋqä	MD
(7)	*Iqu woŋuä*	*i*	*-ä(t)*	*-ŋqä*	*-ta?*
	he work	do-3SG/IR-GOAL-POLQ			
	Will he work?				

		VN	S1	*n(i)*	S2	ŋqä	MD
(8)	*Iqua woŋuä*	*i*	*-p*	*-n(i)*	*-uwä*	*-ŋqä*	*-i.*
	they work	do-3PL/IR-?		-3PL	-GOAL-INDIC		
	They will work (in a few days or more).						

		VN	S1	
(9)	*Ne woŋuä*	*i*	*-an.*	
	1PL work	do	-1PL/IR	
	Let's work!			

		VN	*q*	S1	*n(i)*	MD
(10)	*Iqu woŋuä*	*i*	*-q*	*-ä(t)*	*-n(i)-i.*	
	he work	do-PFV-3SG/IR-?			-INDIC	
	He would have worked.					

The organisation of the body of this paper is determined by the morphological structure of the verb. The morphemes that occur in the same position in the verb determine the Menya formal equivalents of the semantic categories defined in section 1. The order of presentation is as follows (each category constituting a separate section): tense/aspect (combined since they are encoded using portmanteau morphemes), modality (to the extent that the different forms have been analysed), assertion, relevance and mood. Appendix B provides a paradigm of all the forms to be discussed for the verbs *ma* 'get, have' and *i* 'do'. The remainder of this section presents a brief overview of other features of Menya grammar, to provide background which, hopefully, will help the reader to follow the examples.

Menya is a fairly rigid SOV language with nominative-accusative case distinctions. The person and number of the entity deemed to be performing (the subject except in impersonal constructions) is obligatorily marked on the verb as a suffix. The person and number of the most topical affected entity, when human and occasionally when non-human animate, is marked on the verb as a prefix (i.e. OVS verb morphology).

(11)	*Ämaqä*	*iqu*	*woŋuä*	*bu*	*äpmakäqe.*
	ämaqä	*i-qu*	*woŋuä*	*m-tu*	*ä-pma-k-qäqä-i*
	man	that-3SG	garden	down-LOC	ASS-be-PA/PFV-3SG/DSOC-INDIC
	The man was down in the garden.				

(12)	*Nyi*	*äuyäukäqe.*		
	nyi	*ä-uyäu-k-qäqä-i*		
	1SG	ASS-arise-PA/PFV-1SG/DSOC-INDIC		
	I got up.			

(13) *Ämaqä iqu yaqueqä huŋque ämakäqe.*
ämaqä i-qu yaqueqä hun-que ä-ma-k-qäqä-i
man that-3SG pig a-3SG ASS-get-PA/PFV-3SG/DSOC-INDIC
The man obtained a pig.

(14) *Ämaqä täqu (nyi) änäma äpäkäqe.*
ämaqä tä-qu (nyi) ä-n-ma ä-p-k-qäqä-i
man this-3SG 1SG ASS-1SG-get ASS-come-PA/PFV-3SG/DSOC-INDIC
This man brought me.

(15) *Nyi buayäŋqä änyiŋgäqe.*
nyi buayä-ŋqä ä-n-i-n-k-qäqä-i
1SG food-GOAL ASS-1SG-do-DETR-PA/PFV-3SG/DSOC-INDIC
I wanted food.

(16) *Ämaqä iqu buayäŋqä äwiŋgäqe.*
ämaqä i-qu buayä-ŋqä ä-w-i-n-k-qäqä-i
man that-3SG food-GOAL ASS-3SG-do-DETR-PA/PFV-3SG/DSOC-INDIC
The man wanted food.

Examples (11,12) are typical intransitive clauses and (13,14) typical transitives. The *-qu* suffixed to the demonstratives indicates third person singular subject, whether transitive or intransitive, whereas the *-que* suffix indicates third person singular non-subject (this latter form is also used in conjunction with other case-marking post-clitics, hence non-subject rather than object). This distinction only occurs on demonstratives, but since they serve as definite and indefinite articles they are quite frequent. As (12,14) illustrate, personal pronouns use the same form for both subject and object. Examples (15,16) are impersonal constructions; note that the subject form of the demonstrative is used but that the person and number of the subject/experiencer is cross-referenced by the verb prefix rather than the suffix. This construction is called impersonal because it has an undefined actor, obligatorily marked as third person singular.

The entity cross-referenced by the verb prefix is typically the patient but, when a recipient is present, it obligatorily supersedes the patient for cross-referencing; neither noun phrase is case-marked other than as non-subject (17).

(17) *Iqua apäkä huaqui (nyi) ändapäkuwi.*
i-qua apäkä hu(n)-uaqui (nyi) ä-n-tap-k-uwä-i
that-3PL woman a-3P/F 1SG ASS-1SG-give-PA/PFV-PL/DSOC-INDIC
They gave me two women.

In addition to the semantic categories introduced in section 1 and the person/number cross-refences, the affixes on the final verb also indicate (i) the 'voice' of the sentence (benefactive, reflexive and causative being the marked categories) and (ii) certain aspectual distinctions of an internal semantic category rather than the 'speaker-perspective' category.

The three marked voice categories all affect the transitivity of the clause. The benefactive increases the transitivity by 'promoting' the beneficiary from a peripheral, case-marked argument (18) to direct object, losing its case-marking and being cross-referenced on the verb (19). The detransitiviser reduces transitivity indicating (in most instances) that the actor and affected entities are coreferential (20) either reflexively or reciprocally. The causative increases transitivity by introducing an agent to a stative situation (21).

(18) *Iqu yeŋqä kŋuä ätukäqe.*
i-qu ye-ŋqä kŋuä ä-tu-k-qäqä-i
that-3SG 1DU-GOAL sugar ASS-break-PA/PFV-3SG/DSOC-INDIC
He broke a stick of sugarcane for us two.

(19) *Iqu kŋuä (ye) äyatuikäqe.*
i-qu kŋuä (ye) ä-ya-tu-i-k-qäqä-i
that-3SG sugar 1DU ASS-1DU-break-BEN-PA/PFV-3SG/DSOC-INDIC
He broke us two a stick of sugarcane.

(20) *Iqua mäkä äuŋguwi.*
i-qua mäkä ä-u-n-k-uwä-i
that-3PL fight ASS-shoot-DETR-PA/PFV-3P/DSOC-INDIC
They fought each other.

(21) *Iqua yä ätäqätekuwi.*
i-qua yä ä-täqä-te-k-uwä-i
that-3PL tree ASS-stand-CSV-PA/PFV-3PL/DSOC-INDIC
They stood up the post.

These additional categories of information, along with the 'patient' prefix, are part of what I call the 'verb nucleus' in the formula on p.255. Constituency in the verb nucleus is established on the morpho-syntactic basis of inseparability from the main verb, even under nominalisation (22), whereas the other categories can be encoded on an auxiliary verb (23).

(22) *Ŋqä woŋuä nyiyäqä iqu äpäqi.*
n-qä woŋuä n-i-i-qä i-qu ä-p-q-i
1SG-POSS work 1SG-do-BEN-NMSR that-3SG ASS-come-PR/PFV-3SG/ASOC
My workman is coming.

(23) *Iqu woŋuä manyiyäqä imiŋqe.*
i-qu woŋuä ma-n-i-i-qä i-miŋ-qäqä-i
that-3SG work NEG-1SG-do-BEN-NMSR do-PA/IPFV-3SG/DSOC-INDIC
He didn't work for me.

Menya distinguishes two sets of pronouns: personal and demonstrative. For third person reference, the demonstratives are far more frequent than the personals, which have only a limited discourse function; there are no first or second person demonstratives. The personal pronouns are given in Table 2. The demonstrative pronouns distinguish between near (this), far (that), far above (that up there), far below (that down there), far level (that over there) and indefinite (a/an). They are also marked for gender, indicating masculine, feminine, diminutive and aged. The masculine is the 'unmarked' form (used for anything that is not any of the other three specific genders) and is therefore not glossed for gender in the examples. In addition to functioning as pronouns they also serve as specifying articles in the noun phrase. The masculine and feminine of the far demonstratives are given in Table 3 for all numbers, in both subject and non-subject forms.

person	singular	dual	plural
1	*nyi*	*ye*	*ne*
2	*si*	*qe*	*he*
3	*ki*	*qu*	*qu*

TABLE 2: PERSONAL PRONOUNS

	singular	dual	plural
m/subject	*iqu*	*iquaqu*	*iqua*
m/-subject	*ique*	*iquaqui*	*iquau*
f/subject	*i*	*iuaqu*	*iua*
f/-subject	*i*	*iuaqui*	*iuau*

TABLE 3: MASCULINE AND FEMININE FAR DEMONSTRATIVE PRONOUNS

The Menya noun phrase has its head noun followed by all modifiers other than possessor, which precedes.

(24) *Ŋqä yaqueqä naqä iqu äpäqi.*
n-qä yaqueqä naqä i-qu ä-p-q-i
1SG-POSS pig big that-3SG ASS-come-PR/PFV-3SG/ASOC
My big pig is coming.

Peripheral noun phrases in Menya clauses are marked with post-clitics. The demonstrative roots are the base for locatives with a wide range of clitics indicating different relationships; (25,26) illustrate two of these.

(25) *Yeqä aŋä bu hiqaqä äwäkuee.*
ye-qä aŋä m-tu hiqaqä ä-wä-k-ueä-i
1DU-POSS house below-LOC sleep ASS-lie-PA/PFV-1DU/DSOC-INDIC
We two slept down at our house.

(26) *Iqu eqä näŋgisa äpmamiŋqe.*
i-qu eqä n-ŋgisa ä-pma-miŋ-qäqä-i
that-3SG water level-side ASS-be-PA/IPFV-3SG/DSOC-INDIC
He was over on the other side of the river.

The most frequent of the clitics, and also the one with the widest range of meanings, I refer to as the 'goal' case marker. It includes not only destination (27) but also beneficiary (18), object of desire (16), topic of conversation (28) and purpose (29).

(27) *Iqu qäuqä yätuŋqä äikäqe.*
i-qu qäuqä y-tu-ŋqä ä-y-k-qäqä-i
that-3SG forest up-LOC-GOAL ASS-ascend-PA/PFV-3SG/DSOC-INDIC
He went up to the forest.

(28) *Iqu yiŋäŋqä kukŋä ätäkäqe.*
i-qu yiŋä-ŋqä kukŋä ä-t-k-qäqä-i
that-3SG bird-GOAL speech ASS-say-PA/PFV-3SG/DSOC-INDIC
He spoke about birds.

(29) *Ye buayäŋqä äpäkuee.*
ye buayä-ŋqä ä-p-k-ueä-i
1DU food-GOAL ASS-come-PA/PFV-1DU/DSOC-INDIC
We two came for food.

The time of a situation is frequently specified by a time word without any case marker. However, deictic time reference (30), borrowed expressions (31) and temporal clauses are usually marked by *-ŋga*.

(30) *Iqu täŋga äpäqäqe.*
i-qu tä-ŋga ä-p-q-qäqä-i
that-3SG this-time ASS-come-PR/PFV-3SG/DSOC-INDIC
He came today.

(31) *Pokilokäŋga ätimäukäqäqe.*
po-kilok-ŋga ä-timäu-k-qäqä-i
four-clock-time ASS-arrive-PA/PFV-3SG/DSOC-INDIC
He arrived at four o'clock.

One of the locative clitics, *-ŋi,* is used extensively in natural text to indicate givenness – the presuppositional status of the marked phrase. Thus in (32) the first three phrases all constitute the 'topic' as used by Haiman (1978a); no translation into English can reflect this and sound natural.

(32) *Kalo iqu Akuanjätaŋi, tenämunäqä de tuendiŋi,*
Kalo i-qu Akuanjä-ta-ŋi tenämunäqä de tuendi-ŋi
Carl that-3SG Akwanja-from-GVN October day twenty-GVN

iqu änauyäma äukäqe.
i-qu ä-na-uyäma ä-w-k-qäqä-i
that-3SG ASS-1PL-leave ASS-go-PA/PFV-3SG/DSOC-INDIC
From Akwanja on October 20th, Carl left us.

3.0 ASPECT AND TENSE

As the discussion of realis and irrealis final verbs given in section 2 shows, irrealis final verbs do not normally indicate the finer details of tense and aspect which the realis verbs show. This is explainable by the fact that when a proposition is encoded as irrealis the focus of interest is on the degree and nature of the divergence from reality or absolute truth value. When an event is predicated as having definite reality, on the other hand, the temporal details become more relevant and, for Menya verbs, are obligatorily marked.

Tense and aspect are indicated in Menya by the interplay between the portmanteau tense/aspect suffix and the portmanteau subject cross-reference/relevance suffix. (The latter of these two suffixes is more accurately described as the actor cross-reference rather than as the subject cross-reference; the latter term is used as a generalisation since the actor is almost always the subject.) The tense/aspect suffixes, displayed in Table 4, make a three-way distinction in tense (present, past and remote past) and, basically, a two-way distinction in aspect (perfective and imperfective). The imperfective aspect in present tense and in different-referent medials further distinguishes progressive from non-progressive. That the progressive is a subcategory of the imperfective is evidenced morphologically in that the progressive affix is added to the imperfective affix to indicate the progressive aspect. The term 'imperfective' refers to the macrocategory; when specific reference to the non-progressive is intended, the term 'stative' is used. The different-referent (DR) medial tense/aspect suffixes, which are clearly manifestations of the same semantic categories, are included for comparative purposes, and are discussed below (section 3.3). Similarly, the irrealis affixes are included for completeness, though the intersection of aspect and irrealis is not discussed until section 4.

	Perfective	Imperfective	
		(Stative)	Progressive
Present	*-q*	*-ŋ*	*-ätäq-ŋ*
Past	*-k*	*-miŋ*	
Remote Past	*-äŋ*	*-miŋ*	
DR Medial	*-qaŋg*	*-ätaŋg*	*-ätäq-ätaŋg*
Irrealis	*-q*	*-ät*	*-ätäq-ät*

TABLE 4: TENSE/ASPECT SUFFIXES

The subject cross-referencing suffix distinguishes three categories of number (singular, dual and plural) and three categories of person (first, second and third). Here also there is not maximum differentiation, in that second and third persons are not distinguished for dual or plural number. Two sets of suffixes indicate two categories of relevance (associative and dissociative) which reflect different relationships between the predicated situation and the situation to which it is related (speech event or matrix clause). The associative/dissociative distinction manifests itself differently according to context and is the topic of section 6. The reader is asked to accept the validity of the terminology without challenge at this point.

Tables 5 and 6 show the associative and dissociative suffixes respectively. The first and third person singular and first person plural forms of the dissociative set can be one or two syllables, depending upon the speaker, style of speech and speed of utterance. Of the two forms for the third person singular associative, the *-ä* is used only with imperfective (including progressive) final forms, and in this context the imperfective suffix drops out, thus maintaining a distinction in form between third person singular on the one hand, and first person singular and third person plural on the other. Neither set of affixes bears any phonological resemblance to other sets of person/number markers in the language, so it is not possible to speculate as to their origin.

Person	Singular	Dual	Plural
1	*-ä*	*-ue*	*-u*
2	*-n*	*-iny*	*-ä*
3	*-i/-ä*	*-iny*	*-ä*

TABLE 5: ASSOCIATIVE PERSON/NUMBER SUFFIXES

Person	Singular	Dual	Plural
1	*-(qä)qä*	*-ueä*	*-(qä)qu*
2	*-ŋä*	*-iyä*	*-uwä*
3	*-(qä)qä*	*-iyä*	*-uwä*

TABLE 6: DISSOCIATIVE PERSON/NUMBER SUFFIXES

3.1 ASPECT

In section 1.2, I propose that two types of information are commonly encoded as aspect: (i) the temporal nature of the specific situation being described (repetitive, habitual, inceptive, progressive etc.) and (ii) the perspective of the speaker on the situation (viewed as a whole regardless of internal temporal complexity, or viewed with emphasis on internal temporal complexity). The

perfective/imperfective morphological distinction in Menya indicates the speaker perspective (ii). Whichever is chosen, however, some information is given about the temporal nature of the specific situation as a product of that choice in perspective and the inherent semantic property of the verb root. This latter category of information has often been called *Aktionsart,* and has been defined as "the particular way in which the verb presupposes and involves the notion of time" (Vendler 1967:97).

The most elemental criteria for distinguishing verb classes are time involved (punctuality versus durativity) and internal complexity (change or phases during the situation versus lack thereof). This gives rise to a three-way distinction among verbal concepts: punctual (no time taken), process (change or phases through duration) and state (no change of state through duration). Comrie (1976:41-51) and Vendler (1967) both discuss additional distinctions such as telicity (presence or lack of a natural endpoint or climax to the situation) and dynamism (need for continued effort or energy input to keep the situation going). However, they also point out that these require bringing in non-temporal factors, a process which I believe could go on indefinitely. They further point out that language-specific verb roots, as opposed to verbal concepts, can belong to more than one of these classes, as we shall see is the case for Menya.

Punctual verbs are those which refer to an event which takes place instantaneously such that at one moment the event is not true and yet a moment later it is true. Typical examples, universally, are 'arrive', 'die' and 'cough'. Since the imperfective draws attention to the internal temporal constituency of the situation being predicated, it is to be expected that perfective aspect is the unmarked form for punctual verbs (33,34), and that the imperfective forms can only be used when a repetitive or habitual performance of the situation is being predicated (35,36). As is to be expected, where imperfective aspect distinguishes between progressive and stative, the latter is incompatible with punctual verbs.

(33) *Eqä mäŋi ätimäukuee.*
eqä m-ŋi ä-timäu-k-ueä-i
water down-LOC ASS-arrive-PA/PFV-1DU/DSOC-INDIC
We two arrived at the water.

