

SERIES C - No. 16

A GRAMMAR OF KEWA, NEW GUINEA

by

K.J. Franklin



PACIFIC LINGUISTICS

The Australian National University

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First published 1971.

The editors are indebted to the Australian National University for help in the production of this series.

This publication was made possible by an initial grant from the Hunter Douglas Fund.

PREFACE

My interest in Kewa dates back to 1958 when, as members of the Summer Institute of Linguistics, Inc. (SIL), my wife and I first began our study of the language. Our efforts concentrated on East Kewa from 1958 until the end of 1962. Several years lapsed while we undertook other duties with SIL, until finally in 1967 we returned to our studies of Kewa, this time in the West dialect.

The phonology and grammar which follow describe West Kewa. The materials are slightly revised in a few places, but generally are from Chapters 2-6 of a doctoral dissertation presented to the Australian National University in May of 1969. Chapter 1 of the dissertation (except for some non-theoretical sections) and Chapter 7 are planned for a forthcoming article tentatively called "On tagmemics and tagmemic rules". Chapter 8 of the original work has already been published (Franklin 1968b).

I am very grateful to those who have been my linguistic teachers: especially Kenneth L. Pike, Robert E. Longacre, Joseph E. Grimes and Charles F. Hockett. It would be rewarding if this work reflected some of their scholarship and approach to language.

While at the Australian National University, Dr. C.L. Voorhoeve and Professor S.A. Wurm guided my research programme. I have especially appreciated Dr. Voorhoeve's comprehensive written comments, and discussions of many aspects of the grammar with Dr. T.E. Dutton, then a fellow Research Scholar in Linguistics.

My wife, Joice, has been a constant source of encouragement and help. In addition to reading and commenting on all phases of the study, she has performed clerical and typing duties, including the grammar in many drafts.

From all the Kéwa people who have helped us learn their language, four deserve special mention: Pigu and Yandawae of East Kewa, and Kirapeaasi and Orope from West Kewa. These young men have been both willing teachers and friends.

Finally, I wish to express my appreciation for financial aid to two sources: (1) to the A.N.U. for a research scholarship which made concentrated research in West Kewa possible; (2) to many friends (especially members of the First Baptist Church, Pontiac, Michigan) who have supported our work with the Kewa from the beginning.

K.J. Franklin

TABLE OF CONTENTS

PREFACE	111
LIST OF FIGURES AND CHARTS	1x
CHAPTER 1: INTRODUCTION	1
1.0 GENERAL ORIENTATION	1
1.1 PREVIOUS KEWA MATERIALS	2
1.2 PRESENTATION	3
1.3 ABBREVIATIONS	4
1.4 SUMMARY	6
NOTES	7
CHAPTER 2: PHONOLOGY	9
2.0 INTRODUCTION	9
2.1 THE PHONOLOGICAL HIERARCHY	9
2.2 SEGMENTAL PHONEMES	11
2.3 TONE	12
2.31 Tonal Variation	13
2.4 INTONATION CONTOURS	14
2.5 MORPHOTONEMICS	15
2.51 Stems with Basic Low(s)-High	17
2.52 Progressive Assimilation to Lows	18
2.53 Progressive Assimilation of Other Patterns	20
2.54 Dissimilation of Basic Tones	22
2.6 OTHER OBSERVATIONS	23
2.7 SUMMARY	25
NOTES	26
CHAPTER 3: WORDS	30
3.0 INTRODUCTION	30

3.1	WORD CLASSES	30
3.11	Verbs	30
3.12	Nouns	31
3.13	Adjectives	33
3.14	Adverbs	33
3.15	Deictics	34
	3.15.1 Pronouns	34
	3.15.2 Demonstratives	36
3.16	Particles	36
3.2	WORD PATTERNS	36
3.21	Verb Bases	37
3.22	Obligatory Suffixes	38
	3.22.1 Terminal Suffixes	38
	3.22.2 Non-Terminal Suffixes	40
3.23	Morphophonemic Rules	41
3.24	Verb Syntagmemes	46
	3.24.1 Negative	47
	3.24.2 Causative	48
	3.24.3 Aspect ¹	48
	3.24.4 Aspect ²	50
	3.24.5 Aspect ³	50
3.25	Noun Syntagmemes	51
	3.25.1 Word-Level Clitics	53
3.26	Other Word Patterns	53
	3.26.1 Adjectivals	53
	3.26.2 Adverbials	54
	3.26.3 Deictics	54
	NOTES	56
	APPENDIX A: Verb Paradigms	60
CHAPTER 4:	CLAUSES	61
4.0	INTRODUCTION	61
4.1	CLAUSE-LEVEL TAGMEMES	61
	4.11 Subject Tagmemes	62
	4.12 Object Tagmemes	65
	4.13 Complement Tagmemes	67
	4.14 Predicate Tagmemes	68
	4.15 Adjunct Tagmemes	69
4.2	CLAUSE SYNTAGMEMES	70
	4.21 Intransitive Clauses	70
	4.22 Transitive Clauses	71

4.23	Derived Transitive Clauses	72
4.24	Complementive Clauses	73
4.3	SO-CALLED EQUATIONAL CLAUSES	75
4.4	EMBEDDED CLAUSES	76
4.41	Clauses Embedded in Subject Position	77
4.42	Clauses Embedded in Object Position	79
4.43	Clauses Embedded in Complement Position	81
4.44	Clauses Embedded in Adjunct Position	81
4.5	CLAUSE PERMUTATIONS	82
	NOTES	84
CHAPTER 5: PHRASES		86
5.0	INTRODUCTION	86
5.1	NOUN PHRASES	86
5.11	Descriptive Noun Phrases	86
5.12	Possessive Noun Phrases	88
5.13	Conjoined Noun Phrases	90
5.2	NOMINALISATIONS	92
5.3	AXIS-RELATOR PHRASES	94
5.4	VERB PHRASES	95
5.41	Possessive Verb Phrases	96
5.42	Purposive Verb Phrases	97
5.43	Gerundive Verb Phrases	99
	NOTES	100
CHAPTER 6: SENTENCES		102
6.0	INTRODUCTION	102
6.1	COORDINATE SENTENCES	102
6.11	Sequential Coordination	103
6.12	Simultaneous Coordination	106
6.13	Coordination Involving Different Persons	108
6.14	Other Co-Occurring Time Relationships	110
6.14.1	<i>Prolongation</i>	111
6.14.2	<i>Serialisation</i>	111
6.14.3	<i>Permission</i>	112
6.14.4	<i>Disassociation</i>	112
6.14.5	<i>Exclusion</i>	113
6.14.6	<i>Other Observations</i>	113
6.2	SENTENCE CONNECTORS	114
6.21	Reason Sentences	114
6.22	Antithetical Sentences	115

6.23	Alternative Sentences	117
6.24	Causal Sentences	118
6.25	Thematic Sentences	119
6.26	Quotative Sentences	120
6.3	MULTIPLE FUNCTIONS	124
6.4	PRE- AND POST-POSED TAGMEMES	125
	NOTES	126
	BIBLIOGRAPHY	131

LIST OF FIGURES AND CHARTS

CHAPTER 1

Figure 1: After Becker (1967a)	3
Figure 2: Functions vs. Categories	3

CHAPTER 2

Chart 1: Tone Patterns	17
------------------------	----

CHAPTER 3

Chart 2: Time Orientation	32
Chart 3: Personal Pronouns	34
Chart 4: Demonstratives	36
Chart 5: Set II Tense Suffixes	39
Chart 6: Imperative Suffixes	39
Chart 7: Set I Tense Suffixes	40
Chart 8: Non-Terminal Suffixes	41
Chart 9: Interrogatives	55

CHAPTER 5

Chart 10: Verb Phrase Examples	99
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CHAPTER 6

Chart 11: Sentence-Level Recursiveness	107
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FRANKLIN, K. A GRAMMAR OF KOUA, NEW GUINEA

CONTENTS

1. INTRODUCTION

2. PHONOLOGY

3. MORPHOLOGY

4. SYNTAX

5. SEMANTICS

6. APPENDIX

7. REFERENCES

8. INDEX

9. AUTHOR'S ADDRESS

10. ACKNOWLEDGEMENTS

11. NOTES

12. SUMMARY

13. BIBLIOGRAPHY

14. APPENDIX I

15. APPENDIX II

16. APPENDIX III

17. APPENDIX IV

18. APPENDIX V

19. APPENDIX VI

20. APPENDIX VII

21. APPENDIX VIII

22. APPENDIX IX

23. APPENDIX X

24. APPENDIX XI

25. APPENDIX XII

26. APPENDIX XIII

Chapter 1

INTRODUCTION

1.0 GENERAL ORIENTATION

The Kewa people, who live in the Southern Highlands District of Papua and number over 40,000, are part of a large Highlands Stock (Wurm 1960a).¹ The Kewa language is a member of the West-Central Family, a Family which also includes Enga (dialects), Ipili, Huli, Mendi (dialects), Sau and perhaps Wiru.² More specifically, Wurm has included Kewa as a member of the Mendi-Pole Sub-Family along with Mendi, Pole, Augu and Sau.³ Wurm and Laycock also suggest that all of these Sub-Family members may be in fact one language (1961: 141), a presumption later followed by C.F. and F.M. Voegelin (1965: 11).⁴ On the other hand, I have outlined what I hold to be the boundaries of Kewa and give evidence for them elsewhere (Franklin 1968b).

The first indication of a group of related languages corresponding in part to what is now known as the West-Central Family was by A. Capell (1948-49:374ff). He examined and gave limited vocabularies from Hoiyevia (= Ipili), Tarifuroro⁵ (= Huli), Augu, Kutubu (= Foi), Sau and Telefomin. Capell then suggested a relationship between what is now known as Ipili, Huli, Mendi and Sau, as well as Enga.⁶

However, despite the early comparisons by Capell and the survey by Wurm, there is still little published linguistic material available on the West-Central Family.⁷ Our own published articles are on East Kewa; the grammatical features are summarised later in this chapter. The present study is, however, exclusively on West Kewa. Much of the primary material in the grammatical description is from a concordance of over 14,000 words of text in West Kewa made on computer at the University of Papua and New Guinea. The programme was supervised by Professor M.H. McKay of the Department of Mathematics. A concordance

of East Kewa consisting of 19,000 words of text made on the IBM 1410 computer at the University of Oklahoma by the Linguistic Information Retrieval Project of the Summer Institute of Linguistics and the University of Oklahoma Research Institute, and sponsored by Grant GS-270 of the National Science Foundation, was also used. Research in West Kewa was carried out during fourteen months of field work between 1967-9 as a Research Scholar of the Australian National University.

1.1 PREVIOUS KEWA MATERIALS

In an earlier grammatical paper on East Kewa (1964) the morphology of the verb was dealt with, in particular the final or independent verb. The suffixes were first charted according to their relative position away from the stem. Following this a semantic designation such as tense, purpose, aspect, type of reason, and so on, was assigned to the range of affixation occurring in a given position. This, however, is now inadequate in several respects: (1) it does not significantly describe the functional role of many such affixes in relation to other tagmemes, especially sentences and clauses; (2) the semantic designation of a relative position was often forced, i.e. instead of recognising three different orders of aspects, each order is given a different name; (3) the mode suffixes have nothing to do with the morphology of the verb; (4) certain reason 'suffixes' are, in fact, clitics which can be attached to practically any word class.

Later (1965) clauses and verbs were classified as transitive vs. intransitive and independent vs. dependent. The latter distinction was based primarily upon terminal and non-terminal suffixes. In this grammar certain non-terminal markers are not considered relevant to the clause-level at all. Instead, they mark a sentence-level relationship between tagmemes. An article on sentence structure (1967b) was, as is pointed out in Chapter 6, written before the paper on clauses and included in it two further clause types: an Equative (with two subtypes) and a Quotative. The first type of equative is included in the present study under complementive clauses, and the latter type of equative as well as the quotative are included within the present description of sentences. Basically, the study on sentences was a sentence-by-sentence analysis of a text according to sentence types, clause constituent types, and internal and external referent markers. External markers were called goal, subject, cause, result, general and pronominal. Sequential relationships were called temporal, chained and logical.

1.2 PRESENTATION

Becker (1967a:116) has outlined, by means of a matrix, the kind of information a complex tagmeme symbol might employ. Slightly modified, it is given in Figure 1. Notationally the symbols $S_{act}:N_{com}$ stand for the functional slot Subject-as-Actor filled by Nouns which are common.

	Grammatical	Lexical
Form (Surface)	Subject	Noun
Meaning (Deep)	Actor	Common

Figure 1: after Becker (1967a)

Merrifield (1967:49ff), however, places function squarely within the semantic [= lexical] hierarchy, exactly opposite to Becker while Longacre wants much of the information from the lexical hierarchy included in dictionaries, not the grammar.

By distinguishing more clearly between relations (functions) on the one hand, and grammatical and lexical (semantic) categories on the other, Becker's matrix can be re-aligned as in Figure 2.

	Grammar	Semantics
Functions	Subject	Actor
Categories	Noun	Common

Figure 2: Functions vs. Categories

The tagmemic notation for Figure 2 is identical to that of Figure 1, but the distinction between function and category is kept distinct, more in line with Dik (1968:158): 'Functions and categories are independent parameters which in any construction can contract a multitude of different mutual relations.' I have tried to employ a notation which represents the distinctions given in Figure 2, e.g. $S_{ACT}:n_{com}$.

In Kewa there are several relationships involved between other tagmemes and the Predicate. Any additional sub-function of the Predicate is often specified once the function of any other tagmeme is listed, so that it is redundant to relist all sub-functions with the Predicate. A very common specification of semantic functions in Kewa would include the following:⁸

Subject-as-Agent	Predicate-as-Action
Object-as-Beneficiary	Predicate-as-Benefactor
Object-as-Goal	Predicate-as-Goal Directed
Object-as-Location	Predicate-as-Motion

The semantic relationships are only listed once, e.g. S_{AGN}, O_{BEN}, O_{LOC}, and so on. If all these occur simultaneously in a clause, the Predicate should automatically read as P {ATN, BEN, MOT⁹}, but only the function diagnostic of the clause type will be listed with the P.

In this grammar phrase structure or equivalence rules (which always show a lower-level expansion or an embedded construction) are symbolised by a single-shaft arrow [+]; exponence rules by a colon [:]; environments by a diagonal line [/].

All Kewa language materials are underlined and have hyphens to indicate morpheme boundaries, when possible. The English gloss or translation is enclosed in single quotes. If the gloss is grammatical rather than lexical in meaning, it is also enclosed in parenthesis. Thus *ní* will be glossed either as '(1 sg)' or simply as 'I'.

1.3 ABBREVIATIONS

The most general abbreviations used throughout the grammar are now given. Some appear in the grammar both as capitalised (for functions) and small case (for categories) symbols. A few other abbreviations are also given in individual chapters.

sg	singular	alo	altocentric
dl	dual	ANTE	Antecedent
pl	plural	AR	Axis-Relator
n-sg	non-singular	asp	aspect
1	1st Person	ATN	Action
2	2nd Person	ATR	Actor
3	3rd Person	BEN	Beneficiary
A	Adjunct	C	Complement
ADJZ	Adjectiviser	cas	causative
adv	adverb	cl	clause
AGN	Agent	cmp	complementive
aj	adjective	col	color

coll	collective	KVM	'Kewa Verb Morphology' (1964)
COM	Comment	KCM	'Kewa Clause Markers' (1965a)
comp	completive		
CONTM	Contemporaneous	KSS	'Kewa Sentence Structure' (1967b)
DEG	Degree	LOC	Location
dei	deictic	M	Modification
dem	demonstrative	MAN	Manner
des	descriptive	MOT	Motion
dim	diminutive	MP	Morphophonemic
DIR	Direction	n	noun
ditr	ditransitive	neg	negative
dp	different person	nm	number
e	embedded	ng	general noun
ego	egocentric	np	noun phrase
eq	equational	nt	temporal noun
GD	Goal Directed	O	Object
ger	gerundive	P	Predicate
GOL	Goal	par	particle
H	Head	pos	possessive
ID	Identificational	POSR	Possessor
imm	immediate	pro	pronoun
n-imm	non-immediate	pun	punctiliar
imp	imperative	pur	purpose
IN	Instrument	Q	Quote
inc	inceptive	QAL	Quality
incom	incomplete	QAN	Quantity
int	intransitive	qt	quotational
inter	interrogative	RE	Reason
K	Conjoining	REC	Recipient
Kewa I	'Kewa I: Phonological Asymmetry' (1962b)	S	Subject
Kewa II	'Kewa II: Higher Level Phonology' (J. Franklin 1965)	s	sentence
		SEQL	Sequel

sim	simultaneous	tr	transitive
sp	same person	d-tr	derived tr
STA	State	v	verb
suc	successive	va	active verb
SZ	Size	vaf	verb affix
ten	tense	vp	verb phrase
Term	Terminal	vs	stative verb
n-Term	non-Terminal	d-vs	derived vs
TM	Time	vst	verb stem
TOP	Topic		

1.4 SUMMARY

What I have done in the following chapters is to account for the facts of Kewa as I understand them. I have tried to emphasise the functional role of tagmemes and the formal markers which often relate such roles on various grammatical levels. For example, I emphasise the functional role of clauses as coordinated bases. Other articles on New Guinea language verb (and clause) systems, including my own (1964), have correctly stressed the distinction between 'medial' and 'final' verbs as one which involves a time relationship by the same or different subjects.¹¹ In this grammar I consider the time factor as part of the functional role of the coordinators.

N O T E S

1. Wurm, using lexicostatistical measures (1960a:16), set up five distinct Families within the Stock, but evidence by Pawley (1966) indicates that there is a sixth.

2. Earlier designations to the Families were by a combination of the major 'Sub-Family' names: the West-Central was called the Enga-Huli-Pole-Wiru Family (Wurm 1960a:18; 1960b:127). I question the inclusion of Wiru within the Family (see Franklin 1968b).

3. Augu is a Mendi dialect (J. Rule 1965) which was first mentioned by F.E. Williams (1939), the government anthropologist at that time. Pole is the southernmost dialect of Kewa. Mendi is spoken in the vicinity of Mendi town as well as westward and north of it; Sau is spoken around Samberigi. All of these languages are in the Southern Highlands District.

4. Since the original classification by Wurm, the tendency has been towards more in.

the boundary between language and dialect as 'at least limited mutual intelligibility, i.e. at least 60% of information transfer' (1961:140), reduce the number of distinct languages in the Stock from 48 to 26 and those within the West-Central Family from 11 to 5. C.F. and F.M. Voegelin set up a Central New Guinea Macro-phylum which includes the original East New Guinea Highlands Stock plus Pawley's Kobon-Karam-Gants Family plus Mikaru, Pawaia, and a Sesa Group. For criticism of this latter group see K. Franklin (1968a:42).

5. The name given by Hides (1936) to the large population discovered near present day Tari in the epoch exploration by Hides and O'Malley in 1935.

6. Called Tsage by Capell (1948-9) and later Tchaga by J. Crotty (1951).
7. There are numerous publications in anthropology. See, for example, the bibliography in J. Watson (ed. 1964). There are also many unpublished linguistic materials which have been prepared by missionaries available in almost every language of the Family. Published linguistic materials will be mentioned elsewhere in the grammar.
8. Grimes (1964:46) calls such semantic functions voice relationships and states that in Huichol they are grammatical relationships between primary constituents [= tagmemes] and the nucleus [= Predicate]. Halliday (1967:39ff) characterises the semantics of English transitivity in terms of (1) processes: directed action, non-directed action, ascription; (2) participants: actor, goal and attribuant; and (3) attribute. In addition he classifies the grammatical features of the clause according to sub-categorisation by the exponents of the Predicator. Halliday's description in specifying the role of the participant (such as actor), is very similar to that of Pike (e.g., 1964b).
9. Throughout the grammar I follow Dik (1968:170) by always indicating functions by capitals, categories by small type.
10. Nida (1964:63) has suggested that there are four principal function types involved in lexical units: objects, events, abstracts, and relationals. Although certain semantic relationships may be signalled by lexical units, the relationships specified in this grammar are between tagmemes.
11. Wurm (n.d.) gives a concise summary of the nature of such time relationships and subject markers. See also, for example, B.F. Elson (ed.), *Verb Studies in Five New Guinea Languages*, on the range of categories indicated in verbs. As exponents of the Predicate, verbs are often best seen as 'a clause-in-miniature' (Longacre 1964a:36).

Chapter 2

PHONOLOGY

2.0 INTRODUCTION

This chapter begins with a summary of the theory underlying tagmemic phonology and then briefly outlines the phonology and some tone perturbation (morphotonemic) patterns of West Kewa. Some of the findings are related to materials from the East Kewa dialect,¹ as well as to other Highland languages.