(34) *Yaqueqä iqu äpäukoŋgäqe.*
yaqueqä i-qu ä-päukon-k-qäqä-i
pig that-3SG ASS-die-PA/PFV-3SG/DSOC-INDIC
The pig died.

(35) *Eqä naqä huŋqu iqueqä aŋä täŋä*
eqä naqä hun-qu i-que-qä aŋä täŋä
water big a-3SG that-3SG-POSS house near

iqisa ätimäuätäqä.
i-qi-ta ä-timäu-ätäq-ä
that-LOC-from ASS-arrive-PRGV-3SG/ASOC/STV
A large river emerges from near his house.

(36) *Ämaqä ita äpäukonämiŋuwi.*
ämaqä i-ta ä-päukon-miŋ-uwä-i
man that-from ASS-die-PA/IPFV-3PL/DSOC-INDIC
For that reason men used to die.

The large majority of Menya verbs typically predicate processes, including speech, motion and work activities. Process verbs, though naturally involving temporal complexity by definition, are also typically used in perfective forms in Menya, implying that the speaker is choosing to view the situation as a whole (37,38). Again, the imperfective forms are used only to emphasise the temporal complexity, though in this case it can be the complexity of a single instantiation (39,40) as well as iterativity or habituality (41) of the process.

(37) *Ämaqä täqu päqi?*
ämaqä tä-qu p-q-i
man this-3SG come-PR/PFV-3SG/ASOC
Who is coming? (The near demonstrative pronouns are used as WH-pronouns.)

(38) *Woŋui Dewiti iqu kiqä kiui*
woŋuä-i Dewiti i-qu ki-qä ki-uä-i
garden-DEF David that-3SG 3SG-POSS 3SG-POSS-DEF

ikäqe.
i-k-qäqä-i
do-PA/PFV-3SG/DSOC-INDIC
Regarding work, David did his own.

(39) *Ne ti ätuqu "Ne huänaqä täu*
ne ti ä-w-t-q-u ne huänaqä tä-u
1PL thus ASS-3-say-PR/PFV-1PL/ASOC 1PL road this-LOC

äquyepätäqäŋunä".
ä-quyep-ätäq-ŋ-u-nä
ASS-come.down-PRGV-PR/STV-1PL/ASOC-QT
We said this, "We are coming along this road".

(40) *Huänaqeu qe äwämiŋque.*
huänaqä-i-u qe ä-wä-miŋ-qäqu-i
road-DEF-LOC CESS ASS-go.down-PA/IPFV-1PL/DSOC-INDIC
We went down the road.

(41) *Päwä imäkätäqäŋuwä huŋqu*
päwä imäk-ätäq-ŋ-uwä hun-qu
power make-PR/PRGV-PR/STV-3PL/DSOC a-3SG

qe änätäma äpäiqe.
qe ä-na-täma ä-p-y-q-qäqä-i
CESS ASS-1PL-get ASS-come-go.up-PR/PFV-3SG/DSOC-INDIC
One of the power station workers brought us up.

In (39) the motion predicated is clearly in progress at the time of speech – it is the response to a person met along the way who asked where the speaker was going. In (37), however, the motion is also clearly in progress since the man in question may be visibly approaching when the question is asked, yet the perfective is used. Thus, for the perfective to be used, in Menya, the event does not even need to be completed before it can be viewed as a whole. The motion in (40) is not in progress at the time of speech but the speaker of this, and (39), exaggerates the distances travelled throughout the text by using (among other devices) imperfective verb forms. The referent in (41) is identified as

one who works at the power station; not just one who was working there at the time, but one who habitually did so.

Verbs predicating speech are typically perfective when used to introduce a quote (39,42) or to refer to a single instance of speech (e.g. 'What did you say?') but imperfective when referring to a conversation having taken place (43,44) without citing any of what was said. This probably arises from the facts that conversations are a series of speeches uttered by more than one person and that there is greater conceptual difficulty in seeing, as a unit, a complex situation with alternating actors.

(42) *Buayäŋqä täqä qe äyatäkäqe,*
buayä-ŋqä täqä qe ä-ya-t-k-qäqä-i
food-GOAL call CESS ASS-1DU-say-PA/PFV-3SG/DSOC-INDIC

"Buayä nyitä anä natuŋqä yapinyäqä".
buayä nyi-tä anä n-a(tu)-ŋqä yap-iny-qä
food 1SG-with together eat-1PL/IR-GOAL come.up-2DU/IR-QT
He called to us two about food, "Come up to eat with me!".

(43) *Quoyaŋä huŋqutä queya ätämiŋuee.*
quoyaŋä hun-qu-tä queya ä-t-miŋ-ueä-i
old.man a-3SG-with story ASS-say-PA/IPFV-1DU/DSOC-INDIC
I and an old man were talking.

(44) *Päitetäqä iqu Jos iqutä kukŋä*
päitetäqä i-qu Jos i-qu-tä kukŋä
pilot that-3SG George that-3SG-with talk

tätäqätaŋgiyäŋga...
t-ätäq-ätaŋg-iyä-ŋga
say-PRGV-DR/IPFV-3DU/DSOC-time
While the pilot and George were talking...

State verbs predicate situations that continue through time without variation. (Comrie (1976:49) would add the criterion that they do so without continual input of energy or effort.) In Menya, this class includes existentials (45,46), possession (47) and the senses of sight (48) and hearing (49).

(45) *Iqi yä naqä huŋqu ätäqäuä.*
i-qi yä naqä hun-qu ä-täqäu-ä
that-LOC tree big a-3SG ASS-stand-3SG/ASOC/STV
A large tree stands there.

(46) *Iqueqä apäki aŋä yäŋi*
i-que-qä apäkä-i aŋä y-ŋi
that-3SG-POSS woman-DEF house up-LOC

äpmeŋinyäqä.
ä-pma-ŋ-iny-qä
ASS-be-PR/IPFV-3DU/ASOC-QT
His two wives are up at the village.

(47) *Nyi mbäqä kuapänä ämeŋä.*
nyi mbäqä kuapä-nä ä-ma-ŋ-ä
1SG money many-FCS ASS-get-PR/STV-1SG/ASOC/STV
I have plenty of money.

(48) *Tä nyi ämaqä hiŋuä äqunäŋänä.*
tä nyi ämaqä hiŋuä ä-w-q-n-ŋ-ä-nä
this 1SG man eye ASS-3-rub-DETR-PR/STV-1SG/ASOC-QT
This is a **man** that I'm looking at.

(49) *Nyaqä kukŋä qätä nyiyäŋän?*
n-yaqä kukŋä qätä n-i-i-ŋ-n
1SG-POSS talk ear 1SG-do-BEN-PR/STV-2SG/ASOC
Do you understand me (lit. my talk)?

State verbs do frequently occur in perfective forms, but in these cases the act initiating the state (50,51), or the state as a whole (52,53), is in view. Progressive forms, accordingly, indicate that the process whereby the state comes into being is in progress (54). The fact that progressive and stative forms are not distinguished for past and remote past renders it difficult to determine which situation, the state or the initiating process, is being referred to when such forms are used.

(50) *Yeqä aŋä bu päŋqä eäta hiqaqä*
ye-qä aŋä m-tu päŋqä ä-i-äta hiqaqä
1DU-POSS house down-LOC place ASS-put-1DU/SR sleep

qe äwäkuee.
qe ä-wä-k-ueä-i
CESS ASS-go.down-PA/PFV-1DU/DSOC-INDIC
We two put (our things) in the house and went to sleep/lie down.

(51) *Eqä yakä hiŋuä äquŋqäqäque.*
eqä yakä hiŋuä ä-w-q-n-q-qäqu-i
water bridge eye ASS-3-rub-DETR-PR/PFV-1PL/DSOC-INDIC
We saw the bridge over the river.

(52) *Hanjuwäŋi iqu hia huŋquaqui huŋquaqui*
Hanjuwä-ŋi i-qu hia hun-quaqui hun-quaqui
Hanjuwa-LOC that-3SG night a-3DU a-3DU

hiqaqä äwäkäqäqe.
hiqaqä ä-wä-k-qäqä-i
sleep ASS-go.down-PA/PFV-3SG/DSOC-INDIC
He slept at Hanjuwa for four nights.

(53) *Balusiŋqä hiŋuä äqunan biŋsu*
balusi-ŋqä hiŋuä ä-w-q-n-an biŋsu
plane-GOAL eye ASS-3-rub-DETR-1PL/SR missionary

iqutä anä äpmakäque.
i-qu-tä anä ä-pma-k-qäqu-i
that-3SG-with together ASS-be-PA/PFV-1PL/DSOC-INDIC
We watched for the plane (and) stayed with the missionary.

(54) *Yakä hiŋuä äqunätäŋque,*
yakä hiŋuä ä-w-q-n-ätäq-ŋ-qäqu-i
bridge eye ASS-3-strike-DETR-IPFV-PR/STV-1PL/DSOC-INDIC

iqu täqä änatäqe
i-qu täqä ä-na-t-qäqä-i
that-3SG call ASS-1PL-say-3SG/DSOC-INDIC
While we were looking at the bridge, he called us.

It will be noted that some state verbs, when in perfective form, have a meaning which is an extension of the 'initiation-of-state' meaning. For example, the verb root *-wä-* in stative form means 'lie' or 'sleep' (52), whereas in perfective form it can mean 'lie down' (50) or 'go down' (40). Similarly, the verb *-ma-* means 'have' when stative (47) and 'get' when perfective even though the getting may not result in possession (55).

(55) *Iqu änäma äyapäqe.*
i-qu ä-na-ma ä-yap-q-qäqä-i
that-3SG ASS-1PL-get ASS-come.up-PR/PFV-3SG/DSOC-INDIC
He brought us up.

It would be possible to classify these as distinct verb roots – one state and the other process – but this would be counterintuitive since the meanings are clearly related. It would also be possible to consider the process verb to be basic and analyse the stative forms as referring to an ongoing but terminable situation resulting from the process, somewhat comparable to perfect aspect. This would require, however, the significant restriction that the 'result' be terminable, which goes counter to what is most typically considered to be perfect – the current relevance of a previous event which can be invoked at any time. Thus, whereas the English 'I have sat on the king's throne' can be claimed by the speaker as true at any time after the event, a translation using the Menya stative form under consideration could only be true as long as the speaker is still sitting on the throne. I therefore describe the state meaning as basic, with the process meaning as an extension of the 'initiation-of-state' meaning.

In summary, whereas state verbs occur with all three aspects, punctual verbs can never be inflected as stative. In only one instance has a process verb been observed in a stative form. In that instance (56) the context is a description of the process of making, and learning to make, the traditional men's grass skirt. In this sentence the speaker is asserting that they still continue this practice, and it is possible, therefore, that he is picturing the fact that they still make the skirts as one of their attributes rather than as one of their habitual activities.

(56) *Neqä yäqänä imäkänäŋu.*
ne-qä yäqänä imäk-n-ŋ-u
1PL-POSS still make-DETR-PR/STV-1PL/ASOC
We are still making them for ourselves.

Punctual verbs in imperfective forms can only refer to multiple performance of the activity, whereas process and state verbs with imperfective aspect can refer to either multiple performance or the internal complexity of a single instance.

State verbs in perfective form can refer to the event initiating the state or to the state viewed as a whole. Process verbs in perfective form refer to the process viewed as a complex whole, whereas for punctuals verbs the perfective form is the way to refer to a single instance of the event.

3.2 TENSE

The vertical parameter of Table 4 above, indicates three different time relationships between the predicated event and the speech event – present, past and remote past. It has probably already been noted, however, that several instances of the present suffixes have been translated as past, such as (51) (repeated as (57) for convenience).

(57) *Eqä yakä hiŋuä äquŋqäqäque.*
eqä yakä hiŋuä ä-w-q-n-q-qäqu-i
water bridge eye ASS-3-strike-DETR-PR/PFV-1PL/DSOC-INDIC
We saw the bridge over the river.

Present tense propositions are encoded as the product of the present tense/aspect suffixes and the associative actor suffixes. In the elicitation and translation of isolated sentences, present tense/aspect with associative subject is translated as 'same time as' (58) or 'immediately before' (59) the speech time, present tense/aspect with dissociative subject as 'within the past two or three days' (60), past tense/aspect with dissociative subject as 'up to ten years ago' (61) and remote past tense/aspect with dissociative subject as 'prior to ten years ago' (62). The forms referring to two or three days past will be referred to as near past. Forms combining past or remote past tense/aspect with associative subject are not accepted in elicited data. Exceptions occurring in natural discourse will be discussed in section 6.

(58) *Iqua aŋä qäpu ämätäqä.*
i-qua aŋä qäpu ä-mät-q-ä
that-3PL house CMPL ASS-build-PR/PFV-3PL/ASOC
They are just finished building the house.

(59) *Si suäqä ätn?*
si suäqä ä-t-q-n
2SG what ASS-say-PR/PFV-2SG/ASOC
What did you say (just now)? – (PR/PFV deletes before 2SG)

(60) *Iqua aŋä qäpu ämätäquwi.*
i-qua aŋä qäpu ä-mät-q-uwä-i
that-3PL house CMPL ASS-build-PR/PFV-3PL/DSOC-INDIC
They finished building the house (within the last few days).

(61) *Iqua aŋä qäpu ämätäkuwi.*
i-qua aŋä qäpu ä-mät-k-uwä-i
that-3PL house CMPL ASS-build-PA/PFV-3PL/DSOC-INDIC
They finished building the house (within the last ten years).

(62) *Iqua aŋä qäpu ämätäŋuwi.*
i-qua aŋä qäpu ä-mät-äŋ-uwä-i
that-3PL house CMPL ASS-build-RPA/PFV-3PL/DSOC-INDIC
They finished building the house (more than ten years ago).

Recorded discourse usage of these forms does not, however, adhere to these distinct time zones. If the remote past *-äŋ* indicates time beyond ten years ago, then all legends and historical narratives should be in this tense. However, the predominant tense in these genres is the past tense *-k*. Example (63) is the opening sentence to a legend and is preceded only by a title consisting of the

name of the major character. All the final verbs in the text are in the past tense; the only possible indicator of the remoteness is the common cultural knowledge of who Pataqu was.

(63) *Pätäqugu apäkä hui buayä hikä enyeqaŋgi*
Pätäqu-qu apäkä hu(n)-i buayä hikä enye-qaŋg-i
Pataqu-3SG woman a-3SG/F food stone heat-DR/PFV-3SG/ASOC

aŋä yätuŋqä äpäikäqe.
aŋä y-tu-ŋqä ä-p-y-k-qäqä-i
house up-LOC-GOAL ASS-come-go.up-PA/PFV-3SG/DSOC-INDIC
Pataqu came to the house while a woman was heating stones for cooking.

In a historical narrative told by the same speaker, the first three verbs are in the remote past tense, but the majority thereafter are past tense, with just an occasional remote past tense thrown in. Example (64) is the first sentence, containing the first two verbs. It is tempting to say that the remote past is used to establish the scene, and that the past is then used for the main events. However, remote past tense forms later in this text, and the absence of such forms in the setting of others, prevent so simple an analysis.

(64) *Qäukuä wätakä ämäuäŋqe, ämaqä*
qäukuä wätakä ä-mäu-äŋ-qäqä-i ämaqä
sky ash ASS-descend-RPA/PFV-3SG/DSOC-DEF man

yänanjuäqä huŋqu äquyepäŋqe.
yänanjuäqä hun-qu ä-quyep-äŋ-qäqä-i
spirit a-DEF ASS-come.down-RPA/PFV-3SG/DSOC-INDIC
Regarding the sky-ash descending, a spirit man came down.

Inconsistencies also occur across the past/near past boundary. In one text, describing a journey which began six days previously and ended two days previously with four days inactivity intervening, the forms pertaining to the initial day are consistently in past tense, as expected. Those referring to the last day, however, encode only one event in near past form. The last day's events are given below in free translation with the tense of the final verbs indicated.

> "...he went down (PA) to Menyamya...he came up (NP) to Kapo. He came up (NP) to Kapo, he did not arrive (PA) at noon – the road was no good ...He arrived (PA) at Kapo at 4.00 p.m....he came up (PA) to his village, Akwanja...He arrived at 6.30 p.m."

What is significant about arriving at Kapo that it alone should be in the near past tense and all the other events in the unexpected past tense? The story was told at Akwanja so the location of the speech act is not a factor.

One of the most frequent domains for deviant usage of tense is with quote verbs. Kiparsky (1968:32fn.) notes a similar propensity in Indo-European languages, even among those languages which do not otherwise have an historical present (the form he is concentrating on). Direct quotes in Menya are frequently introduced and either interspersed or closed with a quote verb, yet there is not always consistency of tense even between such redundant pairs.

(65) *"Häŋqä" ätuqä, "Iqueqä apäkä*
häŋqä ä-w-t-q-ä i-que-qä apäkä
no ASS-3-say-PR/PFV-1SG/ASOC that-3SG-POSS woman

iuaqu *yäŋiyäqä"* *ätukäqe.*
i-uaqu *y-ŋi-i-qä* *ä-w-t-k-qäqä-i*
that-3DU/F up-LOC-INDIC-QT ASS-3-say-PA/PFV-1SG/DSOC-INDIC
"No!", I say, "his two wives are up (at the house)", I said.

(66) *Ti* *ätuäŋqe* *"Täŋgaŋi*
ti *ä-w-t-äŋ-qäqä-i* *tä-ŋga-ŋi*
thus ASS-3-say-RPA/PFV-3SG/DSOC-INDIC this-time-GVN

piyä *naqänäŋä* *hui* *qiyätäŋqeqä"*
piyä *naqä-näŋä* *hui* *q-ä(t)-ŋqä-i-qä*
rain big-very some rub-3SG/IR-GOAL-INDIC-QT

ätukäqe.
ä-w-t-k-qäqä-i
ASS-3-say-PA/PFV-3SG/DSOC-INDIC
He said (RPA), "Today there's going to be some very heavy rain", he said (PA).

Fleischmann (1978) discusses similar types of tense variation in Bine, a Papuan language unrelated to Menya. She reviews various explanations proposed for such variation in tense usage in other languages and finds evidence for all of them in Bine texts. Detailed text analysis for this problem in Menya is not yet complete, so any suggested reasons for the variation in Menya tense usage would be premature in this paper. However, it does appear to be very likely that tense selection is not dependent strictly upon the relationship between the event time and either the speech time or the event time of some other predication, but upon the speaker's evaluation of some other criterion or criteria.

3.3 DIFFERENT-REFERENT MEDIALS

Medial verbs in Papuan languages are dependent verb forms, which typically occur as verbs of non-final clauses in sentences, and are not as fully inflected as final verbs, being dependent upon the final verbs for at least mood and frequently tense also. They typically indicate something of the nature of the relationship between the clauses in sequence, especially as to whether the topical participant (usually subject) is the same or different from that of the following clause. Menya medial forms which indicate changes in topical participants bear considerable similarity to the realis finals which we have been considering thus far in this section. As Table 4 indicates (section 3.0), they encode aspect in the same categories and with somewhat related forms. They also use the same two sets of subject cross-referencing suffixes. Their structure is represented as follows:

(assertion)-verb nucleus-aspect-subject-(case)

Examples (67-70) illustrate the different aspects in conjunction with dissociative subject suffixes.

(67) *Basi* *aŋä* *yäpä* *yäŋgisa* *pmeqaŋgäquŋga*
basi *aŋä* *yäpä* *y-ŋgisa* *pma-qaŋg-qäqu-ŋga*
bus house within up-side be-DR/PFV-1PL/DSOC-time

qe *änäma* *äyapäqe.*
qe *ä-na-ma* *ä-yap-q-qäqä-i*
CESS ASS-1PL-get ASS-come.up-PR/PFV-3SG/DSOC-INDIC
When we were inside the bus he brought us up (home).

(68) *Natäqaŋgäqäŋga* *ne* *ti* *qe*
na-t-qaŋg-qäqä-ŋga *ne* *ti* *qe*
1PL-say-DR/PFV-3SG/DSOC-time 1PL thus CESS

ätuqäque...
ä-w-t-q-qäqu-i
ASS-3-say-PR/PFV-1PL/DSOC-INDIC
After he spoke to us we answered thus...

(69) *Iquaqu* *kukŋä* *tätäqätaŋgiyäŋga*
i-quaqu *kukŋä* *t-ätäq-ätaŋg-iyä-ŋga*
that-3DU talk say-PRGV-DR/IPFV-3DU/DSOC-time

nyi *yuqaye* *ämamiŋqe.*
nyi *yuqayä-i* *ä-ma-miŋ-qäqä-i*
1SG cargo-DEF ASS-get-PA/IPFV-1SG/DSOC-INDIC
While they two were talking I got the cargo.

(70) *Nyi* *Hauän* *qoquawä* *täu* *pmetaŋguwäŋga*
nyi *Hauän* *qoquawä* *tä-u* *pma-ätaŋg-uwä-ŋga*
1SG Haauan rest place this-LOC be-DR/IPFV-3PL/DSOC-time

qe *äwimeqe.*
qe *ä-w-ima-q-qäqä-i*
CESS ASS-3-meet-PR/PFV-1SG/DSOC-INDIC
I met them while they were at the Haauan resting place.

The medial verb in (68) refers to a single utterance, viewed as a whole – hence the perfective aspect– whereas that in (69) refers to a conversation which was going on while the speaker was working – hence the imperfective. In (67) the speaker and those with him had not been in the bus for any length of time when the journey began; the significant situation was that the act of getting in the bus was accomplished regardless of how long they had been there. In (70), on the other hand, the implication is that the people were resting there for a period of time.

Medial verbs are dependent on the subsequent final verb for their absolute tense; however, there is a strong, if not absolute, correlation between perfective aspect and relative past tense on the one hand, and imperfective aspect and relative present tense on the other, as (67-70) illustrate. This observation brings about an interesting contrast with the proposals of Hopper (1979, 1982) and others associating perfective aspect with foreground and imperfective aspect with background. This correlation is also present in the above examples. Entering the bus is a necessary event on the time line of the narrative, whereas the people's resting at Haauan is secondary information about them at the time of the speaker's meeting them. In (68) the initial speech was an event in sequence with the response, both of which were part of the narrative event line, whereas the conversation in (69) is not essential to the narrative and not in sequence. However, examples like (71), where an imperfective final form ends the sentence, clearly indicate that this analysis does not fit perfectly.

(71) *Huänaqeu* *qe* *äwämiŋque.*
huänaqä-i-u *qe* *ä-wä-miŋ-qäqu-i*
road-DEF-LOC CESS ASS-go.down-PA/IPFV-1PL/DSOC-INDIC
We went down the road (for a time).

Comrie (personal communication) has pointed out that the high coincidence of the perfective with foregrounding is a natural outcome of its basic meaning – the situation seen as a complete whole as if it were a point in time. Narrative discourse typically presents events as a successive, ordered series and, therefore, the perfective is a natural medium of expression for the major events.

As was the case with tense usage, the use of aspect in discourse has not been sufficiently analysed to state the extent to which Hopper's observations are applicable to Menya or the extent to which relative tense is a part of the meaning.

4.0 MODALITY

I define modality as the speaker's estimation of the relationship of the predicated situation to the time/reality line, both in terms of its degree of potentiality and the nature of its relationship (necessity, desire, generality etc.). In Menya, all predications for which factuality of a specific situation is not being asserted or assumed use irrealis verb forms (as introduced in section 2). In addition to their use in encoding any situation future to the speech act, they are the primary vehicle for expressing generic statements about animal behaviour and both modern and traditional cultural norms. The aim of this section is to expound, as far as is possible at this stage of analysis, the distinctions in modality which are made in Menya by the different irrealis verb forms.

It is pointed out in section 2 that the only morpheme common to all the irrealis verb forms is the earliest occurring subject cross-reference, which I have called the irrealis person/number suffix. The forms of this suffix set are given in Table 7. As comparison with Tables 2, 5 and 6 shows, there is no phonological relationship between this and any other set of person/number markers. There is considerably more variation in form for this set than for any of the others. The intrusive *t* in three of the person/number suffixes is required in some irrealis forms but not in others; only in two sets of forms is it optional. The *ä* of the third singular becomes *o* following *q*; also, the first persons dual and plural add a *u* between the *q* and the vowel of the suffix.

Person	Singular	Dual	Plural
1	*m*	*e*	*an/a(tu)*
2	*(t)*	*i(ny)*	*i(ny)*
3	*ä(t)*	*p*	*p*

TABLE 7: IRREALIS PERSON/NUMBER SUFFIXES

4.1 IMMEDIATE

The morphologically simplest of the modalities is the immediate, which consists of the verb nucleus plus the irrealis person/number suffix. The function of these forms seems to be to express a strong, speaker-imposed obligation upon the subject to effect the situation immediately. They are, therefore, the functional equivalent of the English imperative mood but a more accurate translation into English may be something like 'I insist that...' rather than the imperative. Just as the complement of 'I insist that...' is not restricted as to the identity of its subject, so the Menya immediate modality can occur in any person and number.

(72) *Si täqi pma.*
si tä-qi pma-(t)
2SG this-LOC be-2SG/IR
You stay here.

(73) *Qe hiŋuä ŋqänyinyäqä.*
qe hiŋuä n-q-n-iny-qä
2DU eye 1SG-rub-DETR-2DU/IR-QT
You two watch me.

(74) *Ne aŋä naqänäŋä huŋqu ämätanä.*
ne aŋä naqä-näŋä hun-qu ä-mät-an-nä
1PL house big-very a-3SG ASS-build-1PL/IR-QT
We're going to (We must) build a very big house.

(75) *Iqua quamä äpmapu.*
i-qua quamä ä-pma-p
that-3PL seated ASS-be-3PL/IR
Let them (They must) be seated.

Examples (73,74) are direct quotes taken from text, as indicated by the quote marker suffixed to the verb. It will be noted that the second person immediates (72,73) do not have the assertion prefix whereas the first person (74) and third person (75) forms are marked. This distinction is consistent for immediate forms, and its importance is discussed in section 5. (In general, irrealis verb forms are not marked for assertion.)

4.2 INTENTIVE

The intentive is by far the most common of all the sets of irrealis verb forms. It consists of the verb nucleus, the irrealis person/number suffix and the 'goal' suffix *-ŋqä*. It is used in everyday conversation to express intention for the immediate future (generally up to twenty-four hours) (76,77) and habitual behaviour to be instituted immediately (78,79).

(76) *Nyi yiŋä amäŋqä kukŋä tämäqe.*
nyi yiŋä amä-ŋqä kukŋä t-m-ŋqä-i
1SG bird *amä*-GOAL talk say-1SG/IR-GOAL-INDIC
I am going to talk about the *amä* bird.

(77) *Awiŋgaŋi, ye yeqä aŋämäqä äkiuyäma*
awiŋga-ŋi ye ye-qä aŋä-m-ŋqä ä-k-uyäma
tomorrow-GVN 1DU 1DU-POSS house-LOC-GOAL ASS-2SG-leave
äyeŋqe.
ä-y-e-ŋqä-i
ASS-go.up-1DU/IR-GOAL-INDIC
Tomorrow we two will leave you and go home.

(78) *Täŋgaŋi, si apäkä ämeŋi,*
tä-ŋga-ŋi si apäkä ä-ma-q-n-ngi
this-time-GVN 2SG woman ASS-get-PR/PFV-2SG/ASOC-GVN

woŋuäŋqä kŋuä induäqändäŋqe.
woŋuä-ŋqä kŋuä induäqän-t-ŋqä-i
work-GOAL thought think-2SG/IR-GOAL-INDIC
Today you have married and you are going to (need to) think about work.

(79) *Iqua Matiu iqueqä aŋä iqi*
i-qua Matiu i-que-qä aŋä i-qi
that-3PL Matthew that-3SG-POSS house that-LOC

timäupäŋqe.
timäu-p-ŋqä-i
arrive-3PL/IR-GOAL-INDIC
They are going to visit (start visiting) Matthew's house.

The last two examples are taken from a discussion between a father and his son on the day of the son's wedding. Example (78) could be interpreted as referring only to a single instantiation of the situation in the immediate future but for (79) this is not possible. 'They' refers to the son's relatives, who will now start to visit him whereas they did not while he was still single and spending most of his time with other young men.

The intentive is also used clause medially to express the purpose for the matrix event. It is the common element of intention in this and the above usages of the intentive that gives it its name. The subject of the intended situation may be the same as that of the matrix clause, as in (80), or different from it, as in (81).

(80) *Iqu päŋäŋqätä guäŋqätä hiŋuä qunätäŋqä*
i-qu päŋä-ŋqä-tä guä-ŋqä-tä hiŋuä w-q-n-ä(t)-ŋqä
that-3SG betel-GOAL-and rope-GOAL-and eye 3-hit-DETR-3SG/IR-GOAL

qäuqä yätuŋqä äikäqe.
qäuqä y-tu-ŋqä ä-y-k-qäqä-i
forest up-LOC-GOAL ASS-go.up-PA/PFV-3SG/DSOC-INDIC
He went up to the forest to look for betel nut and bush-rope.

(81) *Nyi humbu dapätäŋqä*
nyi hun-pu n-tap-t-ŋqä
1SG a-DIM 1SG-give-2SG/IR-GOAL

äquyepäqänä.
ä-quyep-q-ä-nä
ASS-come.down-PR/PFV-1SG/ASOC-FCS
I have come for you to give me some.

Example (80) was selected because it well illustrates the varied uses of the *-ŋqä* suffix which I consistently gloss as goal. In the phrase 'to the forest', its use marking destination is evidenced, and, in the coordinate phrase 'for betel nut and bush-rope', it is marking the object of a search. In the overview of Menya in section 2, it is demonstrated that this suffix marks a wide range of semantic relations, including purpose. The example given there is 'I have come **for food**'. The common element of meaning in all its functions, including the intentive verb forms and others to be mentioned below, is that of potentially affected (nominals) or potentially effected (situations).

The other main use of the intentive is for the expression of generic statements, especially in texts describing typical behaviour of animal species (82,83) but also pertaining to human behaviour (84,85).

(82) *Qui yä yäquwäqä yäpem nyuätäŋqänä.*
qui yä yäquwäqä yäpä-im nyuä-ä(t)-ŋqä-nä
egg tree leaf inside-LOC bear-3SG/IR-GOAL-FCS
It lays its eggs in (a pile of) leaves.

(83) *Yä häukä metäŋqänä.*
yä häukä ma-ä(t)-ŋqä-nä
tree fruit get-3SG/IR-GOAL-FCS
It gathers fruit.

(84) *Qäpu äumbiyi, äquatämbäŋqä.*
qäpu ä-u-n-piyi ä-quatä-n-p-ŋqä
CMPL ASS-shoot-DETR-3PL/SR ASS-leave-DETR-3PL/IR-GOAL
They would finish fighting each other then separate.

(85) *Ämaqä puqä täqeuŋqä watuŋqä.*
ämaqä puqä t-qä-i-u-ŋqä w-a(tu)-ŋqä
man magic say-NMSR-DEF-LOC-GOAL go-1PL/IR-GOAL
We used to go to the shaman (for medicine).

4.3 ABILITATIVE

The abilitative differs from the intentive in that, instead of the suffix *-ŋqä*, it ends with the suffix *-n*, for which no specific meaning is postulated. In everyday speech, it appears to be used interchangeably with the intentive to refer to the immediate future (86).

(86) *Ye "äoqä" tenyä, "qe äyapäque".*
ye äo-qä t-e-n qe ä-yap-q-ue
1DU yes-QT say-1DU/IR-? CESS ASS-come.up-PR/PFV-1DU/ASOC
"Yes", we'll say, "we two have come".

It is also used extensively in the description of animal behaviour, again seemingly interchangeably with the intentive (87).

(87) *Yaqoqowä-i, aŋä imäkän.*
yaqoqowä-i aŋä imäk-ä(t)-n
yaqoqowä-DEF house make-3SG/IR-?

Aŋä kiŋä imäkätäŋqänä.
aŋä kiŋä imäk-ä(t)-ŋqä-nä
house huge make-3SG/IR-GOAL-FCS
The *yaqoqowä* bird builds a nest. It builds a huge nest.

However, where the intentive is used in such descriptions for the stages of the process, the abilitative appears to be restricted to general statements of abilities (88). This usage is sometimes evidenced in normal conversation also (89).

(88) *Eqä yäpem qaŋä äŋguänäŋä upän.*
eqä yäpä-im qaŋä äŋguä-näŋä w-p-n
water inside-LOC walk good-very go-3PL/IR-?
They move about very well under the water.

(89) *Nyi a matäuqä da yäm. Nyi a*
nyi a ma-täu-qä da i-m-n nyi a
1SG hand NEG-cut-NMSR EMPH do-1SG/IR-? 1SG hand

matäuqä da ikäqe, hiqŋqe.
ma-täu-qä da i-k-qäqä-i hiqŋqä-i
NEG-cut-NMSR EMPH do-PA/PFV-1SG/DSOC-INDIC room-DEF
I am unable to number them. I didn't count them, the rooms (when I was there).

4.4 OBLIGATIVE

Structurally, the obligative differs from the intentive in that it adds a second person/number suffix, after the goal suffix. This second set of person/number suffixes is that which I am calling the associative; the significance of its usage in the formation of the obligative is discussed in section 6. Semantically, the obligative indicates a high degree of necessity, almost to the point of inevitability, but not imposed by the speaker. Example (90) is the statement of one of the wives of a man whose newly bought piglet had died on the journey to the village. The other wife had just suggested (using a first person immediate) cooking and eating it.

(90) *Yaqueqä häkiyä maŋqä yaŋqunä.*
yaqueqä häkiyä ma-n-qä i-a-ŋqä-u-nä
pig pot NEG-eat-NMSR do-1PL/IR-GOAL-1PL/ASOC-QT

Qua päteaŋqunä.
qua päte-a-ŋqä-u-nä
ground dig-1PL/IR-GOAL-1PL/ASOC-QT
We can't cook and eat the pig. We must bury it.

The obligative forms are also used to encode inevitable consequences. In (91) the consequence arises from the natural laws (this was a spontaneous utterance); in (92) the inevitability arises more from knowledge of human nature.

(91) *Biä änämäqe, qeqä qui nyimäkäŋqiyä.*
biä ä-n-m-äqe qeqä qui n-imäk-ä(t)-ŋqä-i-yä
beer ASS-eat-1SG/IR-SR liver bad 1SG-make-3SG/IR-GOAL-3SG/ASOC-QT
If I drink beer, my liver will be destroyed.

(92) *"Quaŋqä täŋqiyä" ätäqi.*
quaŋqä t-ä(t)-ŋqä-i-yä ä-t-q-i
lie say-3SG/IR-GOAL-3SG/ASOC-QT ASS-say-PR/PFV-3SG/ASOC
He(i) said, "He(j)'s sure to lie".

In (92), the speaker is a local official who has just reported to 'he(j)' an accusation of theft made by 'he(i)' against 'he(j)'; 'he(j)' has denied the charge and (92) is the official's response.