Wurm (1964a) has summarised and conflated a maximum non-existent phonological index for the Mendi Sub-Family. His summary is based on phonemic inventories of Kewapi (our E. Kewa), Pole (our S. Kewa), Mendi and Sau. The only other relevant phonological material available for the Sub-Family is by J. Rule (1965) in which she compares two Mendi dialects (the Mendi valley proper and the westward Nembu valley where there is a dialect called Wala or Wela).² There are several differences between the phoneme inventories of Wurm on the one hand, and Rule on the other which may alter Wurm's conflated index for the Sub-Family. Allowing for overlap, but based on Rule's dialects, two phonemes should be added to Wurm's non-existent maximum system: /d/ and /ⁿj/. Both of these, however, are included in Wurm's conflated system for the whole West-Central Family (1964a:16)--if his /ⁿd^y/, listed in the alveopalatal column, may be considered the same as Rule's alveolar /ⁿj/. Other differences are probably due to interpretation: for example, the listing of labialised and alveopalatal consonants in Wurm's inventory.

2.1 THE PHONOLOGICAL HIERARCHY

Pike's Volume II of *Language* (1955) outlines the tagmemic phonological hierarchy. His revision (1967²) is basically unchanged in respect to phonology, although the implications of Crawford's (1963) study are noted (1967²:520-1).

Crawford (1963:2) postulated a phonotagmeme as an analog to the grammatical tagmeme. The phonotagmeme is one part of a correlation on the lowest-level of the phonotagmemic hierarchy. As the lowest-level unit, it represents a slot which is in turn filled by a class of phonemes. Ascending the hierarchy which Crawford proposed for Mixe, the individual units are represented by correlations such as Syllable type: Syllable; Phonological-word-type: Phonemic-word; and Phonological-phrase-type: Phonemic-phrase.³ The phonotagmemic hierarchy is a distributional framework for units of the phonemic hierarchy, which is represented by classes of units such as phoneme, syllable and so on up the hierarchy.

Other studies follow Pike's original model more closely, where the P-hierarchy descends as follows: Breath Group, Pause Group, Stress Group, Syllable and the Phoneme (Pike 1967²:515). Within this model the important feature is the distribution of lower-level units into higher-level ones. Although there are variations in analysis and presentation, several New Guinea studies have built on this framework.⁴

Longacre (1964b:6ff) calls Crawford's slots (i.e. in his phonotagmemic hierarchy) P-syntagmemes and his fillers P-tagmemes (1964b:12). He then shows how one particular Trique syllable-type (called a P-syntagmeme) can be generated by classes of phonemes (including tone), abstracted and collapsed into a horizontal and vertical array. Within his hierarchical view of language Longacre has accepted the P-tagmeme as a unit parallel to the G-tagmeme. He then, following Pike (1967²:520), posits an L-tagmeme and fills in the L-hierarchy (1964b:6ff). However, Longacre has modified to some extent the original view of Crawford by introducing the P-syntagmeme. If, following Longacre (1960:64 but here hypertagmeme, and also 1964a:15; 1965a:72) a syntagmeme is part of a correlation involving tagmeme, then Crawford's phonotagmemic and phonemic hierarchies depict correlations between them at each level and not only (as Crawford suggests) within each hierarchy.

Within such a framework as Longacre's, P-tagmemes on various levels can be more easily conceptualised. A syllable-level P-tagmeme can most often be decomposed into strings of phonemes, just as a word-level G-tagmeme can be segmented (most often) into morphemes. Often the syllable as a whole is no more amenable to segmentation across morpheme boundaries than a word is divisible into morphemes (see Longacre, n.d.a, for illustrations, and his conclusion that a 'wave' theory allows us to see and account for such instances more clearly--

following Pike (1959)). The importance of Longacre's phonological strings is an emphasis upon patterns of P-syntagmemes which have defining contrastive properties at various levels of the P-hierarchy.

At variance with Longacre's implications (1964b:12), Crawford's model does not indicate that the syntagmeme-tagmeme is a correlation on the one hand, and that slot-class is a correlation on the other. Crawford suggested instead a slot-class correlation within a dual hierarchy, the phonemic on the one hand, and the phonotagmemic on the other. In either hierarchy a unit from one level enters into or manifests another level, but Crawford's phonotagmemic units are not P-syntagmemes; they are distributional slots plus classes of fillers, not simply patterned strings.

The main thrust of Pike's P-hierarchy has, however, remained: units at lower levels most commonly manifest higher-level units. Revisions such as those mentioned by Crawford and Longacre build upon and expand this fundamental hierarchical concept. In Kewa II, the higher-level units are called phonological foot, phonological phrase, and phonological sentence. In the following sections these are briefly reviewed, but first the segmental phonemes are outlined.

2.2 SEGMENTAL PHONEMES

West Kewa has the following phonemes: p, t, k, b, d, g, m, n, l, r, s, w, y, ə, a, e, i, o and u. This inventory is two less than E. Kewa, which also has the palatals /ʃ/ and /ñ/ (Kewa I:30).⁵

The symbols employed here have traditional articulatory values except that /t/ and /y/ are fronted, /b/ and /d/ are prenasalised, /l/ and /r/ are flaps, and /g/ is generally voiceless and backed. As an orthographic convention /ə/ will hereafter be written /a/; /a/ will be written as /aa/.⁶

Any consonant or vowel may occur as a syllable onset, but only a vowel occurs as syllable terminus: pa 'to do'; tá 'to hit'; kí 'hand'; bi 'name'; di 'a count'; gí 'to give (to 1st or 2nd person)'; mú 'sand'; nu 'net bag'; lo 'stomach'; ro 'bridge'; sáá 'we (two)'; waa 'sugar cane'; yáá 'bird'; áá 'man'; e 'garden'; i 'excrement'; o 'scabs'; u 'sleep'.⁷

Syllable nuclei have a contrastive peak of tone which is always simple, even in combination with other vowels: aaí 'banana'.

Any vowel may follow any consonant in a syllable, except for these restrictions: *yi, *yu, *wu. In contiguous syllables of a single

morpheme the following combinations have not been observed: *CeCi, *CeCu, *CoCi, *CoCu, i.e. low non-central and high vowels do not occur in contiguous syllables separated by a consonant.

There are other phonological features which are important but which have been outlined elsewhere; others are not as well developed. Note especially that: (1) except for /aa/ which is perceptably slightly longer, long vowels are restricted to monosyllabic rhythm units (Kewa I:33); (2) any rhythm unit (or phonological foot) is a unit of stress placement, each foot having an obligatory stress which is the nucleus (Kewa II:84); (3) a plus juncture accompanies the joining of single foot syllables within a single morpheme.

Word space, for the most part, also represents plus juncture, but grammatical words are determined by criteria other than plus juncture alone. On the phonological realm, clitics in combination with stems or each other, as well as any V which is not /a/ or /aa/ but which is followed by one of them, have audible transition points. Compound stems, on the other hand, have their borders signalled by a change in pitch at the seam, by plus juncture, or by both. Some considerations of plus juncture may be morphophonemic, e.g. /y/ may be interpreted as occurring as a variant of plus juncture in certain positions.

2.3 TONE

Most New Guinea Highland languages have been found to have a phonemic system which includes tone or accent.⁸ The partition of suprasegmental systems into tone systems on the one hand, and accent systems on the other has been suggested for a number of reasons:⁹

(1) In accentual systems high pitch is most often linked with the nucleus of a rhythm unit; in a tonal system the tone is not dependent on the nucleus of a rhythm unit.

(2) In accentual systems the position of the accent is conditioned by the placement of the vowel nucleus in the rhythm unit; in a tonal system every vowel carries a contrastive tone.

(3) In accentual systems the morphophonemics often determines but one accent in a string of words; in a tonal system the contrastive tone points are maintained.

(4) In accentual systems phonetic features of voice quality may help determine an unaccented string of syllables; in a tonal system the phonetic features of short rises or falls occur at the margins of syllables.

In general the points which Pike and Scott outline for tonal systems hold for Kewa. The only modification necessary would be point (3), where in Kewa contrastive tone points are often neutralised in morphotonemics.

Tone was shown to be phonemic in E. Kewa (Kewa I:34). Tonal patterns in W. Kewa correspond to those in E. Kewa with the exception that a low-low pattern occurs on verb stems and must be reconstructed only in the case of nouns. In E. Kewa all basic low-low patterns were reconstructed on the basis of their perturbation pattern.

The four tonal patterns of two syllable verb stems are illustrated in the following frame:

- | | | |
|-----|-----------|----------------------|
| (1) | ní rúmáwá | 'I climbed up it' |
| (2) | ní kálawa | 'I gave it (to him)' |
| (3) | ní rubáwá | 'I threw it out' |
| (4) | ní pawa | 'I did it' |

The isolating frame consists of ní []-wa 'I [verb]-(1 sg Pa)', where the verb stems are: rúmá 'to climb', kála 'to give (to a 3rd person)', rubá 'to throw out', pa 'to do (something)'. The free pronoun ní 'I' is always basic high tone, but the suffix -wa '(1 sg Pa)' perturbs according to the basic tone of the verb stem. Most verb suffixes follow the tone carried on the final syllable of the stem, but there are other complications which are mentioned later. Because so many expected tone patterns do not actualise due to perturbation, the discussion of basic tones of other word classes such as nouns is delayed until §2.5. In the remainder of this section the phonetic variations of tone patterns which have been observed are given.

2.31 Tonal Variation

The perceptual or auditory height of a tone may be conditioned by stress placement (cf. Kewa I:35). Disregarding levels above the phonemic word, a primary stress occurs on the first syllable of any noun stem of less than four syllables and on the second syllable of any stem over four. Any basic low tone which occurs on such stressed syllables will be heard as mid.

In a given sequence of up to three tones, if the first is high and the third low, the second will most often actualise as mid. In such cases the tone can be interpreted as high or low only by determining its perturbation effect with adjacent tones.

A non-phonemic up-glide occurs on syllable final lows when such lows are followed by a word with an initial high. This phonetic clue is often useful in establishing the identity of following tones as phonemic highs. In the same manner, a rapid fall on the final syllable of an utterance establishes the final tone as high plus terminal fade (see below on intonation), rather than as the normal very low tone of a terminal fade. In a series of two identical tones on adjacent syllables interrupted by /p/ [p̥] or /r/ [r̥], the first tone actualises with a slight rise-fall where the consonant intervenes.

An intonational downdrift actualises any series of basic high or low tones as successively lower in an utterance.

The beginning pitch point of all utterances is most often perceptibly mid on the first syllable. This may indicate that the beginning as well as the end syllables of every utterance have tones which can be interpreted as pitch points in an intonational contour, rather than simply as lexical tones. It, therefore, follows that the basic tones of any stem can only be positively identified in an environment other than pre- or post-silence.

2.4 INTONATION CONTOURS

Three contrastive intonational contours were described for E. Kewa (Kewa II:87). In each case the final syllable of the utterance carries the contrastive intonation pitch and one highest point or peak occurs in the contour (marked with ° in the article referred to).