4.5 FUTURES

There are two sets of verb forms, which I treat simultaneously in this section. Following the irrealis person/number suffix, there is a suffix *-ni* (possibly a variant of the *-n* which marks the abilitative) and a second person/number suffix – the dissociative. The two sets differ in the presence and absence of the goal suffix *-ŋqä* following the dissociative suffix. The *-ni* reduces to *n* before *u* and to zero before *ŋ* or after *ny*, but even then the forms are still distinct from other irrealis forms. Semantically, no distinction has yet been discovered, both indicating that the situation predicated is to occur beyond the immediate future.

(93) *"Nyi hikuä ique täumäniqeqä"*
nyi hikuä i-que täu-m-ni-qäqä-i-qä
1SG lime that-3SG cut-1SG/IR-?-1SG/DSOC-INDIC-QT

kŋuä uyäqaŋgi...
kŋuä w-i-qaŋg-i
thought 3-do-DR/PFV-3SG/ASOC
Because he thinks, "I will cut a lime tree"...

(94) *Si qänaki yematäŋäŋqä,*
si qänaki ya-ima-t-n(i)-ŋä-ŋqä
2SG later 1DU-meet-2SG/IR-?-2SG/DSOC-GOAL

ye awiŋga yeŋqe.
ye awiŋga y-e-ŋqä-i
1DU tomorrow go.up-1DU/IR-GOAL-INDIC
You will come to us two later, we're going up tomorrow.

(95) *Matasinäqä, täŋä yaqä yeyäqaŋgaŋi,*
matasinäqä täŋä yaqä ya-i-qaŋg-ŋga-ŋi
medicine pain sick 1DU-do-DR/PFV-time-GVN

yenyä nenyueäqä.
ye-nä n-e-n(i)-ueä-qä
1DU-FCS eat-1DU/IR-?-1DU/DSOC-QT
As for medicine, when we two are in pain, we will take it.

In the descriptions of animal behaviour, only the *-ŋqä*-marked set has been observed, invariably as the last verb in the discourse (96). In procedural discourse (exposition of a process) both are found, though the *-ŋqä*-marked set is more frequent. In the Menya direct quote construction, the quote is usually preceded by, and often also followed by, a verb of saying. Example (97) is such a sentence from a procedural text and demonstrates the apparent interchangeability of the two future forms. In text concerning ancestral behaviour, again the *-ŋqä*-marked set is the more frequent of the two.

(96) *Naqä imänäqe, känatäŋi qaŋä anä*
naqä imän-äqe k-na-tä-ŋi qaŋä anä
big grow-3SG/SR 3-mother-with-GVN walk together

ikinyiyäŋqä. *Qäpinji.*
iki-ny-n(i)-iyä-ŋqä *qäpu-nji*
travel-3DU/IR-?-3DU/DSOC-GOAL CMPL-INDIC
It (fledgling) grows big and travels around with its mother. The end.

(97) *...täniŋqe* *"Hikuä qäpänä huiqä sä*
t-ä(t)-ni-qäqä-i *hikuä qäpä-nä huiqä sä*
say-3SG/IR-?-3SG/DSOC-INDIC lime white-FCS white fire

äuyeqänä" *täniqe.*
ä-uye-q-ä-nä *t-ä(t)-ni-qäqä-i*
ASS-burn-PR/PFV-1SG/ASOC-QT say-3SG/IR-?-3SG/DSOC-INDIC
...he'll say, "I've made really white lime powder".

4.6 ASPECT IN IRREALIS

It is stated in section 3 that aspect in Menya is relevant mainly in realis predications and it will have been noted that aspect has not entered into the discussion of irrealis forms thus far. Occasionally, however, aspect is marked on irrealis forms with the same three semantic distinctions and the same forms as for the present except that the imperfective suffix is *ät* rather than *ŋ*. All of the above sets of modal forms have been recorded with a perfective affix and several with a stative (non-progressive) affix.

(98) *Hikŋä mämquaquiŋqä* *iŋga*
hikŋä m-m-quaqui-ŋqä *i-ŋga*
youth below-LOC-3DU-GOAL that-time

päwäqoŋqä.
p-wä-q-ä(t)-ŋqä
come-go.down-PFV-3SG/IR-GOAL
Then she can come and go down to the two young men.

(99) *Yimeqä iqua qeyaqä suqä du qänakänä*
yimeqä i-qua qe-yaqä suqä n-tu qänakä-nä
child that-3PL 2DU-POSS custom level-LOC behind-FCS

iqäpänuwäŋqä.
i-q-p-n(i)-uwä-ŋqä
do-PFV-3PL/IR-?-3PL/DSOC-GOAL
The children will follow your behaviour.

(100) *Huiqä ätakäqa ämayapäqätän.*
huiqä ätakäqa ä-ma-yap-q-(t)-n
skin removed ASS-get-come.up-PFV-2SG/IR-?
You can bring them (peanuts) without the skin.

Only the immediate modality (section 4.1), however, has been observed in the progressive. The aspectual forms of the immediate are used to express potentiality for the present (101-103). This requires the use of the dubitative mood clitic, which is expounded further in section 7.

(101) *Iqu täŋga woŋuä iqoti.*
i-qu tä-ŋga woŋuä i-q-ä(t)-ti
that-3SG this-time work do-?-3SG/IR-DUBIT
He may be working.

(102) *Iqu täŋga woŋuä itäqätäti.*
i-qu tä-ŋga woŋuä i-ätäq-ät-ä(t)-ti
that-3SG this-time work do-PROG-IPFV-3SG/IR-DUBIT
He may be working.

(103) *Iqu aŋä du pmetäti.*
i-qu aŋä n-tu pma-ät-ä(t)-ti
that-3SG house level-LOC be-IPFV-3SG/IR-DUBIT
He may be at home.

These aspectually marked forms are not restricted to any particular discourse types but, because nothing further can be said at this stage about how they differ in their meaning or function from the non-aspectual variants, no further examples will be given.

4.7 CONTRARY-TO-FACT

The contrary-to-fact irrealis modality is used, primarily, in the apodosis of counterfactual conditionals (If x had been true, *then y would be/have been true also*). It is constructed by suffixing the perfective *-q*, the irrealis suffix and *-ni* to the verb nucleus. Since it is necessarily sentence final, it always has a sentence-final mood clitic affixed to it. Since it is not marked for tense the situation encoded is potentially true of the past, present or future. In (104) the speaker is responding to a claim for compensation for a theft which he has been accused of. Since the accuser did not catch him in the act he is refusing to make any payment.

(104) *Iqu änyimeqä säpi,*
i-qu ä-n-ima-qä säpi
that-3SG ASS-1SG-come upon-NMSR CTF

nyi moni uyäqäminji.
nyi moni w-i-ç-m-n(i)-nji
1SG money 3SG-do-PFV-1SG/IR-?-INDIC
If he had come upon me, I would (now) pay him.

(105) *Huäqiŋi, si täqi pmeqä säpi,*
huäqi-ŋi si tä-qi pma-qä säpi
yesterday-GVN 2SG this-LOC be-NMSR CTF

si kiap iqueŋi hiŋuä quŋqätninji.
si kiap i-que-ŋi hiŋuä w-q-n-q-(t)-ni-ji
2SG official that-3SG-GVN eye 3SG-hit-DETR-?-2SG/IR-?-INDIC
If you had been here yesterday, you would have seen the official.

4.8 UNFULFILLED INTENTION

Intended action that has for some reason been cancelled or postponed is encoded with an irrealis form that differs considerably from all the above. The first suffix after the verb nucleus is the first person irrealis suffix, regardless of what person the subject is; it does, however, agree in number with the subject. This is followed by a previously unintroduced *-(n)ät* suffix, and the irrealis person/number suffix fully agreeing with the subject. (It is possible that the *n* of *(n)ät* is the *n(i)* morpheme which occurs in the other irrealis forms.) Just as the intentive (section 4.2) is used either sentence finally or embedded, so is the unfulfilled intention.

(106) *Iquaqu woŋuä yenyäsinji.*
i-quaqu woŋuä i-e-(n)ät-iny-nji
that-2DU work do-1DU/IR-?-2DU/IR-INDIC
They two were going to work today.

(107) *Ämaqä iqu hiyäundäqä yi humätä*
ämaqä i-qu hiyäundäqä yi u-m-(n)ät-ä(t)
man that-3SG cassowary arrow shoot-1SG/IR-?-3SG/IR

äpmiŋqe.
ä-p-miŋ-qäqä-i
ASS-come-PA/IPFV-3SG/DSOC-INDIC
The man was coming intending to shoot the cassowary.

(108) *Napäsanätäpu qe iquwi.*
na-päk-a-(n)ät-p qe i-q-uwä-i
1PL-hit-1PL-?-3PL/IR CESS do-PR/PFV-3PL/DSOC-INDIC
They did (it) intending to beat us.

5.0 ASSERTION

As stated at the end of the discussion in section 1.3, this section focuses on the categories of information which Givón (1982,1984) includes under modality: presupposition, assertion and negation. Givón proposes that presuppositions be treated as accepted fact and, therefore, not asserted, and that, for those propositions which are asserted, it is possible to distinguish between realis assertion (assertion as fact) and irrealis assertion (assertion as possibility).

Within the Menya sentence, a slight variation of these factors is indicated by the initial prefix on the verb. A strong assertion, of whatever truth value, is indicated by the prefix *ä-*. Negation (denial of factuality or assertion of falsehood) is indicated by the prefix *ma-*, regardless of the strength of the assertion. Presupposition and weak positive assertion is unmarked. Clearly, there are two different factors involved here – the strength of the assertion (weak being unmarked) and the polarity of the proposition (positive being unmarked). When a strong negative assertion is made, there is potential conflict as to which factor will be marked; this conflict is avoided in the majority of instances, however, by indicating the polarity on the main verb and the assertion factor on an auxiliary verb.

5.1 STRENGTH OF ASSERTION

The definition given earlier (in section 2.0) for the realis/irrealis distinction among Menya verb forms was that realis refers to specific events predicated of the past or present, whereas irrealis refers to any future or generic event. It is predictable from these definitions that realis forms will be far more compatible with strong assertion than will irrealis forms. Accordingly, the realis forms presented in section 3 are almost all marked with the strong assertion marker *ä-* whereas most of the forms in section 4 are unmarked.

Examples (109-112) illustrate the use of *ä-* with active and stative verbs in both present and past tenses.

(109) *Iqu kukŋä ändäqi.*
i-qu kukŋä ä-n-t-q-i
that-3SG speech ASS-1SG-say-PR/PFV-3SG/ASOC
He (just) spoke to me.

(110) *Iqu kukŋä ändäkäqe.*
i-qu kukŋä ä-n-t-k-qäqä-i
that-3SG speech ASS-1SG-say-PA/PFV-3SG/DSOC-INDIC
He spoke to me (some time ago).

(111) *Iqua Menyäma bu äpmeŋä.*
i-qua Menyäma m-tu ä-pma-ŋ-ä
that-3PL Menyamya down-at ASS-be-PR/IPFV-3PL/ASOC
They are at Menyamya.

(112) *Iqua Menyäma bu äpmamiŋuwi.*
i-qua Menyäma m-tu ä-pma-miŋ-uwä-i
that-3PL Menyamya down-at ASS-be-PA/IPFV-3PL/DSOC-INDIC
They lived (were) at Menyamya.

Examples (113-116) illustrate the use of irrealis forms without the prefix. Immediate and remote future activities are exemplified by (113,114), generic behaviour by (115) and traditional generic behaviour by (116).

(113) *Ye quapiqä täu weŋqe.*
ye quapiqä tä-u w-e-ŋqä-i
1DU straight this-LOC go-1DU/IR-GOAL-INDIC
We're going to go along this straight place.

(114) *Nyi aŋä mätämäniŋqä.*
nyi aŋä mät-m-ni-ŋqä
1SG house build-1SG/IR-?-GOAL
I will build a house.

(115) *Oeqä i qui yä häuyäqä iu nyuän.*
oeqä i qui yä häuyäqä i-u nyu-ä-n(i)
oeqä that egg tree hole that-LOC lay-3SG/IR-?
The *oeqä* bird lays its eggs in a hole in a tree.

(116) *Iqua mäŋä qäpäŋqä.*
i-qua mäŋä q-p-ŋqä
that-3PL axe rub-3PL/IR-GOAL
They would shape the axe head.

There is not, however, a perfect one-to-one correlation between realis and strong assertion on the one hand, and irrealis and weak assertion on the other. The exceptions to this formal correlation are either phonologically conditioned (section 5.1.1) or pragmatically conditioned (section 5.1.2).

5.1.1 PHONOLOGICALLY CONDITIONED EXCEPTIONS

Vowel-initial stems constitute the domain of phonological conditioning and will be presented first. The *ä-* prefix elides before stems commencing with *i* (117) but not those commencing with other vowels (118). On the other hand, an epenthetical *h-* occurs on irrealis forms commencing with vowels other than *i* (119), but not on those commencing with *i* (120). (Throughout most of this paper, I have omitted the *ä-* before *i* in the morpheme-by-morpheme line of the examples.)

(117) *Iqu woŋuä iqi.*
i-qu woŋuä ä-i-q-i
that-3SG garden ASS-do-PR/PFV-3SG/ASOC
He is working.

(118) *Iqu yaqueqä yi äuqi.*
i-qu yaqueqä yi ä-u-q-i
that-3SG pig arrow ASS-shoot-PR/PFV-3SG/ASOC
He's shooting a pig.

(119) *Si yaqueqä yi hutäŋqe.*
si yaqueqä yi u-t-ŋqä-i
2SG pig arrow shoot-2SG/IR-GOAL-INDIC
You are going to shoot a pig.

(120) *Si woŋuä isäŋqe.*
si woŋuä i-t-ŋqä-i
2SG garden do-2SG/IR-GOAL-INDIC
You are going to work.

5.1.2 PRAGMATICALLY CONDITIONED EXCEPTIONS

The constructs in which pragmatic factors condition exceptions to the correlation between strength-of-assertion marking and realis marking are: information questions in present tense, modalised clauses where the degree of certainty is to be emphasised, and medial clauses.

Whenever an information question pertains to an event at the same time as the speech act (i.e. present time) the *ä-* prefix does not occur (121,122). Whenever an event in the past time is referred to in the question, however, the prefix does occur (123,124).

(121) *Yaqueqä ique täqu päsäqi?*
yaqueqä i-que tä-u päk-q-i
pig that-3SG this-3SG hit-PR/PFV-3SG/ASOC
Who is hitting the pig? (near demonstrative functions as the interrogative pronoun)

(122) *Kŋuä änä kiyäqi?*
kŋuä änä k-i-i-q-i
thought how 2SG-do-BEN-PR/PFV-3SG/ASOC
What (lit. How) do you think?

(123) *Yaqueqä ique täqu äpäkäkäqäwä?*
yaqueqä i-que tä-qu ä-päk-k-qäqä-wä
pig that-3SG this-3SG ASS-hit-PA/PFV-3SG/DSOC-INFOQ
Who killed the pig?

(124) *Äkŋgi äuquatämäukŋi?*
äk-ŋgi ä-u-quatämäu-k-ŋä-i
what-LOC ASS-3-leave-PA/PFV-2SG/DSOC-INDIC
Where did you leave him?

I suggest that the most logical explanation for this distinction is that, even though the event in the present may be being observed, it is still not completed and, therefore, not as firmly established in the speaker's mental inventory of facts as an event in the past. It may then be asked why the prefix is used in present indicative sentences. I suggest that, in the question, the truth value of the proposition is not in focus to nearly the same extent as in the statement since the primary focus is on the entity/element in question. The omission of the prefix in present information questions is, therefore, a combination of the epistemic status of the event and the secondary importance of the polarity factor.

Somewhat problematic to this analysis is the fact that polar questions in both present and past are marked with *ä-* (125).

(125) A: *"Qe äyä äyapäqinyä?"*
qe äyä ä-yap-q-iny
2SG now ASS-come.up-PR/PFV-2DU/ASOC

B: *"Auä, ye äyapäque."*
auä ye ä-yap-q-ue
yes 1DU ASS-come.up-PR/PFV-1DU/ASOC
A: "You two have returned?" B: "Yes, we've returned."

At this stage, I can offer no definite explanation for the presence of the strong assertion affix in these contexts. One possibility is that a polar question indicates a strong predisposition towards a positive answer in Menya; thus, just as the translation of (125) is in the English indicative mood with only intonation indicating that it is a question, so Menya polar questions have some of the features of assertions. Another possibility is that the function of the prefix is being reanalysed diachronically. A point in favour of this suggestion is that Jordan (1963:50-1), writing 27 years ago, reported that the prefix was more often present than absent on irrealis forms though there was still variability.

Propositions pertaining to the future invariably have an indefinite truth value and are, therefore, encoded as irrealis or modal verb forms. The speaker can, however, assert a strong degree of certainty by marking the verb with the *ä-* prefix. This contrast shows most clearly in the use of the

immediate modality (section 4.1), where the prefix invariably occurs if the actor is first or third person (126,127), but never when it is second person (128,129).

(126) *Ne aŋä naqänäŋä huŋqu ämätanä!*
ne aŋä naqä-näŋä hun-qu ä-mät-a-nä
1PL house big-very a-3SG ASS-build-1PL/IR-QT
Let's build a very large house!

(127) *Iqua quamä äpmapu!*
i-qua quamä ä-pma-p
that-3PL seated ASS-be-3PL/IR
Let them be seated!

(128) *(He) Quamä pmapu!*
(he) quamä pma-p
2PL seated be-2PL
(You all) Sit down!

(129) *(Si) Maqänä u!*
(si) maqä-nä w-(t)
2SG quick-FCS go-2SG/IR
(You) Go quickly!

In the translations of (126,127), I have used the traditional translations of the hortatory and jussive moods – 'let's' and 'let him'. The 'let' should not, however, be confused with its use as a main verb 'to allow', implying a command to the addressee to give permission for the event to take place.

As (127,128) illustrate, the irrealis actor suffix does not differentiate between second and third person for plural forms, resulting in the respective verb forms differing only in the presence/absence of the polarity prefix. This is also true for dual forms but not for singular forms so the need to differentiate is not a sufficient explanation for the distribution of the polarity prefix.

The immediate modality in Menya, as has already been explained (section 4.1), implies immediacy as well as a strong desire of the speaker. There is, therefore, such a strong degree of certainty in the speaker's mind that, when the speaker is involved, or the person involved is not present to 'defend' his or her right not to comply, then the speaker is free to mark the sentence as a strong assertion. When the hearer is the proposed actor, however, the speaker is not free to do so out of deference to the hearer's right not to comply. This is in accordance with the traditional strong individualism which is characteristic of the Menya culture. Since pacification in the 1950s, the only traditional authority structure (fight leaders) has broken down, further reducing the authority of any one individual over another.

Other future reference forms are not consistent, but the vast majority do not overtly indicate the strong assertion value. In the few instances that do, the same factor – degree of certainty in the mind of the speaker – seems to be at play. There frequently appears to be an element of promise or inevitability which, understandably, would increase the speaker's feeling of certainty such that he wishes to emphasise it, even though the lack of actualisation requires him to use an irrealis form. Example (130) is part of a father's instructions to his son's new bride. Sentence (131) is part of a text concerning the death adder and follows the statement "If you step on their tail, they will bite you.", in which the verb 'bite' is not marked with *ä-*. Example (132) is the response of a man who

has just finished making some lime powder, to a relative who arrives and asks him for some. Not all the examples of irrealis forms marked with *ä-* are as transparent as these, but a large number are.

(130) *...buayä ämetn äwisäŋqe.*
buayä ä-ma-ät-n ä-w-i-t-ŋqä-i
food ASS-get-?-2SG/SR ASS-3-do-2SG/IR-GOAL-INDIC
...you are to get food and serve them.

(131) *Iqueqä nätämatäqä quyäqä saqä huiwi*
i-que-qä nätämatäqä quyäqä t-yaqä huiwä-i
that-3SG-POSS something bad 2SG-POSS skin-DEF

etäqe, si äpäukondn.
ä-e-ät-äqe si ä-päukon-t-n(i)
ASS-put-3SG/IR-GEN 2SG ASS-die-2SG/IR-?
Whenever he puts his poison in your skin, you're sure to die.

(132) *Saqä hikuä häkä yäqä dapiyä!*
t-yaqä hikuä häkä yäqä n-tap-(t)-yä
2s-POSS lime bamboo now 1PL-give-2SG/IR-QT

Humbu äkäpäsim.
hun-pu ä-k-päk-i-m-n(i)
a-DIM ASS-2SG-hit-BEN-1SG/IR-?
Give me your lime container! I will separate some for you.

The final context for unexpected distribution of *ä-* is in medial verb forms. While medial forms are not within the primary scope of this paper, they are mentioned here to complete the description and explication of the assertion prefix. With a high degree of consistency, same-referent medials are prefixed with *ä-* whereas different-referent medials are not.

(133) *Pakäpiŋi apäkä huŋqua asiŋä qänätäqätaŋgä*
Pakäpi-ŋi apäkä hun-qua asiŋä q-n-ätäq-ätaŋg-ä
Pakäpi-LOC woman a-3PL wash rub-DETR-PRGV-DR/IPFV-3PL/ASOC

äwimakuee.
ä-w-ima-k-ueä-i
ASS-3-come.upon-PA/PFV-1DU/DSOC-INDIC
At the Pakapi we came upon some women bathing.

(134) *Mäŋi näquatämäuqaŋgäqäŋga*
m-ŋi na-quatämäu-qaŋg-qäqä-ŋga
down-LOC 1PL-leave-DR/PFV-3SG/DSOC-TIME

ne iqi pämä ätäqäuŋque.
ne i-qi pämä ä-täqäu-ŋ-qäqu-i
1PL that-LOC stand ASS-stand-PR/IPFV-1PL/DSOC-INDIC
He left us below and we stood there.

(135) *Tnäŋänä äpäyayi apäki*
tnäŋä-nä ä-p-y-ayi apäkä-i
fast-FCS ASS-come-go.up-1DU/SR woman-DEF

äwimakuee.
ä-w-ima-k-ueä-i
ASS-3-come.upon-PA/PFV-1DU/DSOC-INDIC
We two ascended quickly and came upon the woman.

(136) *Iqu katä änäma äpäikäqe.*
i-qu katä ä-na-ma ä-p-y-k-qäqä-i
that-3SG car ASS-1PL-get ASS-come-go.up-PA/PFV-3SG/DSOC-INDIC
He brought us up by car.

Again here I have no firm idea as to the rationale behind this aspect of the distribution of *ä-*. My hypothesis is that different-referent medials in Menya are always part of the background material and therefore treated as presupposed, even though the situation may not actually be known to the hearer. The evidence for the background nature of different-referent medials is that they are most commonly marked by a case-marking clitic such as *-ŋga* 'time' (134) or are of relative clause type (133). Since most same-referent medials are foreground material along with most finals, it is appropriate to mark them as strongly asserted. As (136) illustrates, this is true even with serial verb constructions such as 'get-come (=bring)' where the first verb is prefixed even though it has none of the normal same-referent suffixation. This area needs verification based on more comprehensive text analysis, especially since there are medials which do not fit this pattern. However, given the scope of this paper, it is sufficient to say here that the explanation for the distribution of *ä-* with medials does not appear to be incompatible with that with final verbs.

5.2 NEGATION

The polarity of the proposition is the second category of information encoded by the verb prefix. It has already been pointed out that the negative is the marked value for polarity and is therefore necessarily overt in any sentence containing a negative concept. The conflict between marking of the assertion factor and negation is usually resolved by the use of a periphrastic construction in which the verb to be negated is nominalised (or, more accurately, deverbalised) and marked for negation, and another verb (usually an auxiliary) is marked for strong assertion plus the other categories of meaning which we have been discussing. Since this is by far the most frequent strategy for negation, I present it first, then the non-periphrastic alternative, and finally the scope of negation where negation marked on one verb indicates the polarity of another, unmarked verb.

5.2.1 NEGATIVE VERB PHRASE

If the verbal concept is no more complex than that contained in the verb to be negated, the verbs *i* 'do' for active sentences (137) and *e* 'put' for stative sentences (138) are used, fully inflected, as auxiliaries. When a further verbal concept is involved however, it is expressed as the fully inflected verb of the construction (139,140) and there is no auxiliary.

(137) *Nyi hiŋuä maqeqäŋqä imäqänä.*
nyi hiŋuä ma-qe-q-n-qä i-m-ŋqä-ä-nä
1SG eye NEG-2DU-rub-DETR-NMSR do-1SG/IR-GOAL-1SG/ASOC-QT
I must not see you two.

(138) *Iqua täqi mäpmeqä eŋä.*
i-qua tä-qi ma-pma-qä ä-e-ŋ-ä
that-3PL this-LOC NEG-be-NMSR ASS-put-PR/IPFV-3PL/ASOC
They are not here.

(139) *Nyi qaŋä mawäqä äpmeŋä.*
nyi qaŋä ma-w-qä ä-pma-ŋ-ä
1SG walk NEG-go-NMSR ASS-be-PR/IPFV-1SG/ASOC
I'm bedridden (lit. not walking, staying).

(140) *Ye maqäŋqä päwenyueeqä.*
ye ma-q-n-qä p-w-e-ni-ueä-i-qä
1DU NEG-strike-DETR-NMSR come-go-1DU/IR-?-1DU/DSOC-INDIC-QT
We two will pass unseen.

Since the *ä-* elides before *i*-initial verbs, its presence is not discernible with the active auxiliary. That it is present in the construction is determinable from the stative auxiliary and the non-auxiliary examples.

5.2.2 FULLY-INFLECTED NEGATIVE VERBS

Instances have been observed in texts of the negated verb not being nominalised but remaining a full, inflected verb. In each instance it is a permanent state which is being described (141-143).

(141) *Wäpäqe aŋä täŋä täqiŋi mäpmetäqe,*
wäpäqä-i aŋä täŋä tä-qi-ŋi ma-pma-ät-äqe
wäpäqä-DEF place near this-LOC-GVN NEG-be-3SG/IR-GEN

qäuqä kiŋä yäm äpme.
qäuqä kiŋä y-m ä-pma-ä
forest large up-LOC ASS-be-3SG/PR/IPFV
The *wäpäqä* bird does not live near here, but far up in the forest.

(142) *Käkatukui mämäwäqutäuätäqe, ami*
käkatukuä-i ma-mä-u-qutäu-ät-äqe amä-i
chicken-DEF NEG-?-3-pass-3SG/IR-GEN *amä*-DEF

mämäwäqutäuätäqe, qäquaqu akinyäŋi.
ma-mä-u-qutäu-ät-äqe qä-quaqu akinyäŋä-i
NEG-?-3-pass-3SG/IR-GEN that-3DU same-INDIC
Neither the chicken nor the *amä* bird is bigger, they are the same size.

(143) A: *Aŋä aŋqäqi qe äpmamiŋque.*
aŋä aŋqä-qi qe ä-pma-miŋ-qäqu-i
house empty-LOC CESS ASS-be-PA/IPFV-1PL/DSOC-INDIC

B: *Ämaqä mäpmetaŋgä?*
ämaqä ma-pma-ätaŋg-ä
man NEG-be-DR/PRGV-3PL/ASOC

A: *Ämaqe mäpmeqä hitaŋgä.*
ämaqä-i ma-pma-qä e-ätaŋg-ä.
man-DEF NEG-be-NMSR put-DR/PRGV-3PL/ASOC
A: We stayed at an empty house. B: Nobody lived there? A: The men weren't there.

When the periphrastic and fully inflected forms of a proposition are constructed and presented to a native speaker, the opinion is often expressed that there is no meaning difference (if both are accepted). Examples (144,145) are sometimes differentiated by the added component of meaning for (144) that there is no food to eat.

(144) *Nyi buayä maŋgaŋga*
nyi buayä ma-n-qaŋg-ŋga
1SG food NEG-eat-DR/PFV-time

si änyimakŋi.
si ä-n-ima-k-ŋä-i
2SG ASS-1SG-come.upon-PA/PFV-2SG/DSOC-INDIC
I had not eaten when you came upon me.

(145) *Nyi buayä maŋqä iqaŋga*
nyi buayä ma-n-qä i-qaŋg-ŋga
1SG food NEG-eat-NMSR do-DR/PFV-time

si änyimakŋi.
si ä-n-ima-k-ŋä-i
2SG ASS-1SG-come.upon-PA/PFV-2SG/DSOC-INDIC
I had not eaten when you came upon me.

It seems reasonable to propose, therefore, that the use of the fully inflected negative verb indicates a less definite subject or a less deliberate failure-to-act by the subject than does the more frequent periphrastic construction.

5.2.3 SCOPE OF NEGATION

It has already been pointed out that a negative truth value always has to be overtly expressed within the sentence that contains it. However, it is not always the case that *ma-* is prefixed to the verb whose concept is being negated. That is to say, a negative prefix on one verb may actually apply to a different verb. This is comparable to the English *I do not think he came,* which in the opinion of many really means *I think he did not come.* In Menya, this type of transferred application of negation is limited to a single construction exemplified in (146), which is the only textual example thus far observed.

(146) *Iquenyäqä huipa imäkätm, matäsinäqä*
i-que-ŋqä huipa imäk-ät-m matäsinäqä
that-3SG-GOAL hand make-?-1SG/SR medicine

aŋiu iqueqä yoqä äqiyämanyätm,
aŋä-i-u i-que-qä yoqä ä-qiyämany-ät-m
house-DEF-LOC that-3SG-POSS name ASS-write.post-?-1SG/SR

"tä	*iqu*	*maŋqä*	*yäniqeqä"*
tä	*i-qu*	*ma-n-qä*	*i-ä(t)-ni-qäqä-i-qä*
this	that-3SG	NEG-eat-NMSR	do-3SG/IR-?-3SG/DSOC-INDIC-QT

ätätm	*mimäkäqä*	*iqäqeqä.*
ä-t-ät-m	*ma-imäk-qä*	*i-q-qäqä-i-qä*
ASS-say-?-1SG/SR	NEG-make-NMSR	do-PR/PFV-3SG/DSOC-INDIC-QT

I have not made a taboo sign, blacklisted his name in the clinic or said, "He won't eat this medicine".

This sentence, using the *-ät* medials, is an example of the Menya construction for an unordered list. It is *only* in this construction that a negative (in the final verb for the sentence) can have greater scope than its matrix clause. Even the serial verb construction illustrated earlier (section 5.1), in which the first verb is uninflected (147), does not allow such extended application of negation.

(147)

Tuwaŋuä	*iqu*	*mäma*	*mapäqä*	*iqe.*
tuwaŋuä	*i-qu*	*ma-ma*	*ma-p-qä*	*i-q-qäqä-i*
letter	that-3SG	NEG-get	NEG-come-NMSR	do-PR/PFV-3SG/DSOC-INDIC

I did not bring the letter.

6.0 RELEVANCE

At various points in the presentation so far (sections 3.0, 3.2, 3.3, 4.4 and 4.5), reference has been made to one or both sets of subject person/number suffixes on the verb: the associative and the dissociative. The distinction indicated by these two sets in their various contexts is the topic of this section.

The two sets of subject cross-reference suffixes indicate two degrees of relevance of the propositional situation to the speech act or to the situation in the matrix clause. As the terms 'associative' and 'dissociative' indicate, one set indicates a much higher degree of relevance or association between the situations than the other.

6.1 RELEVANCE WITH REALIS FINALS

It is pointed out in section 3.2 that the associative suffixes, in combination with the present tense/aspect suffixes, indicate an actual situation at the same time as the speech act (i.e. proto-typical present tense). In contrast, the dissociative suffixes combine with the present tense/aspect to indicate a situation within the two or three days prior to the speech act, and with the past and remote past tense/aspects to indicate situations even more removed in time. It would be tempting, on the basis of this data alone, to classify the two sets of subject suffixes as present and past respectively, rather than associative and dissociative. However, as Steele (1975) has pointed out for Uto-Aztecan and Langacker (1978) for English, what at first glance appears to be a past tense indicator proves to have a more general meaning of removal from the speaker or speech act in any of several ways.

It is also mentioned in section 3.2 that, in elicitation, forms combining associative suffixes with past or remote past tense/aspect are not acceptable. They have however been recorded in natural text, specifically when a listener interrupts to ask a question of the narrator (148) or to remind him of some omitted information which he, the interrupter, considers to be important (149).

(148) *Iqu hiŋuä äquŋqaŋi äkimaki?*
i-qu hiŋuä ä-w-q-n-qa-ŋi ä-k-ima-k-i
that-3SG eye ASS-3-rub-DETR-?-GVN ASS-2SG-meet-PA/PFV-3SG/ASOC
When he had looked, did he meet you (again)?

(149) *Iqu aŋä huänaqä iqisa kukŋä*
i-qu aŋä huänaqä i-qi-ta kukŋä
that-3SG house road that-LOC-from talk

ämätuki.
ä-mä-w-t-k-i
ASS-?-3-say-PA/PFV-3SG/ASOC
He spoke to her from the doorway.

In both cases, the interrupter is implying that the information he is eliciting or supplying is important to the current context of understanding the story.

It may be remembered from section 3.2 that the forms used to refer to a situation in present tense are also used for events completed in the immediate past (e.g. 'What did you say just now?'). The use of the associative suffixes to encode present-tense situations is not, therefore, because present time reference is a part of their meaning but because present-tense situations are naturally highly relevant to the speech act situation.

6.2 RELEVANCE WITH IRREALIS

A further use of the associative/dissociative distinction, referred to in sections 4.4 and 4.5, relates to modalised propositions. The associatives are used in the construction of the obligative modality (section 4.4), which indicates a high degree of necessity or inevitability. In such predications, the high relevance of present-tense situations is metaphorically extended since they are as good as fact. Three examples were given in section 4.4, one of which (90) is repeated as (150).

(150) *Yaqueqä häkiyä maŋqä yaŋqunä.*
yaqueqä häkiyä ma-n-ŋqä i-a-ŋqä-u-nä
pig pot NEG-eat-NMSR do-1PL/IR-GOAL-1PL/ASOC-QT

Qua päteaŋqunä.
qua päte-a-ŋqä-u-nä
ground dig-1PL/IR-GOAL-1PL/ASOC-QT
We can't cook and eat the pig. We must bury it.

The obligative forms were chosen by native speakers to translate a prediction of Jesus instructing two of the disciples to prepare for their last meal together (151). Here again the event is predicated as so highly probable that it is as relevant as any present situation.

(151) *Ämaqä huŋqu qondähäkä eqä täŋä ämaŋi,*
ämaqä hun-qu qondä-häkä eqä täŋä ä-ma-ŋi
man a-3SG ?-bamboo water near ASS-get-GVN

qe iqutä ämimbäŋqäuä.
qe i-qu-tä ä-mi-n-p-ŋqä-ä-uä
2DU that-3SG-and ASS-come.upon-DETR-2PL/IR-GOAL-2PL/ASOC-QT
You two and a man with a vessel of water will meet.

The dissociative suffixes, on the other hand, were described as being used in the construction of all the forms translated as beyond the immediate future – clearly more remote temporally. Again, several examples were given in section 4.5, of which only one (94) will be repeated here as (152). Example (153) was spoken to a son on his wedding day so the children referred to as subject are not yet even born.