The intonational contours are signalled by terminal fade, terminal rise, or terminal fall-rise. The usual semantic distinctions are respectively:

- (1) fact, repetition, permission and command;
- (2) attention, affirmation, exclamation or incredulity;
- (3) inquiry.

These three intonational contours seem to be practically the same in W. Kewa; in addition, a fourth pattern occurs (presumably in both dialects). A terminal rise-fall appears to mark intonational contours which are meant to forewarn. Morphologically, such forms are identical with that of the future tense, but the meaning is different, as shown below:¹⁰

- (4) *nimi awalimí 'you all should not dig it'*

This intoneme contrasts with normal negative imperative structures or simple future statements, both of which have contours as described in (1) above:

(1a) nimi awalimi *'you all will dig it'*

(1b) nimi naawalepaa *'don't you all dig it'*

Often the contrastive intonation terminal contour is carried by a special morpheme, rather than simply the final syllable of an utterance: for example, *-ra* in the case of emphatics (2).

2.5 MORPHOTONEMICS

The few tone perturbation rules outlined for E. Kewa (Kewa I:34) apply, with some amplification, to W. Kewa. The rules in E. Kewa were: (1) the tones of noun stems perturb to the same tone as the basic uniform tones of a preceding word; sub-classification is necessary if the preceding tones are diverse; (2) stems with tones of basic low-high are not perturbed; (3) the free pronouns of 1st dual and plural could be perturbed so that their basic tones were dissimilated.¹¹

Tone or stress perturbation rules for other languages of the New Guinea Highlands have been summarised by E.V. Pike (1964:127-8). Of general interest is a system of separate patterns of perturbation affecting nouns on the one hand and verbs on the other. Languages with this system are all in the Eastern Highlands and contrast with the system in Kewa, which has a more uniform system across word classes. Two other languages summarised by E.V. Pike are reported to have stress perturbation systems.¹²

A. Healey (1964:43-7) has briefly described tonal sandhi in Telefol, a language to the extreme west in the Highlands but not in the same stock as Kewa. Healey's work is of direct interest and importance to our own in that it describes clearly (although briefly) morphotonemic processes of assimilation and dissimilation which are internal (stem plus suffix(es)) or external, i.e. separate phonological words. Our study observes the same type of patterns in W. Kewa, but to a greater degree and across a wider range of syntactic combinations. Nevertheless, it will be obvious that our description is only preliminary. From the total set of syntactic patterns only a small sub-set has been extracted and studied. Further materials will amplify but should not greatly alter the general perturbation rules outlined here. Furthermore, so little has been done in this sphere on New Guinea languages that even this preliminary description should prove useful.¹³

Morphotonemic patterns in Kewa do not operate independently of lexical, rhythm, or intonational spans. In certain cases, and in ways not presently understood, the stressed syllable of a rhythm unit may override an expected perturbation pattern. It appears that such examples of stress are not purely lexical, but that in such instances emphasis may be given to any particular word (or clitic) in an utterance.

In this section perturbation is described without taking into account the effect of stress on rhythm units. In other words, our analysis has not progressed far enough to describe exactly what happens to tone patterns when they are distributed in other high-level phonological units.

In the case of nouns, the perturbing effect of the stem helps classify its basic tones. This is most obvious in pairs of words which are alike except for their basic tones. For example, in the following frame, 'my NOUN *two*', the post frame láápo (HL) '*two*' perturbs to LL only if the basic tones of the substituted noun stem are also low:

- (5) niná [ímaa] láápo 'my two [*relatives*]'
 (6) niná [ímaa] laapo 'my two [*pig tusks*]'

Here the contrastive basic tones of ímaa '*relative*' and imaa '*pig tusks*' actualise as identical tones. However, the basic tones can be classified as HL and LL respectively due to perturbation. This is because only stems with basic lows can perturb a following high to low such that láápo becomes laapo. At the same time, the final basic high of the clitic -ná '*(possessive)*' has perturbed the otherwise isolatable initial basic low of imaa '*pig tusks*' to high. Such an understanding and interpretation of the interaction of final and initial tones is crucial to the classification of the basic tones of any stem. It has, therefore, been necessary to determine and test tonal patterns in many syntactic environments and state all changes in terms of an underlying basic pattern.

In the examples which follow usually only a limited number of stems from the main word classes are used; these are given in Chart 1. Although the tones of the total lexicon have been tested in frames, a proliferation of forms in this section would add little to the description. By holding the forms constant in various syntactic combinations the perturbation patterns can be observed more easily. In addition, all tones in the examples can be read as derived; if they are the same as the basic tones below they are thus unaffected by perturbation.

	all highs	all lows	high-lows	lows-high
NOUNS	áá 'man'	aani 'husband'	ááne 'ear'	aaí 'banana'
	kópó 'plate'	akena 'eel'	áápidi 'stone axe'	urí 'frog'
VERBS	ná 'to eat'	pa 'to do'	íra 'to cook'	yalá 'to yell'
	tá 'to hit'	rogaa 'to bind'	rúmaa 'to por- tion out'	pogoláá 'to jump'
PRO- NOUNS	ní '(1 sg)'	ne '(2 sg)'		nipú '(3 sg)' or '(3 dl)'
	sáá '(1 dl)'	nimi '(2 pl)'		
	níáá '(1 pl)'	nipi '(2 dl)'		nimú '(3 pl)'

Chart 1: Tone Patterns

2.51 Stems with Basic Low(s)-High

The most stable tone pattern is any stem with one or more low tones followed by a high. Such patterns in nouns do not perturb unless bounded by final pause. Basic patterns of low-high with verb stems perturb to all low if preceded by the clitic *na-* '(negative)', which has a basic low tone. This rule may be stated as:¹⁴

$$T-R1. \quad B-LH \rightarrow \left\{ \begin{array}{l} n-HL / \underline{\quad} \# \\ v-L \dots / n\bar{a}- \underline{\quad} \\ x-LH / \text{elsewhere} \end{array} \right\}$$

where x is any other stem class

In the following examples *-mé* and *-nu* are clitics which mark substantives as 'subject/agent' or 'collection of' respectively. Tense suffixes and other details are outlined later.

- (7) epé kóbere [aaí] láápo 'the two good dark [bananas]'
good dark bananas two
- (8) epé kóbere [áái] 'the good dark [banana]'
- (9) áámé [aaí] táa 'the man hit the [banana]'
- (10) [urínú] yalámé 'all of the [frogs] croaked'
- (11) nimi na[pogota]paape 'you all don't [jump]'

Notice in (10) that the LH pattern of *urí* 'frog' perturbs the clitic *-nu* which follows it to H. It is a common feature that any basic low following a basic high also perturbs to high.

2.52 Progressive Assimilation to Lows

When free pronouns with tones of basic low are followed by verb stems, the latter usually become low:

- (12) ne nisi 'you ate it some time ago'
 (13) nimi rogaalimi 'you all will bind it'
 (14) nimi valámé 'you all yelled'
 (15) ne iriti 'you have cooked it'

The exceptions are stems with a basic LH pattern (as shown in T-R1) or verb stems which seem to reflect fused morpheme combinations, such as:

saapíra (cf. (16) below) 'to hold' (sá 'to put' plus píra 'to sit');
 rípiánaa 'to grasp' (ria 'to carry' plus piná 'doing (subordinate)');
 rígiita 'to cover over' (rigi 'bamboo type/knife' plus tá 'to hit').

Verbs such as these perturb sometimes as if the tones of the postulated fused morphemes were interacting with each other, as well as with final tones from adjacent stems. In the following example the tones of the verb dissimilate, i.e. they become all high.

- (16) nimi [sáápírá]límí 'you all will [hold it]'

Other apparent compounds sometimes represent tones which are basic: thus íní 'eyes' plus áгаа 'mouth' for íníáгаа 'face', and the combination is the patterns of the separate forms. In other instances the tonal combinations appear to represent internal perturbation on their own part: kí 'hand' plus oraa 'touch' form kíóraa 'palm', whereas aa 'foot' plus 'touch' form ááoráá 'sole'. It has not been possible to deal with compounds, especially the more involved ones.

If an object is overtly specified the marker -mé (v -mí) occurs as a clitic on the noun subject and breaks the chain of assimilation begun by the pronoun so that the rule for assimilation to lows is very restricted in its application:

$$\left. \begin{array}{ll} \text{T-R2.} & \text{B-H...} \\ & \text{B-HL} \end{array} \right\} \rightarrow \text{v-L.../pro-B-L}_\underline{\quad}$$

This rule may also provide for such instances as (11) where the verb is marked by both the negative enclitic and an imperative suffix. The rule applies regardless of the grammatical category of the imperative suffix, i.e. immediate singular or plural, egocentric or altrocentric benefaction.¹⁵

The rule, however, must be expanded to include two further instances of perturbation to all low tones: (1) the 'collective' marker -nu which causes progressive assimilation to low of the second order clitic -mí which may follow it; this perturbation to low then carries on to the verbs; (2) stems of basic high tones which occur as a noun object following free pronouns of basic low are perturbed to low. Some examples of both instances are:

- (17) áá[nu]mi irame '[all of] the men cooked it'
 (18) áá[nu]mi radepeame '[all of] the men scraped it'
 (19) áá[nu]mi yalámé '[all of] the men yelled at it'
 (20) áá[nu]mi rogaaeme '[all of] the men have bound it'
 (21) nimi aa nalepaape 'you all eat the man'
 (22) nimi aa pogotépáápe 'you all jump on the man'

In (22) the final syllable of the stem pogoláá is replaced by the imperative suffix, but the initial tone of the suffix remains high and perturbs all but the final syllable tone. This happens also when the final syllable is not replaced: rumá 'to climb up' plus the imperative plural -lepaa becomes rumalépáá(pe) 'you all climb up it'. We account for some examples of suffix perturbation later.

In examples (17-20) -nu perturbs the otherwise isolatable basic H of -mí to L. The verbs then in turn perturb to L, unless they follow T-R1 which applies to B-LH stems (19 and 22). In a complete formalisation of Kewa tone perturbation rules intermediate ordered rules would be necessary to convert -mí + -mi/nu. Examples (21-22) illustrate the perturbation of a noun stem of B-H to L following the free pronoun nimi 'you all'.

In (17-20) the noun áá has its tones actualise as mids. This may be simply the result of intonation, as suggested in §2.31, or it may indicate regressive assimilation to phonemic L due to the effect of -nu. There are many instances when -nu follows basic LH or LL patterns that it in turn perturbs to H. For example note the following:

- (23) urí[nú] rógaalua 'I will bind [all of] the frogs'
 (24) aani[nú] páme '[all of] the husbands did it'

Although both examples appear parallel in structure, in (23) urí 'frog' functions as the object of the action while in (24) aani 'husband' functions as the subject. The perturbation of -nu to -nú in the environment of a B-LH in (23) is expected. This chain of assimilation

to H carries on to the first syllable tone of *rogaa* which is B-LL. This is a common perturbation pattern and is discussed in the next section.

2.53 Progressive Assimilation of Other Patterns

The following rule summarises progressive assimilation:

T-R3. B-L → H/H__, where H__ may be basic or derived.

T-R3 accounts for the perturbation of the first syllable of *rogaa* 'to bind' (23) and *pa* 'to do' (24) and for many tense suffixes. It does not, however, account for the perturbation of *nu* → *nú*/B-L__ in (24). In fact this perturbation is very common and illustrates a principle which can be stated informally as: generally, if two stems or a stem and a clitic both of which are basic L occur next to each other, one or the other must perturb to a H. Before discussing this in more detail, examples which illustrate T-R3 are given.

- | | | |
|------|-----------------------|---------------------------------|
| (25) | áámé [ákéná] táá | 'the man hit [the eel]' |
| (26) | áá [áání] púa | 'the man went to [the husband]' |
| (27) | épé [adaa] aa láápo | 'the two good [big] men' |
| (28) | epé [ogé] ákéna laapo | 'the two good [little] eels' |
| (29) | épé [ogé] áá láápo | 'the two good [little] men' |
| (30) | go [rogaa] | '[bind] that one there' |
| (31) | só [rógaa] | '[bind] that one up there' |

For the present, adjectives used in these examples may be defined as a small set of stems which may function as noun modifiers. Some other examples of basic tone patterns in adjectives are: *ogé* 'little'; *adaa* 'big'; *épé* 'good'; *rúdu* 'short'; and *kóbere* 'dark'. Only the first three are used in (25-29). Demonstratives (in examples 30 and 31) are also a small closed class: *go* 'that (near)'; *mó* 'that (distant)'; *no* 'that (below)'; *só* 'that (above)' and combinations of these and a few others. In combination, perturbation follows regular patterns of assimilation: *mó* plus *go* becomes *mógó*.

Notice that in every case except (28 and 29), which follows T-R1, the first syllable tone of all the forms enclosed in square brackets assimilates to the H of the preceding word. There are several other tone changes in the examples:

(1) *akena* 'eel' perturbs to all H in (25) but to HHL in (28). Normally such a basic L pattern perturbs a following H to L, as in (28) where *láápo* 'two' becomes *laapo*. However in (25) in a pre- and post-frame of all Hs, *akena* also remains H.

(2) Almost the reverse happens in (27) where the basic H of *áá* 'man' perturbs to low following the basic Ls of *adaa* 'big'. Because *aa* is then a derived L pattern, the form *láápo* is not perturbed (as it is in (29)).

Such examples have not been formally accounted for but they do suggest that once the tones of a given pattern are listed as derived, i.e. once moved to the right hand of the rule, they may in turn cause perturbation as if they were basic tones, or they may perturb differently. If such forms perturb as if they were a basic pattern, although they are in fact derived, it would probably be simpler to cycle the rules and make them recursive at this point. If this is so, there would need to be some formal device incorporated which will separate a derived LH, say, which perturbs or acts like a B-LH, from one which does not.

Most verb suffixes also follow the rule pattern outlined in T-R3 such that any suffix tone pattern (which is not basic low-high) assimilates to the tone of its immediate environment:

- (32) *moge[su]* '[some time ago I] tried it'
 (33) *rádépé[sú]* '[some time ago I] scraped it'
 (34) *mogea[lo]* '[I am] trying it'
 (35) *rádépéá[ló]* '[I am] scraping it'

The verb *mogea* 'to try' (32 and 34) is B-Ls and in the same tone class as our usual examples, but it combines with the same set of suffix allomorphs as *rádépéá* and thus better illustrates suffix perturbation.

Other verb paradigms which are identical in segmental phonemes help illustrate the tonal interaction of verb stems with free pronouns on the one hand, and bound suffixes on the other. Notice, for example, the following paradigms for *sá* 'to put' and *sa* 'to knit' in the future tense:

Paradigm A: 'to put'

Paradigm B: 'to knit'

1.	ní sálúa	'I will...'	ni sálua
2.	ne sali	'you will...'	ne sali
3.	nipú sálífa	'he will...'	nipú sálífa
4.	sáá sálípa	'we two will...'	sáá sálípa
5.	nipi salipi	'you two will...'	nipi salipi
6.	nipú sálípi	'they two will...'	nipú sálípi
7.	níáá sálíma	'we all will...'	níáá sálíma
8.	nimi salimi	'you all will...'	nimi salimi
9.	nimi sálími	'they all will...'	nimi sálími

Both verb paradigms are preceded by a column of free pronoun forms which are in cross-reference to the person-number of the 'tense' suffixes. Each pronoun has its basic tone marked. The verb forms consist of a verb plus a suffix, but in this case the tones given are derived ones. Although the basic tones of 'to put' and 'to knit' are H and L respectively, there is in fact no contrast shown on the derived stem tones. The contrast is instead shown only on some of the suffixes. This is because: (a) the tones of a stem with B-H become L following pronouns of B-L, i.e. in Paradigm A following (2, 5 and 8); the result is a neutralisation of contrast between Paradigms A and B in just those examples; (b) the tones of a stem or suffix of B-L become H following a B-H, i.e. in Paradigm B, sa 'to knit' in examples (1, 3, 4, 6, 7 and 9); in Paradigm A, -li- (or -lu- in example 1) in the same examples. In Paradigm B it is the pronoun basic tones which cause the verb's tone to perturb; in Paradigm A it is the basic tone of the verb which causes the first tone of the suffix to perturb.

The same perturbation pattern seems to hold in the case of all tense suffixes.

2.54 Dissimilation of Basic Tones

As indicated earlier, any stem with a B-L is very unstable, especially if it occurs adjacent to a like pattern. This behaviour is not limited solely to such patterns, however. Following some initial basic patterns and also the clitic -mí (v -mé) dissimilation has also been observed:

(37) aapidímí [áání] táá 'the stone axe hit [the husband]'

(38) áámé [kopo] taa 'the man hit [the plate]'

- (39) áámé [aapidí] táá 'the man hit [the stone axe]'
 (40) áá [áání] púa 'the man went [to the husband]'
 (41) áá [aapidí] púa 'the man went [to the stone axe]'
 (42) urí [áápidi] púa 'the frog went [to the stone axe]'
 (43) aani [ákéná] púa 'the husband went [to the eel]'

Notice that the only instance of a noun functioning as object or location retaining its basic pattern is in (42) where aapidi 'stone axe' retains its basic tones following the B-LH on urí 'frog'.

It is possible to conflate a rule representing the instances of dissimilation as follows:

$$\begin{array}{l}
 \text{T-R4.} \\
 \left[\begin{array}{c} \text{n-B-H...} \\ \text{L...} \\ \text{HL} \end{array} \right] + \left[\begin{array}{c} \text{L.../n-B-H -mé} \quad _ \\ \text{H.../x (-mé) \quad _} \\ \text{LH / } \left\{ \begin{array}{l} _ \text{-mé} \\ \text{n-B-H (-mé) \quad _} \end{array} \right\}
 \end{array} \right]
 \end{array}$$

where x is a stem of any word class which can occur with the clitic -mé.

Although in the examples given thus far B-Ls reverse their tone only when filling the object position, or in the location position (if the preceding noun is B-H), there are other examples which suggest that this perturbation pattern is widespread in the language.

It is very likely that a 'phoneme of process' such as Pike suggests (see note 9) may help describe the interaction of adjacent words of B-Ls in Kewa. Pike's work follows that of other Africanists who have shown how certain languages have fixed contrastive pitches (usually H and L) but also a further contrast (Mid) when the H and L tones are in sequence.¹⁶ The fact that tone patterns which are basic L must most often be reconstructed in Kewa and that this pattern is very unstable in regards to perturbation may indicate that a tone of change should be set up, rather than always interpreting the changes as H or L.

2.6 OTHER OBSERVATIONS

In this section we include several additional morphotonemic notes which have not been possible to fully incorporate into this chapter:

(1) Expanded possessive phrases such as *niná áápáná áákúáná si* 'the son of my father's father' suggest that *-ná* 'possessive' generally causes progressive assimilation and the apparent reversal of the basic high tone of *ní* 'I' is actually the lowering of it to a mid tone point at the beginning of a statement.

(2) The tones of medial verb suffixes are not perturbed although it appears that in some cases (usually in the presence of supposed fused verb stems) such suffixes may cause regressive perturbation. Some examples, with medial form interlinear translation, are:

- | | | |
|------|---|---|
| (44) | <i>aani nóa ákéná rádépéa</i>
<i>eat-and</i> | <i>'the husband ate and</i>
<i>then scraped the eel'</i> |
| (45) | <i>aani yalóa ákéná rogaaria</i>
<i>yell-and</i> | <i>'the husband yelled and</i>
<i>then bound the eel'</i> |
| (46) | <i>sáá áání yalápána nímú áákéná nálími</i>
<i>yell-we-and</i> | <i>'we two yell for the</i>
<i>husband and they eat</i>
<i>the eel'</i> |

In each case the final tone of the medial suffix actualises as mid. This again may suggest some intonation factor at the seam of such clauses, but if so perturbation carries across this boundary: e.g. *akena*, which is basic low, is perturbed even though adjacent to the suffix *-a* which is interpreted as basic low.

(3) Some of the above examples, as well as others in our data, suggest that the intonation contours must be more thoroughly examined. The beginning pitch point of statements and the final pitch point of juxtaposed clauses are always mid; this may mean that it is necessary to postulate three intonational tones or pitches, but only two phonemic lexical tones.

(4) There are instances where stress shifts in the same types of syntactic patterns, except that the stress always accompanies noun stems which are basic low. Modifications are therefore necessary in our previous overall rules about stress, so that such examples may be accounted for. This may only be possible in terms of two layers of stress: that which accompanies rhythm units, and that which accompanies certain tonal patterns.

(5) Verbs which function as modifiers in a noun phrase, e.g. *kiritaáé óna* (*kirita* 'to gather' + *-áé* 'adjectiviser' = 'the woman who collects things'), perturb the initial tone of the following noun stem (*óna* 'woman') to a high tone the same as that of *-áé*. Other classes of

verbs take different adjectival markers (-né ~ -ní) with consequent morphophonemic patterns of stem reduction so that the tone perturbation appears to depend upon the lost tones. This has not been analysed satisfactorily.