(152) *Si qänaki yematäŋäŋqä,*
si qänaki ya-ima-t-n(i)-ŋä-ŋqä
2SG later 1DU-meet-2SG/IR-?-2SG/DSOC-GOAL

ye awiŋga yeŋqe.
ye awiŋga y-e-ŋqä-i
1DU tomorrow go.up-1DU/IR-GOAL-INDIC
You will come to us two later, we're going up tomorrow.

(153) *Iqua iquauqä yimeqe muotäquapänuwäŋqä.*
i-qua i-quau-qä yimeqä-i w-motäqua-p-n(i)-uwä-ŋqä
that-3PL that-3PL-POSS child-DEF 3-show-3PL/IR-?-3PL/DSOC-GOAL
They (your children) will teach their children.

It is instructive to compare (154) with (155) since both are indefinite as to when in the future the events will take place. The inevitability of (154) overrides the temporal remoteness and therefore it is the associative suffix which is used (associative and dissociative are mutually exclusive).

(154) *Biä änämäqe, qeqä qui nyimäkäŋqiyä.*
biä ä-n-m-äqe qeqä qui n-imäk-ä(t)-ŋqä-i-yä
beer ASS-eat-1SG/IR-SR liver bad 1SG-make-3SG/IR-GOAL-3SG/ASOC-QT
If I drink beer, my liver will be destroyed.

(155) *Matasinäqä, täŋä yaqä yeyäqaŋgaŋi,*
matasinäqä täŋä yaqä ya-i-qaŋg-ŋga-ŋi
medicine pain sick 1DU-do-DR/PFV-time-GVN

yenyä nenyueäqä.
ye-nä n-e-n(i)-ueä-qä
1DU-FCS eat-1DU/IR-?-1DU/DSOC-QT
As for medicine, when we're in pain, we will take it.

6.3 RELEVANCE WITH MEDIAL VERBS

The third and final use of the associative/dissociative distinction pertains to the different-referent medials.

The use of the associative suffix set on different-referent medials indicates a close logical (e.g. cause-effect) relationship between two clauses, whereas the use of the dissociative set indicates a temporal (perhaps only by default) relationship between two clauses. This difference parallels Jakobson's distinction (1971:141) between consequential and non-consequential 'taxis' which he elaborates as 'signalling an internal connection' as opposed to 'without implying internal connection'. (I avoid using Jakobson's terms because the Menya 'logical' as opposed to 'temporal' medials are not limited to causality as the term 'consequential' suggests.) This does not mean that only a temporal relationship (external connection) exists when a dissociative suffix is used, but that any logical relationship is not overtly signalled. Indeed, there are situations where either form is acceptable and

there are instances of near 'minimal pairs' where it is difficult to assert on what basis the speaker chose the form to use.

(156) *Yähiŋuätäŋi iqu woŋuäŋqä yatäqaŋgi*
yähiŋuätä-ñi i-qu woŋuä-ŋqä ya-t-qaŋg-i
morning-GVN that-LOC work-GOAL 1DU-say-DR/PFV-3SG/ASOC
woŋuäŋqä äpäikuee.
woŋuä-ŋqä ä-p-y-k-ueä-i
work-GOAL ASS-come-go.up-PA/PFV-1DU/DSOC-INDIC
In the morning he spoke to us two about work, so we went up to work.

Here the two events are in temporal sequence and the speaker could have used the form of the verb with the dissociative suffix – *yatäqaŋgäqäŋga* 1DU-say-DR/PFV-3SG/DSOC-time 'after he had spoken to us two'; however, I am suggesting that the speaker is emphasising the strong, though not binding, causal relationship between the two clauses. Contrast this with (157) where there is also a speech and a resultant action but in which the dissociative form is used.

(157) *"Eenä!" natäqaŋgäqäŋga,*
eenä na-t-qaŋg-qäqä-ŋga
come 1PL-say-DR/PFV-3SG/DSOC-time
ne qe ätimäuque.
ne qe ä-timäu-q-qäqu-i
1PL CESS ASS-come.to-PR/PFV-1PL/DSOC-INDIC
When he said "Come!" to us, we came (to him).

Given that there is overlap where the speaker's choice of emphasis is the deciding factor, there are also cases where the semantic relationship dictates which form is used.

(158) *Näpäyäqeu äpmakuee,*
näpäyäqä-i-u ä-pma-k-ueä-i
shade-DEF-LOC ASS-be-PA/PFV-1DU/DSOC-INDIC
iqueqä sukä suwä hiŋqaŋgi.
i-que-qä sukä suwä e-n-qaŋg-i
that-3SG-POSS foot shoe put-DETR-DR/PFV-3SG/ASOC
We stopped in the shade – for him to put his shoes on.

In (158) the medial clause is right dislocated and is given as an afterthought explanation of their stopping. Though the right dislocation places the events in chronological order, this neither necessitates the construction nor is the motivation for choosing it. This is evidenced in (159) where the right dislocated clause does not refer to a subsequent event. Rather, it is the objective complement of the sensory verb. (For both these sentences, the ordering is marked, the norm being for the medial clause to precede the final.)

(159) *Hiŋuä äquŋgäqäqe*
hiŋuä ä-w-q-n-k-qäqä-i
eye ASS-3-strike-DETR-PA/PFV-3SG/DSOC-INDIC
balusi yeyä quyepäqaŋgi.
balusi yeyä quyep-qaŋg-i
plane above descend-DR/PFV-3SG/ASOC
He saw that the plane was descending from above.

Whereas in (156-158) the relationship between the clauses is cause-effect, in (159) it is not clearly so. While one could argue that the plane's approaching caused the seeing, the internal association here is the fact of the plane's coming being the object of the 'seeing'.

In (160) the relationship is different again. Here the two predications represent the parallel activities of two parts of a group that has been divided.

(160) *Ämaqä huŋqua mäŋi täqäuätaŋgä*
ämaqä hun-qua m-ŋi täqäu-ätaŋg-ä
man a-3PL down-LOC stand-DR/IPFV-3PL/ASOC

ne huŋquone qe äpäique.
ne hun-quone qe ä-p-y-q-qäqu-i
1PL a-1PL CESS ASS-come-go.up-PR/PFV-1PL/DSOC-INDIC
Some men went below and we others went up.

Whereas different-referent medials with associative subject suffixes encode a variety of close relationships between the marked clauses and the ones to which they are related, those with dissociative suffixes indicate a less integral relationship. They are the more frequent, being used to encode the normal sequence of events in a story whenever the topical entity changes. They cannot be moved out of chronological order; even if the two situations predicated overlap in time, the one which began first must precede the other.

(161) *Äwimeqaŋgueäŋga iqu*
ä-w-ima-qaŋg-ueä-ŋga i-qu
ASS-3-meet-PFV/DR-1DU/DSOC-time that-3SG

qawä äyätapäkäqe.
qawä ä-ya-tap-k-qäqä-i
taro ASS-1DU-give-PA/PFV-3SG/DSOC-INDIC
After we came upon him, he gave us some taro.

(162) *Iquaqu kukŋä tätäqätaŋgiyäŋga nyi yuquayä*
i-quaqu kukŋä t-ätäq-ätaŋg-iyä-ŋga nyi yuquayä
that-3DU talk say-PRGV-DR/IPFV-3DU/DSOC-time 1SG baggage

ämamuätm imiŋqe.
ä-ma-w-m-ät-m i-miŋ-qäqä-i
ASS-get-go-1SG/IR-?-1SG/IR do-PA/IPFV-1SG/DSOC-INDIC
While they two were talking, I was going to bring the baggage.

An alternative interpretation of the two medial forms under consideration here is that one (that employing the associative suffixes) encodes coordination and the other subordination. The evidence in favour of this analysis comes largely from the fact that the latter are almost always further suffixed with the temporal clitic *-ga* and this is frequently followed by the suffix *-ŋi,* which indicates givenness. Further investigation is needed to verify or negate this possibility. Whichever analysis is correct, however, the overall category of 'relevance' still fits. If the syntactic distinction is correct, the associative is used for coordination – clearly a closer relationship than subordination. If the semantic distinction elaborated here is correct, then the associative marks the closer logical connection.

6.4 SUMMARY

The varying uses of the associative and dissociative person/number suffixes have been described and explanations given for the analysis proposed. It remains to bring these various explanations together, re-emphasising the common element while, at the same time, recognising the variations. This can, perhaps, best be presented in table form:

	Associative	Dissociative
Realis Final: present T/A	proposition at same time as or just before speech time	proposition up to 2 or 3 days before speech time
Realis Final: past T/A	high relevance of information; worthy of interruption	proposition more than 2 or 3 days before speech time
Irrealis Final	virtual inevitability or necessity of future proposition	proposition more than 24 hours later than speech time
Different-referent medial	logical (non-temporal) relationship between marked and matrix clauses either strong or worthy of special note in speaker's estimation	logical (non-temporal) relationship between marked and matrix clauses neither strong nor worthy of special note in speaker's estimation

TABLE 8: SUMMARY OF USES OF RELEVANCE SUFFIXES

Thus, while the matrix clause and the basis for relevancy vary from one context to another, in each case the propositions encoded using the associative suffixes are more closely related to their matrix clauses than the propositions using the dissociative suffixes are to their matrix clauses.

7.0 MOOD

Mood was defined (in section 1) as the speaker's motivation for uttering the sentence. In this section I am concerned with the sentence-final clitics which encode the mood of the predication. Menya sentences which predicate the attributes of their subjects, valid at the time of the speech act, do not require a copula verb. (This is true whether the description is general to a type or specific to an individual). Those descriptive of past or future eras, however, do require a copula – *e* 'be, become, put' – which is distinct from the various existential verbs. Even the verbless sentences are marked for mood, however, using the same clitics as appear on the final verb of the sentence. Mood markers are, therefore, syntactically as well as semantically a property of the sentence rather than of the verb itself. Also indicative of mood are the sentence-final intonation patterns which, though not a primary topic of this paper, are introduced where necessary to a fuller explication of the mood suffixes.

Given below are the six mood clitics which occur in Menya and are expounded in this section.

-i	indicative	speaker providing information
-ji	indicative	speaker providing information
-ta	polar interrogative	speaker soliciting a truth value
-ti	dubitative	speaker expressing uncertainty about truth value
-wä	information interrogative	speaker soliciting identity of argument in the predication
-kä	unidentified	usage overlaps indicative and information interrogative

It should be remembered that, whereas giving a command is normally classified as a mood, and is certainly a valid motivation for uttering a sentence, the Menya expression patterns as a modality rather than as a mood.

7.1 INDICATIVE MOOD SUFFIXES

The most frequently occurring, and semantically least marked, of the mood suffixes is the indicative *-i*. It indicates that the speaker is asserting to the addressee that some state of affairs is or is not true. Indicative mood is also encoded by a falling intonation pattern sentence finally. Examples (163-166) illustrate the indicative of various sentence types.

(163) *Pmuaeqe, iqua aŋä imäkäqäquae.*
pmuaeqä-i i-qua aŋä imäk-qä-qua-i
pmuaeqä-DEF that-3PL house make-NMSR-3PL-INDIC
The *pmuaeqä* birds, they are house-builders.

(164) *Iqueqä häwäqä quäuqe.*
i-que-qä häwäqä quäuqä-i
that-3SG-POSS tail long-INDIC
Its tail is long.

(165) *Ämaqä yänanjuäqä huŋqu äquyepäŋqe.*
ämaqä yänanjuäqä hun-qu ä-quyep-äŋ-qäqä-i
man sky.spirit a-3SG ASS-come-RPA/PFV-3SG/DSOC-INDIC
A sky spirit came (down).

(166) *Nyi täŋgaŋi kukŋä kätämäqe.*
nyi tä-ŋga-ŋi kukŋä k-t-m-ŋqä-i
1SG this-time-GVN talk 2SG-say-1SG/IR-GOAL-INDIC
I'm going to talk to you now.

Whereas (166) exhibits an irrealis verb form with indicative marking, very frequently the clitic is omitted with these forms.

Following the associative person/number suffixes, no mood clitic ever occurs. (No explanation for this cooccurrence restriction has yet been postulated.) Thus the only indicator of mood in (167,168) is the falling intonation pattern.

(167) *Ne aŋä ämätätäqäŋu.*
ne aŋä ä-mät-ë̈täq-ŋ-u
1PL house ASS-build-PRGV-PR/IPFV-1PL/ASOC
We are building a house.

(168) *Yaqueqä häkiyä maŋqä yaŋqunä.*
yaqueqä häkiyä ma-n-qä i-a-ŋqä-u-nä
pig pot NEG-eat-NMSR do-1PL/IR-GOAL-1PL/ASOC-QT
We can't cook and eat the pig.

Clearly associated with the *-i* clitic is the form *-ji*. It also occurs with falling intonation and indicative meaning, but differs from *-i* in that it occurs, primarily, suffixed to adverbial elements of the clause, rather than to nominals, adjectives or verbs (which constitute the normal environments for *-i*). The following examples illustrate *-ji* affixed to the negative morpheme (169), a locative adverb (170) and an aspectual adverb (171).

(169) *Äkewi yiŋä naqä hmanji.*
äkewä-i yiŋä naqä hman-ji
äkewä-DEF bird big not-INDIC
The *äkewä* is not a large bird.

(170) *Ŋqä aŋi mäŋinji.*
n-qä aŋä-i mäŋi-ji
1SG-POSS house-DEF below-INDIC
My house is downhill (from here).

(171) *Wäŋqä yäqänänji.*
wäŋqä yäqänä-ji
small still-INDIC
(They) are still small

The distribution of *-i* and *-ji* given above is not consistent, however. In some instances either suffix is allowed; for example, compare (170) with (172), in which the surface forms of the final words are *mäŋinji* and *mäŋiyi* respectively.

(172) *Ŋqä aŋi mäŋiyi.*
n-qä aŋä-i mäŋi-i
1SG-POSS house-DEF below-INDIC
My house is downhill (from here).

The only context observed to date in which a final verb form is marked with *-ji* is with contrary-to-fact (section 4.7) and unfulfilled intention forms (section 4.8).

(173) *Iqu änyimeqä säpi,*
i-qu ä-n-ima-qä säpi
that-3SG ASS-1SG-come.upon-NMSR CTF

nyi moni uyäqäminji.
nyi moni w-i-q-m-ni-ji
1SG money 3-do-PFV-1SG/IR-?-INDIC
If he had come upon me, I would give him money.

There is independent evidence (174) in Menya for a morphophonemic rule *'n-->j/ _i'*, so it is quite possible that the mood suffix *-ji* is really a bimorphemic sequence *-n -i*, in which case the meaning of *-n* would need to be determined.

(174) *Iqu sukä suwä änyiyäqi/änjiyäqi.*
i-qu sukä suwä ä-n-i-i-q-i
that-3SG foot shoe ASS-1SG-do-BEN-PR/PFV-3SG/ASOC
He (just now) put my shoes on for me.

7.2 POLAR INTERROGATIVE SUFFIX

The polar interrogative mood suffix, whereby the speaker elicits a yes/no truth value judgment from the addressee, is indicated by a sustained high intonation on the last several syllables of the sentence, and by the suffix *-ta*, regardless of what type of word is sentence final.

(175) *"Si apäkä täŋukutanä?" ändäqi.*
si apäkä täŋä-uku-ta-nä ä-n-t-q-i
2SG woman near-2SG-POLQ-QT ASS-1SG-say-PR/PFV-3SG/ASOC
"Do you have a wife?", he asks me.

(176) *Iqu ämaqä naqäquta?*
i-qu ämaqä naqä-qu-ta
that-3SG man big-3SG-POLQ
Is he an important man?

(177) *He Watämbuŋä yätu ätukuwäta?*
he Watämbuŋä yä-tu ä-w-t-k-uwä-ta
2PL Watabung up-LOC ASS-3-say-PA/PFV-2PL/DSOC-POLQ
Did you talk up at Watabung?

(178) *Menyämaŋqä wätäŋqäta?*
Menyäma-ŋqä wä-(t)-ŋqä-ta
Menyamya-GOAL go.down-2SG/IR-GOAL-POLQ
Are you going to Menyamya?

As was stated above, however, no mood clitic occurs following the associative suffixes. Polar questions concerning the present differ from their indicative counterparts only in intonation, as illustrated by the exchange in (179).

(179) A: *Iqu woŋuä iqi?*
i-qu woŋuä i-q-i
that-3SG work do-PR/PFV-3SG/ASOC

B: *Auä, iqu woŋuä iqi.*
auä i-qu woŋuä i-q-i
yes that-3SG work do-PR/PFV-3SG/ASOC
A: "Is he working?" B: "Yes, he is (working)?"

The *-ta* clitic is also frequently used when the speaker presents two or more alternatives to the hearer and expects an answer, whether the alternatives are simply yes and no or whether they are two possibilities for a particular role in the sentence. The intonation on the first alternative in each example is invariably the sustained high which normally accompanies *-ta*, whereas on the second the intonation varies between (i) the falling intonation which normally accompanies indicative sentences and (ii) a sustained high concluding with a slight drop on the last syllable. It is not yet clear what

affect the exhaustiveness criterion has on this difference. The sustained high is normally given in elicitation but the falling intonation is more frequent in text.

(180) *Si utäŋqäta, mawäqä isäŋqäta?*
si w-t-ŋqä-ta ma-w-qä i-t-ŋqä-ta
2SG go-2SG/IR-GOAL-POLQ NEG-go-NMSR do-2SG/IR-GOAL-POLQ
Are you going or not?