2.7 SUMMARY

The most stable tone pattern in Kewa is a basic low-high. It may be perturbed only in very rare instances, e.g. in noun stems only when adjacent to final pause.

The basic pattern of lows is the most unstable; it most frequently simply reverses all of its tones. Once it does reverse its tones, or even in some other cases, it is the only pattern which perturbs following highs to lows.

Patterns which consist solely of basic highs cause perturbation of most patterns which are adjacent to them.

Free pronouns consist of a small class of stems which are easily perturbed. Those which are basic low cause complete assimilation of the tones of any verb stem which may follow.

Clitics have independent perturbation rules in that they cause perturbation, rather than simply assimilating to the tones of the stem, which is most often the case with suffixes.

N O T E S

1. Kewa I, Kewa II, and J. Franklin (unpublished manuscript). My wife, Joice, who did most of the E. Kewa tone analysis, has transcribed all of the W. Kewa tones for me. I have also benefitted by discussing with her the analysis of tone perturbation presented here. However, the present analysis is my own. A visual output of all our tone recordings was also used. This was made on a Mingograph at the Speech and Language Research Centre of the School of English Studies, Macquarie University (Sydney). I am grateful to those at Macquarie who so generously helped me process the materials. The Mingograph is used in conjunction with a Transpitch meter and an Intensity meter. The Pitchmeter is used to filter out the fundamental frequency and the Intensity meter filters out the intensity ratio of low frequencies. A similar array of instruments is in use at the Australian National University and is described by S.A. Wurm (1967).

2. The lexical relationship of Mendi and Sau (as well as other languages) to Kewa is given in Franklin (1968b).

3. As indicated at the end of Chapter 1, the colon symbol (:) means 'is filled by', or 'is represented by a member of the class of' the phonological type which follows the colon. The term preceding the colon is the slot name. Usually in tagmemics, slot, which is better called function, 'refers primarily to grammatical function and only secondarily to linear position' (Elson and Pickett, 1962:57). However, in Crawford's phonotagmemic hierarchy slot refers to a significant position...in phonological structure' (1963:2). The functional aspect of the phonotagmeme is a distributional one.

4. See, for example: May and Loeweke (1965), J. Franklin (1965), J. Swick (1966), and Pence (1966).

5. Franklin (1968b), on dialects, considers the distribution of most phonemes throughout the Kewa language area, including South Kewa.
6. Earlier (Kewa I:29) we considered /aa/ as a geminate cluster of /a/ plus /a/ with a wide distribution and therefore listed only five vowels. Orthographically, never more than one such vowel digraph is written, e.g. ma- '(causative)' + aa 'to be' = maa 'cause it to be'.
7. Throughout later chapters of this grammar the basic phonemic tones are represented on all examples as either H (˘) or L (unmarked).
8. E.V. Pike (1964) lists typological features displayed in 35 New Guinea languages. She outlined two types of tone systems in the Highlands: (1) syllable-tone, mainly high or low tones (10 languages), but in addition falling and rising tones (4 languages, all in the same Family of the Eastern Highlands but with Usarufa not having a rising tone); (2) word-tone, where only the stressed syllable has a high-low tone contrast (in two apparently unrelated languages, both in the Southern Highlands).
- She also describes seven languages of the Highlands as having contrastive stress systems--one (Waffa) in the Eastern Highlands Family. Three other languages reported by her as having contrastive stress systems are in the Sepik River area.
- Out of the 35 languages reported upon, 26 have a phonemic system which includes suprasegmentals. To this number should be added Wele (in her Family 10, p. 131n), according now to H. and M. Boxwell (1966: 87); also Kanite (her Family 2), according to R. Young (1962:98). Three other languages mentioned in her survey have now reported contrastive pitch points within intonational systems: Kunimaipa (A. Pence, 1964); Iatmul (P. Staalsen, 1966:74); and Karam (A. Pawley, 1966:40-1).
9. Condensed from K.L. Pike and G. Scott (1963). They use the term accent instead of stress 'to soften an over-emphasis on intensity' (p. 179n). More recently Pike has done research on African tone languages which indicates that he would now analyse Fore as having suprasegmental accent markers which operate syntagmatically (1967a:1552-3). Such a suprasegmental phoneme of change ('process' or 'wave') may be helpful in understanding one particular tonal perturbation pattern in Kewa.
10. This feature is the same as, for example, the 'avolitional' mode in Awa (R. Loving and McKaughan 1964:24-5), or Tairora (Vincent 1962:7), indicated by a verb compound and suffix respectively; the 'negative

morpheme' in Gadsup (C. Frantz and McKaughan 1964:89), indicated by the 'abilitative' suffix plus a falling tone on the subject suffix.

11. In Kewa I:35 náá was incorrectly and inadvertently glossed as third person dual, rather than second person dual.

12. Chuave of the Central Family and Fore of the Eastern Family. In addition, E.V. Pike reports tonal perturbation in Tifan, a language of the Ok Family and closely related to Telefol.

13. The most complete study to date is by R. Loving (1966) for Awa of the Eastern Family. His tonal patterns are based on classes of noun stems, satellites, and suffixes, each with cross-classification according to basic tonemes. Alternately, by analysing the interaction of final basic tones (where the end point of a falling or rising tone can be regarded as basic) and the initial tones of suffixes, the Awa system is more analogous to Kewa.

The work by Bee and Glasgow (1962) first described in detail morphonemic features in a New Guinea language. Usarufa, which they studied, and Awa are not on more than a stock-level relationship with Kewa (Wurm, 1961).

14. Abbreviations are (B)asic; (L)ow; (H)igh. In general, the rules formulated here concentrate only on the initial and final syllable tones. A letter L or H followed by periods represents an all low or all high pattern. Square brackets often enclose the particular pattern being illustrated.

15. Grammatical categories are outlined in the next chapter.

16. See, for example, Schachter (1961) for an introduction to the theory and mechanics of such a system. There is a great volume of literature on African tone languages and many illustrate the classic so-called terracing effect where (often) an additional phonemic tone of change can be postulated (Arnott 1964). Welmers (1959) noted that Pike's typological classification (1948:5-13) of tone languages as contour or register systems was inadequate for Bantu languages (such as Tiv, described by Schachter and Arnott) at least. Wang (1967) has typologically outlined the phonological features of tone on a world-wide basis--excluding New Guinea.

I have worked out some preliminary rules which show that the terracing effect may not be unique to African tonal languages. However, because they are not adequately developed at this time and because the present study is primarily a grammar, I have not included any details in this chapter.

Chapter 3

WORDS

3.0 INTRODUCTION

In this chapter both word classes and word patterns are outlined. If both the members and morphological combinations of a given class are restricted, they are described in the same section.

3.1 WORD CLASSES

Two major groups of words may be conveniently defined in Kewa: **Verbs** and **Non-Verbs**. The criteria employed to classify verbs are primarily inflectional coupled with morphophonemic variations of the verb bases and certain suffixes. This results in a clear division between a class of verbs on the one hand and all non-verbs on the other. The subdivision of non-verbs is less clear-cut, but several additional word classes can be substantiated: **Nouns, Adjectives, Adverbs, Deictics**, and possibly a class called simply **Particles**. The latter includes several clitics which are not clearly words because they do not occur as free forms. On the other hand, clitics cannot be considered as affixes because at least some of them can occur, in combination with each other, as words. The classification which follows is not exhaustive, nor is this to be expected realistically for any first description of a language.¹ However, by giving definitions of word classes the category symbols employed for them throughout the grammar should be clearer to the reader.

3.11 Verbs (v)

Verbs are those stems which may occur with (1) tense suffixes; (2) the pre-clitic *na-* '(negative)'; (3) command suffixes. Thus the definition of a verb may be on inflectional grounds alone. By incorporating syntactic, i.e. additional distributional criteria, verbs also:

(4) have tense suffixes which are potentially in cross-reference with free pronoun subjects; (5) occur with coordinating suffixes.

Verb stems are inherently Active (va) or Stative (vs). Stative stems are signalled phonologically by bases ending only in /aa/ and morphologically by occurring only with affixes of Set II (outlined in §3.22.1). Stative verbs may be subclassified into non-derived and derived stems, the latter arising from underlying active bases. Some examples of non-derived stative stems are:

- (1) ní mí naa 'to understand'
- (2) rú ma a 'to portion out'
- (3) kí ri ta a 'to gather together'
- (4) mí ná sá á 'to lift up'

Active stems have bases with phonemic shapes which end in /a/, or in two cases /u/; they occur with affixes of either Set I or Set II. Active bases which occur with Set II are derived stative stems.

3.12 Nouns (n)

The definition of a noun stem is essentially a negative one which in fact applies to any non-verb, non-derived stem which cannot occur with terminal or non-terminal suffixes (outlined in §3.22.2). A positive definition must employ functional criteria: those stems which potentially expound the Head of a nominal phrase are nouns. When nouns expound functions such as Subject-as-Agent or Object-as-Location of certain clause types they are marked by special clitics. However, so are other word classes, so there appears to be little or no morphological evidence to separate nouns from other word classes, excluding verbs.²

When a noun expounds the Head-as-Agent of a descriptive noun phrase (np_{des}) it may be modified and the full np is marked by the clitic -mé (ν -mí). This particular clitic marks the function of Subject-as-Agent in certain clause types. For example, the following are np_{des} marked by -mé (throughout, a hyphen indicates morpheme boundaries):

- (5) adaa áá-mé 'the big man'
- (6) adaa áá láápo-mé 'the two big men'

Such clitics as -mé mark clause-level functions for various grammatical categories, not simply nouns. For this reason they are discussed in Chapter 4 on clause patterns.

It is possible to sub-divide nouns semantically into those which are general (ng) and those which are temporal (nt). Any further sub-categorisation of ng is also on a semantic basis: for example, nouns which are animate (ng_{an}) versus those which are inanimate (ng_{inam}). As will be shown later, an animate-inanimate dichotomy is reflected in the semantic interpretation of functions such as Subject-as-Agent on the one hand, and Subject-as-Instrument on the other. In addition, interrogative pronouns (Cf. §3.15.1) have animate-inanimate forms and consequently support the division of ng into these two semantic categories.

Stems which specify time are a sub-class of nouns and include forms such as: *ábíá* 'now'; *ríbáá* 'night'; *órópe* 'later'; and *ogé oro* 'Saturday'.

Reference to specific points of time in the past or future is often by a combination of nt and demonstratives (§3.15.2). Note, for example, the bottom three rows in Chart 2.

					<i>ábíá</i> 'now'			
		<i>'yesterday'</i> <i>ábálá</i>				<i>ékéráá</i> 'tomorrow'		
P							H	
R	<i>númáne</i>		<i>'one day'</i>		<i>rúdáne</i>		E	
I	<i>mó nómáne</i>		<i>'two days'</i>		<i>mó rúdáne</i>		N	
O	<i>ápo nómáne</i>		<i>'three days'</i>		<i>ápo rúdáne</i>		C	
R							E	

Chart 2: Time Orientation

However, any nt can also occur with substantive (= non-verb) clitics, e.g.:

- (7) *ékéráá-mé...* 'with (the coming of) tomorrow...'
- (8) *ékéráá-nane* 'in the future'
- (9) *ékéráá-nu* 'later on' (lit., tomorrow-many)

There seems to be no basis for a sub-classification of ng into common versus proper.³

3.13 Adjectives (aj)

Stems which may expound the Modification function of an np or often the Complement function in a clause are non-derived adjectives. Such stems may be sub-categorised on the basis of their potential position and function in a noun phrase. The following sub-categories of adjectives will be described in greater detail later in Chapter 5 on Phrases:⁴

- (a) colours (aj_{cl}) are forms such as kóbere 'dark', kaane 'red', and kágá rékene 'green'.
- (b) size (aj_{sz}) are forms such as adaa 'big', ogé 'little', and rúdu 'short'.
- (c) number (aj_{nm}) are forms such as láápo 'two', ekátaa 'little finger',⁵ and páápu 'one cycle'.
- (d) quality (aj_{qal}) are such forms as épé 'good', waé 'bad', and púri 'strong'.

Any verb may also become a derived adjectival form upon filling the modification slot of a np_{des} and by being marked by the suffixes -ne (egocentric benefaction⁶) or -ae (altrocentric benefaction) (see §3.26.1).

An aj_{nm} may also be marked with the clitic -pú which specifies the category of quantifier, usually with the meaning of 'sequence' or 'progression'. In addition, words of other classes or even sub-classes of aj may become a derived aj_{nm}:

- (10) nimú adaa-pú ími (*they all, big-quan, they have = 'they have plenty'*) [aj_{sz} + -pú]
- (11) ékéráá yáápi-pú ípa yotéa (*tomorrow, day-quan, water, it will pull = 'tomorrow during the day the water will recede'*) [nt + -pú]
- (12) aki-pú rapoyaa (*what-quan, quantity? = 'how many are there?'*) [interrogative + -pú]

3.14 Adverbs (adv)

Stems which expound the Adjunct tagmeme (§4.16) of a clause generally are adverbs. Adverbs do not occur with clitics which typically mark functions expounded by nouns or adjectives. Such stems may be derived or non-derived. The latter are a small closed set of forms including:

áfpápúlú 'quickly'; gúpá 'likewise'; kóde 'almost'; madá 'enough'; waru 'really'; alóma 'quickly' (only with verbs of motion); pawá 'slowly'; walá 'again'; and ába 'before'. Derived adverbs (actually adverbials) are a combination of any stem which is not already an adverb plus the clitic -rupa '(adverbialiser)' or any construction plus this clitic. The latter represent embedded adverbial clauses and are outlined in the next chapter. Some examples of derived adverbs are:

- (13) ní áá-rupa píralua (*I, man-like, I will sit = 'I will sit like a man'*) [ng + -rupa]
- (14) ní étaa wárf-ni-rupa lágíaa (*I, food, prepare-Adjz-like, he told = 'He told me how food is prepared'*) [Adjectival Clause + -rupa]
- (15) ní mógopara-rupa méáwa (*I, that over there-like, I got it = 'I got (the one) similar to that (thing) over there'*) [Deictic Phrase + -rupa]
- (16) nipú kíri pa-rupa ta (*he, laugh, just-like, he is = 'He is just laughing (without reason)'*) [Particle + -rupa]

3.15 Deictics (dei)

Deictics are either pronouns or demonstratives and constitute a closed class, i.e. they can be enumerated. They can also only be defined semantically by reference to the speech event and to the participants of the speech event.⁷

3.15.1 Pronouns (pro)

There are two sets of pronouns: **Personal** and **Interrogative**. Personal pronouns are a small closed set which may represent actors or objects. The complete set of personal pronouns is given in Chart 3.

	Singular	Dual	Plural
1st	ní	sáá	níáá
2nd	ne	nipi	nimi
3rd		nipú	nimú

Chart 3: Personal Pronouns

In the third person, singular or dual is ambiguous, but may be explicitly stated by the addition of *láápo* 'two':

- (17) *nipú láápo áda-pe* (he, two, they two saw =
'They two saw it')

However, except when free pronouns function as objects, the use of *láápo* 'two', is omitted because pronouns functioning as subject are in cross-reference with verbs. In the following examples the subject of the verb is marked as dual or singular by two separate suffixes (which also indicate number and tense):

- (17a) *nipú áda-pe* (he, they two saw = 'They two saw it')
(17b) *nipú áda-a* (he, he saw = 'He saw it')

If suffixes ambiguously signal the person of the actor, this may be clarified by the use of free pronouns:

- (18) *nimi áda-me* 'You all saw it'
(18a) *nimú áda-me* 'They saw it'

where *-me* ambiguously marks 2nd or 3rd plural Past.

Some examples of clitics occurring with pronouns are: *nipú-ná* (*he-pos* = 'his'); *nimú-para* (*you all-loc* = 'to them'); *ne-si* (*you-dim* = 'little you'); *saa-me* (*we two-AGN* = 'we two').

Interrogative substitutes are built on two forms: (1) *áápi* '(animate)', and (2) *ake* '(inanimate)' meaning broadly 'who?' and 'what?' respectively. Note the appropriate nouns which are used in answer to questions containing the interrogative forms:

- (19) [*áápi*]-*mí tá-a* '[Who] hit it?'
(19a) [*áá*]-*mé tá-a* '[The man] hit it'
(20) [*ake*]-*mé tá-a* '[What] hit it?'
(20a) [*répena*]-*mé tá-a* '[The tree] hit it'

By expanding these two forms with general clitics, or by the use of a separate interrogative clitic, the full range of interrogatives such as 'which', 'how many', 'why', 'how' and so on may be constructed. These will be outlined under word patterns.

3.15.2 Demonstratives (dem)

Demonstratives, similarly to pronouns, are a small closed set of substitutes, but which point out actors or objects. The complete set of simple stems is given in Chart 4 and other dem compounds are built upon them.

só	'up'	go	'specific' (seen)
mó	'distant'	o	'neutral'
no	'down'	ápo	'general' (unseen)

Chart 4: Demonstratives

3.16 Particles (par)

Particles are non-derived or derived forms which function mainly at the clause and sentence-level as Subordinators or Connectors. Subordinators are free forms such as *rábú* 'when' in the following examples:

- (21) *épalia rábú épé ta* (he will come, when, good it is =
'When he comes it will be good')

Connectors are of two shapes, either as clitics or derived from these forms plus the affirmative verb 'to be' *ya*:

-pare	'but, however'	yapare
-pulu	'because'	yapulu
-pae	'perhaps'	yapae

The forms in the first column are used if the relationship signalled is between two verbal clauses or between a verbal clause and some other construction; those in the second column are used if the relationship is between a complementive clause and a verbal clause. Note the following contrast:

- (22) *ora láe-pare napálua* (true, you said, but, I will
not go = 'You spoke true but I will not go')

- (22a) *ora yapare napálua* 'True, however I will not go'

3.2 WORD PATTERNS

As already indicated, words consist of simple or, in some cases, derived stems. These stems occur with various patterns of affixation or

clitic orders. Those patterns which are contrastive (in the tagmemic sense where usually two structural differences are required--see Chapter 1) are separate syntagmemes. The patterns described in this section begin with the more complex ones of verbs and proceed to the simpler patterns.

3.21 Verb Bases

While describing these, it will also be necessary to outline the morphophonemic rules which apply to both verb bases and certain affixes. Simple stative verb bases are unaffected by morphophonemic rules. Derived stative stems are affected by one general morphophonemic rule:

$$\text{vstMP-R1} \quad XV \rightarrow Xaa / \text{ABase} _ \text{Set II,}$$

where V represents the final vowel of an active verb base which becomes /aa/ in the presence of affixes of Set II (§3.2.11). XV refers to the pattern of the active verb base; it always has one of the following underlying morphophonemic patterns:

1. Pattern L - bases ending with or consisting of the shape la, represented morphophonemically as XL.
2. Pattern E - generally bases ending with the vowel sequence ia or ea, represented morphophonemically as XE.
3. Pattern A - generally bases ending with the vowel a, represented morphophonemically as XA.
4. Pattern H - any base with an underlying shape of $XV_1(C)V_2$, where $V_1 = u$ or i , and $V_2 = a$. Thus bases ending in ia (Pattern E) automatically belong to Pattern H.

Pattern H provides for morphophonemic rules of vowel harmony which in every case override rules normally effective in Patterns L, E or A. Therefore, such rules are ordered and always apply last after any other appropriate rule.

Orthographically, patterns are marked as L, E, A or H only when phonemic and morphophonemic correspondences are not isomorphic. Some examples of each pattern are:

- L: yólá 'to pull'; lá 'to talk'; pógolaa 'to jump'.
 E: ria 'to carry (on the shoulder)'; sa(E) 'to knit';
 ráképeá 'to husk'; ógeya(E) 'to beg'.
 A: áda 'to look'; pú(A) 'to go'; méá(A) 'to fetch'.
 H: púná 'to shepherd' (basic pattern A); rábúla 'to mend'
 (basic pattern L); tá 'to hit' (basic pattern E).⁸

MP rules operate upon such verb bases when they combine with obligatory suffixes. The verb base plus the obligatory Terminal or Non-Terminal suffix (see following section) constitute the obligatory verb nucleus. Before discussing **MP** rules it is necessary to introduce the obligatory suffixes which serve as conditioning environments to the verb bases.

3.22 Obligatory Suffixes

Obligatory verb suffixes are either **Terminal** or **Non-Terminal** and in each case belong to one of two sets: (1) Set I, which occurs only with active verb bases, marks egocentric benefaction; (2) Set II, which occurs either with stative or derived verb bases, marks altrocentric benefaction. It is important to note that the *set* marks either of the categories of benefaction, although the individual affixes mark some other grammatical category as well.⁹ Non-obligatory verb affixes co-occur with Set I or Set II terminal or non-terminal suffixes, but do not occur alone.

3.22.1 Terminal Suffixes

Terminal suffixes mark either **Tense** or **Imperative** categories, which are mutually exclusive with each other. Tenses are **Present (Pr)**, **Past (Pa)**, **Remote Past (RP)**, **Future (Fu)**, and **Perfect (Pf)**. Set II (altrocentric) suffixes are outlined in Chart 5.