(181) *Iqu buayä kuapä äkätapäqäta,*
i-qu buayä kuapä ä-k-tap-q-qäqä-ta
that-3SG food plenty ASS-2SG-give-PR/PFV-3SG/DSOC-POLQ

wäŋqäpu äkätapäqäta?
wäŋqä-pu ä-k-tap-q-qäqä-ta
little-3SG/DIM ASS-2SG-give-PR/PFV-3SG/DSOC-POLQ
Did he give you a lot of food or a little?

(182) *Äyani, ämaqä – tripeläquata, popeläquata?*
ä-y-ani ämaqä tripelä-qua-ta popelä-qua-ta
ASS-go.up-1PL/SR man three-3PL-POLQ four-3PL-POLQ
We went up and – was it three men or four?

Frequently in alternative questions in natural conversation, the *-ta* is omitted. This may occur on just the second sentence (183) or on both (184); no instance has yet been observed with only the second sentence marked.

(183) *Woŋui qäquaŋgui äukiyäta,*
woŋuä-i qä-quaŋgui ä-w-k-iyä-ta
work-DEF ?-2DU/M ASS-go-PA/PFV-2DU/DSOC-POLQ

iqu iquaŋguäqä?
i-qu i-quaŋgu-qä
that-3SG that-2DU/M-POSS
Did you two go to the same work or each to his own?

(184) *Eqä asique, huŋque mända?*
eqä asi-que hun-que mända
water same-3SG a-3SG side
The same river or on the side of another?

7.3 INFORMATION QUESTION SUFFIX

Information questions are those which elicit the identity of some argument in the sentence, rather than a truth value or selection from alternatives. They are characterised, in Menya, by the presence of a question word (similar in function to the English 'wh-' question words) and, frequently, by the presence of the suffix *-wä* on the verb or sentence-final element. The typical intonation pattern is gradually falling, as in the indicative.

(185) *Qe aŋginyäqäwä?*
qe aŋgi-ŋqä-wä
2DU where-GOAL-INFOQ
Where are you two going?

(186) *Iqua qua aŋgi pätepäŋqäwä?*
i-qua qua aŋgi päte-p-ŋqä-wä
that-3PL ground where dig-3PL/IR-GOAL-INFOQ
Where are they going to bury him?

(187) *Si äkŋga äyapäŋäwä?*
si äk-ŋga ä-yap-q-ŋä-wä
2SG what-time ASS-come.up-PR/PFV-2SG/DSOC-INFOQ
When did you come?

Once again, associative suffixes are unmarked for mood. Present tense questions are also aberrant in that the assertion prefix is absent from the verb.

(188) *Iqueqä apäki suäqäŋqä quwä ätäma unyä?*
i-que-qä apäkä-i suäqä-ŋqä quwä ä-täma w-n-yä
that-3SG-POSS woman-DEF what-GOAL steal ASS-get go-2SG/ASOC-QT
Why are you going away with his wife?

Of at least equal frequency to *-wä,* however, is the occurrence of the indicative suffix *-i.* Clearly then the primary indicator of information questions is the question word itself (189). The two variants of (190) are spoken by the same person, in the same text, wondering what he could say further to prove his innocence.

(189) *Neson iqu, äkŋgi äwäqatämäukŋi?*
Neson i-qu äk-ŋgi ä-w-qatämäu-k-ŋä-i
Neson that-3SG what-LOC ASS-3-leave-PA/PFV-2SG/DSOC-INDIC
Concerning Neson, where have you left him?

(190) *Nyi änä tämäqe?* OR *tämäqäwä?*
nyi änä t-m-ŋqä-i *t-m-ŋqä-wä*
1SG how say-1SG/IR-GOAL-INDIC say-1SG/IR-GOAL-INFOQ
What more can I say? (lit: How can I speak?)

Whereas statements assert a truth value for a proposition, and polar questions request a truth value for a proposition, information questions presuppose a truth value and, at the same time, seek the identity of some entity (participant, place, time, etc.) of which the proposition is true or of some proposition which is logically related to the matrix proposition (cause, purpose, etc.). It is possible, therefore, that the difference between *-i* marked questions and *-wä* questions represents a difference in emphasis related to these two parts. Native speakers, however, express the opinion that the two variants have the same meaning, and examination of textual usage has so far failed to reveal any pattern.

7.4 DUBITATIVE SUFFIX

The dubitative suffix *-ti* is similar in form, syntax and meaning to the polar interrogative *-ta.* It indicates that the speaker does not know the truth value of the proposition; however, unlike the polar

interrogative, it does not elicit a truth-value judgment from the addressee. It is, similarly, parallel to the information interrogative *-wä* in that it co-occurs with question words, and indicates that the speaker does not know the answer to the question he is posing and does not expect the addressee to know either. Its semantic content is, therefore, the indication of doubt or lack of knowledge, hence the name 'dubitative'. In fact, dubitative sentences are frequently used in answer to questions if the person who has been asked does not know the answer. The intonation pattern in these sentences is the same as in their interrogative equivalents: a final sustained high for polar dubitatives and a falling intonation for information dubitatives. Examples (191-194) are single-clause illustrations of what could be called the polar dubitative and information dubitative uses of *-ti*. The last two are from text and there is no way the hearers could be expected to know the answer because the topic was unfamiliar to them.

(191) *Iqu ämaqä naqäquti?*
i-qu ämaqä naqä-qu-ti
that-3SG man big-3SG-DUBIT
Is he an important man, I wonder? OR I don't know if he is an important man.

(192) *Iqu yapätäŋqäti?*
i-qu yap-ä(t)-ŋqä-ti
that-3SG come.up-3SG/IR-GOAL-DUBIT
Is he coming, I wonder? OR I don't know if he's coming.

(193) *Hikä mäŋä änä ipu ätäumiŋuwäti?*
hikä mäŋä änä i-pu ä-täu-miŋ-uwä-ti
rock axe how do-3PL/SR ASS-cut-PA/IPFV-3PL/DSOC-DUBIT
How did they cut (through) the rock, I wonder?

(194) *Tä aŋgi ikämiŋuwäti?*
tä aŋgi ik-miŋ-uwä-ti
this where plant-PA/PFV-3PL/DSOC-DUBIT
Where have they planted this, I wonder? (in the context of studying a picture of a plant)

Just as the polar interrogative *-ta* is used in the expression of alternatives within questions, whether yes/no or content alternations, so the dubitative *-ti* is used in non-interrogative alternations. It is possible to express the 'I don't know' component overtly before and/or after the alternations, as in (197).

(195) *Tä sipäqäti, botäqä äwitäti?*
tä sipäqä-ti botäqä ä-wi-ät-ä(t)-ti
this ship-DUBIT boat ASS-lie-IPFV-3SG/IR-DUBIT
Is this a ship, or a boat, I wonder?

(196) *Iqua woŋuä ikuwäti,*
i-qua woŋuä i-k-uwä-ti
that-3PL work do-PA/PFV-3PL/DSOC-DUBIT

miqä ikuwäti?
ma-i-qä i-k-uwä-ti
NEG-do-NMSR do-PA/PFV-3PL/DSOC-DUBIT
I wonder if they did their work, or not?

(197) *Nyi maqŋqe. Loti iqu äukäqäti,*
nyi maqŋqä-i Lot i-qu ä-w-k-qä-ti
1SG unaware-INDIC Lot that-3SG ASS-go-PA/PFV-3SG/DSOC-DUBIT

Den iqu äukäqäti? Nyi maqŋqe.
Den iqu ä-w-k-qä-ti nyi maqŋqä-i
Dan that-3SG ASS-go-PA/PFV-3SG/DSOC-DUBIT 1SG unaware-INDIC
I don't know whether Lot or Dan went. I don't know. (lit: I don't know. Did Lot go, or did Dan go? I don't know.)

A further use of the dubitative suffix, though not with final-verb forms, is in the protasis of hypothetical conditionals. Menya is like many other Papuan languages in that the form of the verb in protasis is usually the same medial form as is used for actual events in ordinary narratives, even though the proposition in a protasis is hypothetical. There are, however, special conditional medial forms which are used when the potentiality of the protasis is to be emphasised. The subject cross-reference set used in these forms is the irrealis set, emphasising their potentiality, and they are marked with *-ti*. Examples (198,199) illustrate the regular and conditional medial forms respectively. The first, with the regular medial, can be translated as either a temporal or a conditional clause in English, as reflected in the translation.

(198) *Woŋuä qäpu iqaŋgäquŋga,*
woŋuä qäpu i-qaŋg-qäqu-ŋga
work CMPL do-DR/PFV-1PL/DSOC-time

mbäqä nätapätäŋqe.
mbäqä na-tap-ä(t)-ŋqä-i
money 1PL-give-3SG/IR-GOAL-INDIC
When/If we complete the work, he will pay us.

(199) *Woŋuä qäpu iqaŋguati...*
woŋuä qäpu i-qaŋg-a-ti
work CMPL do-DR/PFV-1PL/IR-DUBIT
If we complete the work...

Haiman (1978b) has demonstrated and explained the polar interrogative and conditional uses (among others) of the Hua particle *-ve*. Since it is not the polar interrogative but the dubitative suffix which is used in Menya conditionals, a different logical basis for the relationship is in order. Haiman has elsewhere (1976, 1978a) pointed out that conditionals are a subset of topics in that they 'constitute the frame of reference with respect to which the main clause is either true (if a proposition) or felicitous (if not).' (1978a:564). As topics they are treated as presupposed, and indeed the temporal medials, as illustrated in (198), are very frequently marked with *-ŋi*, which indicates presuppositional status. Hypothetical conditionals differ from other topics in that they are suppositions rather than presuppositions. I suggest that it is this suppositionality which provides the link with dubitatives, since the speakers are not committing themselves to the factuality of the propositions in either construction.

7.5 SUMMARY

More than anywhere else in this paper, this section has indicated seemingly unexplained variability. With further research, and especially more detailed analysis of the usage of the mood

markers in natural discourse, it may be possible to progress a lot further towards explaining what is happening. Undoubtedly the answer lies in the communicative contract between the speaker and hearer – unless of course the answer is arbitrariness, which I prefer to avoid.

This situation is further complicated by the existence of the fifth mood clitic *-kä/-ŋgä*. In distribution it overlaps greatly with the indicative and information interrogative clitics *-i/-ji* and *-wä*. The only context I have been able to discover where all three are acceptable is following the question word *aŋgi* 'where?', when the existential verb is omitted *(Aŋgikä? ~ Aŋgiwä? ~ Aŋgiyi?)*. Nevertheless, there are several contexts in which *-kä/-ŋgä* can replace *-wä*, and others where it can replace *-i/-ji*.

(200) *Si suäqäŋqä kiŋqaŋgikä?*
si suäqä-ŋqä k-i-n-qaŋg-i-kä
2SG what-GOAL 2SG-do-DETR-DR/PFV-3SG/ASOC-?
What do you want? (lit: Because you want what?)

(201) *Nyi woŋuä iqäminji.* OR *Iqämiŋgä.*
nyi woŋuä i-q-m-n(i)-nji *i-q-m-n(i)-ŋgä*
1SG work do-PFV-1SG/IR-?-INDIC do-PFV-1SG/IR-?-?
I was intending to work.

Example (200) is a complete utterance from text even though the verb it contains is a medial form; it is another instance of an interjected question, and these are frequently truncated sentences.

At this stage I offer no meaning for *-kä*, not having been able to elicit or observe sufficient contrast in meaning to suggest how it differs from *-wä* and *-i*.

APPENDIX A: PHONOLOGICAL AND ORTHOGRAPHIC CONSIDERATIONS

The Menya phonological system consists of 17 consonants and 6 vowels. Voiceless stops and voiced prenasalised stops contrast at bilabial, dental, alveo-palatal, velar and uvular points of articulation. (The alveo-palatals are phonetically affricates, but pattern with the stops.) The voiceless stops are symbolised as *p, t, s, k* and *q* respectively. The voiced prenasalised stops are symbolised as *b/mb, d/nd, j/nj, g/ŋg* and *ŋq*; for the first four, the single-letter variants are used word initially and the digraphs word medially. (A few words begin with a syllabic nasal so initial *mb* for example does exist.) Nasals contrast at bilabial, dental, alveo-palatal and velar points of articulation, and are symbolised as *m, n, ny* and *ŋ* respectively. The remaining three consonants are *w, y* and *h*. The vowels are symbolised as *i, e, a, o, u* and *ä*, with the first five correlating closely with the phonetic equivalents of those symbols, and *ä* representing the mid central vowel.

The Angan languages are characterised by fairly complex morphophonemics. In most of the examples, therefore, both a surface representation (using a basically phonemic orthography) and a morpheme-by-morpheme representation are included. Where the morphemes that form the basis of this paper are involved in morphophonemic processes, the pertinent information is included in the body of the paper. Some of the most frequent morphophonemic processes are informally stated here to help the reader bridge the gap between the two representations. Many of these processes are not global in that they apply in many but not all contexts. It is yet to be determined if the rules only apply to certain word classes or affix types, or whether they apply to certain morphemes idiosyncratically.

Most verb roots have two forms, usually differing in the absence/presence of a final vowel or the quality of the final vowel; in a few instances, the two forms are completely unrelated, such as *nyuä/mi* 'bear, lay'. The distribution of the two forms is conditioned by the phoneme which follows the root: vowel or *-q* (which fricativises between syllabic segments) versus all other consonants. Except in the case of the unrelated pairs, only one form is used in the morpheme line regardless of the form used in that context.

Voiceless stops become voiced following a nasal, and the dental nasal assimilates in point of articulation.

ä-n-t-q-i -> *ändäqi*
ASS-1SG-say-PR/PFV-3SG/ASOC
he is telling me

ä-n-k-qäqä-i -> *äŋgäqe*
ASS-eat-PA/PFV-3SG/DSOC-INDIC
he ate

The dental stop assimilates in point of articulation following *m*. Other combinations of non-homorganic nasal-stop sequences have not been observed, so a more general statement cannot be made.

m-tu -> *bu*
level-LOC
down there

cf. *yä-tu* -> *yätu*
up-LOC
up there

The dental stops and nasal palatalise across morpheme boundaries when preceded by a front vowel and/or followed by a high front vowel; when followed by *y* they coalesce with it.

i-t-ŋqä -> *isäŋqä*
do-2SG/IR-GOAL
you're going to do

ye-nä -> *yenyä*
1DU-FCS
we two

ä-n-ima-qä -> *änyimeqä*
ASS-1SG-come.upon-NMSR
(his) coming upon me

ä-n-t-i-q-i -> *änjiqi*
ASS-1SG-say-BEN-PR/PFV-3SG/ASOC
he is speaking for me

n-yaqä -> *nyaqä*
1SG-POSS
my

t-yaqä -> *saqä*
2SG-POSS
your

The uvular stop deletes at morpheme boundaries before non-bilabial nasals.

ä-t-q-n -> *ätn*
ASS-say-PR/PFV-2SG/ASOC
you are saying

i-q-ŋä-i -> *iŋi*
do-PR/PFV-2SG/DSOC-INDIC
you did

The dental and velar nasals delete after the bilabial nasal.

aŋä-m-ŋqä -> *aŋämäqä*
house-far-GOAL
to the far house

i-m-n -> *im*
do-1SG/IR-?
I can do

cf. *i-ä-n* -> *yän*
do-3SG/IR-?
he can do

The mid central vowel deletes before a morpheme boundary followed by a front vowel.

ä-t-k-uwä-i -> *ätäkuwi*
ASS-say-PA/PFV-3PL/DSOC-INDIC
they spoke

The high front vowel lowers to *e* at a morpheme boundary preceded by *qä* or *qu*.

ä-t-k-qäqä-i -> *ätäkäqäqe*
ASS-say-PA/PFV-3SG/DSOC-INDIC
he spoke

The mid central vowel epenthesises between non-syllabic consonants, except in the nasal-stop sequences already mentioned.

t-p-ŋqä -> *täpäŋqä*
say-3PL/IR-GOAL
they are going to speak

The low central vowel is raised to *ä* when in an unstressed syllable followed by the same vowel in the next stressed syllable.

ä-na-tap-q-i -> *änätapäqi*
ASS-1PL-give-PR/PFV-3SG/ASOC
he is giving to me

ä-mä-na-tuqa-k-uwä-i -> *ämänätuqakuwi*
ASS-?-1PL-teach-PA/PFV-3PL/DSOC-INDIC
they taught us

In many verb forms, a sequence of two or three *qä* syllables could occur, and sometimes does; more frequently, however, these reduce to a single syllable.

i-q-qäqä-i -> *iqäqäqe/iqäqe/iqe*
do-PR/PFV-3SG/DSOC-INDIC
he did

APPENDIX B: SAMPLE PARADIGMS

The paradigms given in this appendix are of the verbs *ma* 'get, have' and *t* 'say'. They are consistently arranged vertically in the order 1SG, 2SG, 3SG, 1DU, 2/3DU, 1PL, 2/3PL and therefore are not labelled. Where alternate pronunciations exist, the simplest form is given; for example, the near past perfective first singular form can be pronounced *ämeqäqäqe* or *ämeqäqe* as well as *ämeqe*. Where stress is the only difference between two forms, the stressed syllable is in capitals. For reader convenience, the tense/aspect and the subject cross-reference suffixes are repeated below.

	Perfective	Imperfective	
		(Stative)	Progressive
Present	*-q*	*-ŋ*	*-ätäq-ŋ*
Past	*-k*	*-miŋ*	
Remote Past	*-äŋ*	*-miŋ*	
DR Medial	*-qaŋg*	*-ätaŋg*	*-ätäq-ätaŋg*
Irrealis	*-q*	*-ät*	*-ätäq-ät*

TENSE/ASPECT SUFFIXES

	Associative	Dissociative	Irrealis
1SG	*-ä*	*-(qä)qä*	*-m*
2SG	*-n*	*-ŋä*	*-(t)*
3SG	*-i/-ä*	*-(qä)qä*	*-ä(t)*
1DU	*-ue*	*-ueä*	*-e*
2/3DU	*-iny*	*-iyä*	*-i(ny)*
1PL	*-u*	*-(qä)qu*	*-an/a(tu)*
2/3PL	*-ä*	*-uwä*	*-p*

SUBJECT CROSS-REFERENCE SUFFIXES

Present Perfective		Present Stative		Present Progressive	
ämeqä	*ätäqä*	*ämeŋä*	—	*ämetäqäŋä*	*ätätäqäŋä*
ämen	*ätn*	*ämeŋän*	—	*ämetäqäŋän*	*ätätäqäŋän*
ämeqi	*ätäqi*	*äme*	—	*ämetäqä*	*ätätäqä*
ämeque	*ätäque*	*ämeŋue*	—	*ämetäqäŋue*	*ätätäqäŋue*
ämeqinyä	*ätäqinyä*	*ämeŋinyä*	—	*ämetäqäŋinyä*	*ätätäqäŋinyä*
ämequ	*ätäqu*	*ämeŋu*	—	*ämetäqäŋu*	*ätätäqäŋu*
ämeqä	*ätäqä*	*ämeŋä*	—	*ämetäqäŋä*	*ätätäqäŋä*

Near Past Perfective		Near Past Stative		Near Past Progressive	
ämeqe	*ätäqe*	*ämeNJQE*	—	*ämetäŋqe*	*ätätäŋqe*
ämeŋi	*ätäŋi*	*ämeNJI*	—	*ämetäqäŋi*	*ätätäqäŋi*
ämeqe	*ätäqe*	*ämeNJQE*	—	*ämetäŋqe*	*ätätäŋqe*
ämequee	*ätäquee*	*ämeŋueE*	—	*ämetäqäŋueeä*	*ätätäqäŋuee*
ämeqiyi	*ätäqiyi*	*ämeŋiYI*	—	*ämetäqäŋiyi*	*ätätäqäŋiyi*
ämeque	*ätäque*	*ämeNJQUE*	—	*ämetäŋque*	*ätätäŋque*
ämequwi	*ätäquwi*	*ämeŋuWI*	–	*ämetäqäŋuwi*	*ätätäqäŋuwi*

Past Perfective		Remote Past Perfective		(Remote-)Past Imperfective	
ämakäqe	*ätäkäqe*	*äMEŋqe*	*ätäŋqe*	*ämamiŋqe*	*ätämiŋqe*
ämakŋi	*ätäkŋi*	*äMEŋi*	*ätäŋi*	*ämamiŋi*	*ätämiŋi*
ämakäqe	*ätäkäqe*	*äMEŋqe*	*ätäŋqe*	*ämamiŋqe*	*ätämiŋqe*
ämakuee	*ätäkuee*	*äMEŋquee*	*ätäŋquee*	*ämamiŋuee*	*ätämiŋuee*
ämakiyi	*ätäkiyi*	*äMEŋiyi*	*ätäŋiyi*	*ämamiŋiyi*	*ätämiŋiyi*
ämakäque	*ätäkäque*	*äMEŋque*	*ätäŋque*	*ämamiŋque*	*ätämiŋque*
ämakuwi	*ätäkuwi*	*äMEŋuwi*	*ätäŋuwi*	*ämamiŋuwi*	*ätämiŋuwi*

Immediate		Abilitative		Intentive	
ämam	*ätäm*	*mam*	*täm*	*mamäqe*	*tämäqe*
ma	*tu*	*matn*	*tätn*	*matäŋqe*	*tätäŋqe*
äme	*ätä*	*men*	*tän*	*metäŋqe*	*tätäŋqe*
äme	*äta*	*menyä*	*tenyä*	*meŋqe*	*teŋqe*
(ä)manyä	*(ä)sinyä*	*manyä*	*sinyä*	*mayäŋqe*	*siyäŋqe*
ämenä	*ätanä*	*menä*	*tanä*	*metäŋque*	*tatäŋque*
(ä)mapu	*(ä)täpu*	*mapän*	*täpän*	*mapäŋqe*	*täpäŋqe*

Obligative		Future 1		Future 2	
mamäqä	*tämäqä*	*mamäniqe*	*tämäniqe*	*mamäniŋqe*	*tämäniŋqe*
matäŋqiny	*tätäŋqiny*	*matäŋi*	*tätäŋgi*	*matäŋäŋqe*	*tätäŋäŋqe*
meŋqi	*täŋqi*	*meniqe*	*täniqe*	*meniŋqe*	*täniŋqe*
meŋque	*teŋque*	*menyuee*	*tenyuee*	*menyueäŋqe*	*tenyueäŋqe*
mayäŋqiny	*siyäŋqiny*	*manyiyi*	*sinyiyi*	*manyiyäŋqe*	*sinyiyäŋqe*
meŋqu	*taŋqu*	*menique*	*tanique*	*meniŋque*	*taniŋque*
mäpäŋqä	*täpäŋqä*	*mapänuwi*	*täpänuwi*	*mapänuwäŋqe*	*täpänuwäŋqe*

Contrary-to-Fact		Unfulfilled Intention	
meqäminji	*täqäminji*	*mamätämji*	*tämätämji*
meqätninji	*täqätninji*	*mamätnji*	*tämätnji*
meqoninji	*täqoninji*	*mamätänji*	*tämätänji*
mequeninji	*täqueninji*	*menyätenji*	*tenyätenji*
meqinyiyänji	*täqinyiyänji*	*menyäsinji*	*tenyäsinji*
mequaninji	*täquaninji*	*menätanji*	*tanätanji*
meqäpäniäi	*täqäpäninji*	*menätäpinji*	*tanätäpinji*

DR Temporal Perfective		DR Logical Perfective	
meqaŋgäqäŋga	*täqaŋgäqäŋga*	*meqaŋgä*	*täqaŋgä*
meqaŋgäŋäŋga	*täqaŋgäŋäŋga*	*meqaŋgän*	*täqaŋgän*
meqaŋgäqäŋga	*täqaŋgäqäŋga*	*meqaŋgi*	*täqaŋgi*
meqaŋgueäŋga	*täqaŋgueäŋga*	*meqaŋgue*	*täqaŋgue*
meqaŋgiyäŋga	*täqaŋgiyäŋga*	*meqaŋginyä*	*täqaŋginyä*
meqaŋguŋga	*täqaŋguŋga*	*meqaŋgu*	*täqaŋgu*
meqaŋguwäŋga	*täqaŋguwäŋga*	*meqaŋgä*	*täqaŋgä*

SR Temporal		SR Logical		SR Close-knit	
ämami	*ätämi*	*ämetäm*	*ätätäm*	*ämam*	*ätäm*
ämañi	*ätäñi*	*ämetn*	*ätätn*	*ämany*	*ätny*
ämeqe	*ätäqe*	*ämetä*	*ätätä*	*äme*	*ätä*
ämeyi	*ätayi*	*ämeta*	*ätäta*	*äme*	*äte*
ämayi	*äsiyi*	*ämesin*	*ätäsin*	*ämayin*	*äsin*
ämeni	*ätani*	*ämetan*	*ätätan*	*ämen*	*ätan*
ämapiyi	*ätäpiyi*	*ämepu*	*ätäpu*	*ämapu*	*ätäpu*

APPENDIX C: SAMPLE TEXTS

C.1 GOING HOME

Kalo	*iqukui,*	*si*	*balusi*	*dowäqatäqaŋgän,*	*ye*	*yeqä*	*aŋä*
Kalo	*i-qu-k-i*	*si*	*balusi*	*dowäqatä-qaŋg-n*	*ye*	*ye-qä*	*aŋä*
Carl	that-3SG-2SG-DEF	2SG	plane	send-DR/PFV-2SG/ASOC	1DU	1DU-POSS	place

Carl, because you sent the plane, it got us two up at

yäm	*äyätämeŋqäqe.*	*Täqi*	*Okatombä*	*täu*
y-m	*ä-ya-täma-äŋ-qäqä-i*	*tä-qi*	*Okatombä*	*tä-u*
up-LOC	ASS-1DU-get-RPA/PFV-3SG/DSOC-INDIC	this-LOC	Ukarumpa	this-LOC

our village. Here at Ukarumpa

sitänä	*anä*	*äpmeŋque.*
si-tä-nä	*anä*	*ä-pma-ŋ-qäqu-i*
2SG-and-FCS	with	ASS-be-PR/IPFV-1PL/DSOC-INDIC

we have been staying with you.

Sitä anä äpmeŋque ye awiŋgaŋi yähiŋuätäŋi
si-tä anä ä-pma-ŋ-qäqu-i ye awiŋga-ŋi yähiŋuätä-ŋi
2SG-and with ASS-be-PR/IPFV-1PL/DSOC-INDIC 1DU tomorrow-GVN morning-GVN
We've been staying with you and tomorrow morning,

pätaite ye yeqä aŋämäqä äkuyäma yeŋqe.
pätaite ye ye-qä aŋä-m-ŋqä ä-k-uyäma y-e-ŋqä-i
Friday 1DU 1DU-POSS place-LOC-GOAL ASS-2SG-leave go.up-1DU/IR-GOAL-INDIC
Friday, we two are going to leave you and go home.

Si qänaki yematäŋäŋqä; ye yeqä
si qänaki ya-ima-t-n(i)-ŋä-ŋqä-i ye ye-qä
2SG later 1DU-meet-2SG/IR-?-2SG/DSOC-GOAL-INDIC 1DU 1DU-POSS
You will come to us later; we're going to leave you

aŋämäqä äkuyäma yeŋqe.
aŋä-m-ŋqä ä-k-uyäma y-e-ŋqä-i
place-LOC-GOAL ASS-2SG-leave go.up-1DU/IR-GOAL-INDIC
and go home.

Äkuyäma äyeqe, yeqä aŋä yämäŋi, ämaqä huŋqu
ä-k-uyäma ä-y-eqe ye-qä aŋä y-m-ŋi ämaqä hun-qu
ASS-2SG-leave ASS-go.up-1DU/SR 1DU-POSS place up-LOC-GVN man a-3SG
We'll leave you and go up and, our village being far off, when a man

hiŋuä äyaqänäqe, "Qe äyä äyapäqinyäqä"
hiŋuä ä-ya-q-n-äqe qe äyä ä-yap-q-iny-qä
eye ASS-1DU-rub-DETR-3SG/SR 2DU now ASS-come.up-PR/PFV-2DU/ASOC-QT
sees us and "You're coming now",

äyatäqäqe, ye "Äoqä", tenyä,
ä-ya-t-q-qäqä-i ye äo-qä t-e-n(i)
ASS-1DU-say-PR/PFV-3SG/DSOC-DEF 1DU yes-QT say-1DU/IR-?
says to us, we two can say, "Yes,

"qe äyapäque".
qe ä-yap-q-ue
CESS ASS-come.up-PR/PFV-1DU/ASOC
we've come".

"Qe äyapäqueä" ätuäta, iqutänä
qe ä-yap-q-ue-ä ä-w-t-ät-a i-qu-tä-nä
CESS ASS-come.up-PR/PFV-1DU/ASOC-QT ASS-3-say-?-1DU-ISR-that-3SG-and-FCS
Having said "We've come", we'll all talk

equne kukŋä ätämäŋi, yeqä aŋämäqä yeŋqe.
eqä-une kukŋä ä-t-mäŋi ye-qä aŋä-m-ŋqä y-e-ŋqä-i
all-1PL talk ASS-say-? 1DU-POSS place-LOC-GOAL go.up-1DU/IR-GOAL-INDIC
together, then we two will go home.

Yeqä	*aŋämäqä*	*äyeqe,*	*yeqä*	*aŋä*	*yäŋi*
ye-qä	*aŋä-m-ŋqä*	*ä-y-eqe*	*ye-qä*	*aŋä*	*y-ŋi*
1DU-POSS	place-LOC-GOAL	ASS-go.up-1DU/SR	1DU-POSS	place	up-LOC

Going up to our home, when we arrive at home

timäuqaŋgueäŋga	*ämaqä*	*huŋqu*	*hiŋuä*	*äyaqänäqe*
timäu-qaŋg-ueä-ŋga	*ämaqä*	*hun-qu*	*hiŋuä*	*ä-ya-q-n-äqe*
arrive-DR/PFV-1DU/DSOC-time	man	a-3SG	eye	ASS-1DU-rub-DETR-3SG/SR

and a man sees us two

ti	*äyatäqe,*	*"Qe*	*äyapäqinyäqä,"*
ti	*ä-ya-t-q-qäqä-i*	*qe*	*ä-yap-q-iny-qä*
thus	ASS-1DU-say-PR/PFV-3SG/DSOC-DEF	2DU	ASS-come.up-PR/PFV-2DU/ASOC-QT

and speaks thus to us, "You two have come",

ye	*"Äoqä",*	*tenyä.*	*Qäpi.*
ye	*äo-qä*	*t-e-n(i)*	*qäpu-i*
1DU	yes-QT	say-1DU/IR-?	CMPL-INDIC

we can say "Yes". The end.

C.2 THE SNAKE STORY

Qämakä	*iqu*	*qaŋä*	*äpmiŋqe.*	*Ämaqä*	*ique*
qämakä	*i-qu*	*qaŋä*	*ä-p-miŋ-qäqä-i*	*ämaqä*	*i-que*
snake	that-3SG	walk	ASS-come-PA/IPFV-3SG/DSOC-INDIC	man	that-3SG

The snake was coming along.

äwimakäqe.	*Äwimeqe,*	*ämaqä*	*ique*
ä-w-ima-k-qäqä-i	*ä-w-ima-äqe*	*ämaqä*	*i-que*
ASS-3-meet-PA/PFV-3SG/DSOC-INDIC	ASS-3-meet-3SG/SR	man	that-3SG

He came upon the man. Having come upon him, he

äqiyäkuäqukäqe.	*Iŋi*	*ämaqä*	*iqu,*
ä-qiyäkuäqu-k-qäqä-i	*i-ŋi*	*ämaqä*	*i-qu*
ASS-encircle-PA/PFV-3SG/DSOC-INDIC	that-GVN	man	that-3SG

wrapped himself around the man. But the man,

ki	*yäŋä*	*äqäŋgäqe.*	*Qämakä*	*ique*	*a*
ki	*yäŋä*	*ä-q-n-k-qäqä-i*	*qämakä*	*i-que*	*a*
3/SG	bone	ASS-rub-DETR-PA/PFV-3SG/DSOC-INDIC	snake	that-3SG	hand

he was strong. He held the snake.

äkiqätäkäqe.	*Kiqätäqaŋga,*	*qämakä*	*iqu*
ä-kiqät-k-qäqä-i	*kiqät-qaŋg-ŋga*	*qämakä*	*i-qu*
ASS-hold-PA/PFV-3SG/DSOC-INDIC	hold-DR/PFV-time	snake	that-3SG

He was holding, and the snake

maŋä	*äyäukäqe.*	*Iŋi,*	*iqueqä*	*tewi*
maŋä	*ä-yäu-k-qäqä-i*	*i-ŋi*	*i-que-qä*	*tewä-i*
mouth	ASS-open-PA/PFV-3SG/DSOC-INDIC	that-GVN	that-3SG-POSS	tongue-DEF

opened its mouth. Then his tongue

ämaqä iqueuä maŋä du änjutämiŋŋqe.
ämaqä i-que-uä maŋä n-tu ä-njut-miŋ-qäqä-i
man that-3SG-POSS mouth level-LOC ASS-touch-PA/IPFV-3SG/DSOC-INDIC
touched the man on his mouth.

Iquaqu kiuŋqu kiuŋqu yäŋä äqänämiŋiyi.
i-quaqu kiuŋqu kiuŋqu yäŋä ä-q-n-miŋ-iyä-i
that-3DU each each bone ASS-rub-DETR-PA/IPFV-3DU/DSOC-INDIC
They tested each other's strength.

Nyi änä maqäŋqe. Ämaqä iqu ämäwäqätäukäqäti,
nyi änä maqäŋqä-i ämaqä i-qu ä-mä-w-qätäu-k-qäqä-ti
1SG yet unaware-INDIC man that-3SG ASS-?-3-pass-PA/PFV-3SG/DSOC-DUBIT
I don't know yet. Did the man win,

qämakä iqu ämäwäqätäukäqäti? Nyi maqŋqe.
qämakä i-qu ä-mä-w-qätäu-k-qäqä-ti nyi maäqŋqä-i
snake that-3SG ASS-?-3-pass-PA/PFV-3SG/DSOC-DUBIT 1SG unaware-INDIC
or did the snake win? I don't know.

Qäpinji.
qäpu-nji
CMPL-INDIC
The end.

ABBREVIATIONS:

ASOC	associative
ASS	assertive
BEN	benefactive
CESS	cessative
CMPL	completive
CSV	causative
CTF	contrary-to-fact
DU	dual
DEF	definite
DETR	detransitiviser
DIM	diminutive
DR	different-referent
DSOC	dissociative
DUBIT	dubitative
EMPH	emphasis
F	feminine
FCS	focus
GEN	generic medial
GVN	given
INDIC	indicative
INFOQ	information question
IPFV	imperfective
IR	irrealis
LOC	locative
M	masculine
MD	mood
NEG	negative
NMSR	nominaliser
PA	past
PFV	perfective
PL	plural
POLQ	polar question
POSS	possessive
PR	present
PRGV	progressive
QT	quote mark
REFL	reflexive
RPA	remote past
S	subject
SG	singular
SR	same-referent
STV	stative

T/A	tense/aspect	2	second person
VN	verb nucleus	3	third person
1	first person		

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