	Pr	Pa	NP	Fu	Pf
1 s	-to	-ru	-su	-lua	-eyo
2 s	-te	-ri	-si	-li	-eye
3 s	-ta	-ria	-sa	-lia	-eya
1 dl	-tepa	-ripa	-sipa	-lipa	-epa
2,3 dl	-tepe	-ripi	-sipi	-lipi	-epe
1 pl	-tema	-rima	-sima	-lima	-ema
2,3 pl	-teme	-rimi	-simi	-limi	-eme

Chart 5: Set II Tense Suffixes

Although it is quite possible to further segment the suffixes in Chart 5 so that person-number is distinct from tense, or even so that person is distinct from number, all of these categories are considered as compound representations and included within the semantic designation called *Tense*.¹⁰

Set II tense suffixes regularly combine with stative bases¹¹ or, together with *vstMP-Rl*, with derived stative stems. Some examples are:

- (23) *rúmaa* 'to portion out' + 1 sg Pr → *rúmaa-to*
'I am portioning out (for someone)'
- (24) *áda* 'to look' + 1 sg Pr + *vstMP-Rl* → *ádaa-to*
'I am looking (on behalf of someone)'
- (25) *ria* 'to carry (on shoulder)' + 1 pl Pf +
vstMP-Rl → *riaa-ema* 'we have carried (on behalf
of someone)'

The first example *rúmaa* illustrates a stative verb stem; the other two examples illustrate stative stems derived from active verb bases.

Imperative categories are Singular and Non-Singular, Immediate and Non-Immediate. Imperative suffixes are listed in Chart 6.

	Non-Immediate		Immediate
	Ego	Alo	
Singular	vBase	vBase + <i>vstMP-Rl</i>	} -pe
Non-Singular	-lepaa	-tepaa	

Chart 6: Imperative Suffixes

Some examples of Set II imperatives are:

- (26) *rúmaa* 'to portion out' + n-imm n-sg + *rúmaa-tepaa*
'you all portion it out (for someone)'
- (27) *áda* 'to look' + n-imm sg + *vstMP-Rl* + *ádaa*
'look (on behalf of someone)'
- (28) *áda* 'to look' + imm n-sg + *vstMP-Rl* + *ádaa-tepaa-pe*
'you all look (on behalf of someone else) now'

Set I Tense suffixes are given in Chart 7.

The basic shape of the active verb base to which Set I Tense suffixes are attached can be found in several ways: (1) the shape of the verb base which results when the regular past tense suffixes occur; (2) the shape of the verb base which results when the 1 and 2 sg Pr tense suffixes occur; (3) the shape of the verb base in the environment of non-immediate sg Set I imperatives.

In other instances the shape of the verb base changes according to regular MP rules which will be outlined.

	Pr	Pa	RP	Fu	Pf
1 sg	-lo	-wa	-su	-lua	-e
2 sg	-e ¹²	-e	-si	-li	-e
3 sg	-la	-a	-sa	-lia	-ea
1 dl	-lepa	-pa	-slpa	-lipa	-epa
2,3 dl	-lepe	-pe	-slpi	-lipi	-epe
1 pl	-lema	-ma	-sima	-lima	-ema
2,3 pl	-leme	-me	-simi	-limi	-eme

Chart 7: Set I Tense Suffixes

3.22.2 Non-Terminal Suffixes

The presence of separate sets of verb suffixes according to the 'medial' or 'final' position of the verb in an utterance is a typological feature of New Guinean Papuan languages.¹³ It is also common in New Guinea Highland languages to treat such clauses in terms of two intersecting dimensions: the set of verb stems which expound the Predicate as one dimension, and the syntactic distribution of the Predicate as the other. In Kewa such aspects of clause relationships are described on the Sentence-level (Chapter 6), so that in this section only

the suffix forms which have morphophonemic rules accompanying them are outlined. There are many variations of such suffixes, but semantically they fall into two main groups: those which mark **successive actions** and those which mark **simultaneous actions**.¹⁴

Actions which are successive may be performed by the same or by different persons. Such actions may also be either altrocentric or egocentric in benefaction. The suffixes which mark such actions are listed in Chart 8 (as well as two others which are discussed later). Morphophonemic rules for the combination of active verb bases and egocentric successive or simultaneous suffixes (Set I) follow in the next section.

Bene- faction	Same Person		Different Persons						
	Suc.	Sim.	1sg	2sg	3	1dl	1pl	2dl	2pl
Ego	-a	-ri	-no	-ina	-na	-pona	-mona	-lipina	-limina
Alo	-wa	-ma	vstMP-R1 plus above suffixes						

Chart 8: Non-Terminal Suffixes

3.23 Morphophonemic Rules

Rules which specify the shape of the verb base for a particular pattern when that pattern occurs with the Terminal suffixes of Set I are given first. The suffix shapes which result are starred if MP suffix rules are yet to be applied. A general rule of vowel harmony applies finally to any appropriate tense or verb stem.

The following rule applies to any base of pattern L:

$$\text{vstMP-R2} \quad \text{XL} \rightarrow \text{X} / \text{---} \left\{ \begin{array}{l} \text{Pr} \\ \text{RP} \\ \text{Fu} \\ \text{Pf} \end{array} \right\}, \text{ where Pr} \neq 1, 2\text{sg}$$

Examples are from the base *yólá* 'to pull':

- | | | | |
|-------|-----------------|-----------|----------------------------|
| (29a) | <i>yólá-lo</i> | (1 sg Pr) | 'I am pulling' |
| (29b) | <i>yó-su</i> | (1 sg RP) | 'I pulled sometime ago' |
| (29c) | <i>yó-lua*</i> | (1 sg Fu) | 'I will pull' |
| (29d) | <i>yó-e*</i> | (1 sg Pf) | 'I have pulled' |
| (29e) | <i>yó-lepa</i> | (1 dl Pr) | 'We 2 are pulling' |
| (29f) | <i>yó-sipa</i> | (1 dl RP) | 'We 2 pulled sometime ago' |
| (29g) | <i>yó-lipa*</i> | (1 dl Fu) | 'We 2 will pull' |
| (29h) | <i>yó-epa*</i> | (1 dl Pf) | 'We 2 have pulled' |

To account for the actual shape of the tense suffixes the following rule must apply:

$$\text{vafMP-R1} \quad \text{XL} + \begin{bmatrix} -lu- \\ -e \\ -le- \\ -li- \\ -e- \end{bmatrix} \rightarrow \begin{bmatrix} -to- \\ -to \\ -ta- \\ -te- \\ -ta- \end{bmatrix} \quad \begin{array}{l} (29c) \\ (29d) \\ (29e) \\ (29g) \\ (29h) \end{array}$$

The correct shapes are thus *yó-toa* (29c), *yó-to* (29d), *yó-tapa* (29e), *yo-tepa* (29g), *yó-tapa* (29h). If certain historical facts are taken into account, which are outside the scope of this grammar, *t* regularly replaces *l*. This results in ambiguity in the case of the *l dl Pr* and *l dl Pf* suffixes, but only with verb bases of this pattern.

The following rule applies to bases of pattern E or A:

$$\text{vstMP-R3} \quad \begin{bmatrix} \text{XE} \\ \text{XA} \end{bmatrix} \rightarrow \begin{bmatrix} \text{X} \left\{ \begin{array}{l} i \\ e \end{array} \right\} / \text{---} \left\{ \begin{array}{l} \text{RP} \\ \text{Pf} \end{array} \right\} \\ \left\{ \begin{array}{l} \text{Xi} \\ \text{X} \end{array} \right\} / \text{---} \left\{ \begin{array}{l} \text{RP} \\ \text{Pf} \end{array} \right\} \end{bmatrix}$$

Examples are from the bases *ria* 'to carry (on the shoulder)', *ráképéá* 'to husk', and *áda* 'to look':

- (30a) *ri-su* (1 sg RP) 'I carried sometime'
 (30b) *ri-to** (1 sg Pf) 'I have carried'
 (30c) *ri-sima* (1 pl RP) 'We all carried sometime'
 (30d) *ri-tema** (1 pl Pf) 'We all have carried'
 (31a) *ráképé-su* (1 sg RP) 'I husked sometime'
 (31b) *ráképé-to* (1 sg Pf) 'I have husked'
 (31c) *ráképé-sima* (1 pl RP) 'We all husked sometime'
 (31d) *ráképé-tema* (1 pl Pf) 'We all have husked'
 (32a) *ádi-su* (1 sg RP) 'I looked sometime'
 (32b) *ád-e* (1 sg Pf) 'I have looked'
 (32c) *ádi-sima* (1 pl RP) 'We all looked sometime'
 (32d) *ád-ema* (1 pl Pf) 'We all have looked'

The variations in the tense suffixes (from those given in Chart 7) can be accounted for as follows:

(1) by expanding the left-hand side of *vafMP-R1* to include pattern E; this applies to (30b), (30d), (31b), and (31d).

(2) by adding a further vowel harmony rule to provide the correct surface shapes for (30b and d):

$$\text{vafMP-R2} \quad \text{XH} + \begin{bmatrix} \text{te-} \\ \text{to-} \end{bmatrix} \rightarrow \begin{bmatrix} \text{ti-} \\ \text{tu-} \end{bmatrix}$$

The correct shapes are thus ri-tu (30b) and ri-tima (30d).¹⁵

The combination of active verb bases and the immediate imperative suffixes follows the general pattern of vstMP-R2:

$$\text{XL} \rightarrow \text{X} / _ \text{Imp}$$

The underlying form of the imperative suffix is -lepaa for all verb patterns, except that pattern L requires an addition to vafMP-R1:

$$\text{XL} + \text{-le-} \rightarrow \text{-te-}$$

In every case the imperative is marked by -tepaa for altrocentric benefaction (Cf. Chart 6). Examples of each active verb stem morpho-phonemic pattern are:

(33) yólá 'to pull' + n-imm n-sg → yó-tepaa
'You all pull it'

(33a) yólá + n-imm n-sg (Alo) → yóláá-tepaa
'You all pull it on behalf of someone'

(34) ria 'to carry' + n-imm n-sg → ria-lepaa
'You all carry it'

(34a) ria + n-imm n-sg (Alo) → riaa-tepaa
'You all carry it on behalf of someone'

(35) tá 'to hit' + n-imm n-sg → tá-lepaa
'You all hit it'

(35a) tá + n-imm n-sg (Alo) → táá-tepaa
'You all hit it on behalf of someone'

Active verb bases which occur with Non-Terminal suffixes (Chart 8) also require MP rules. The following rule applies to bases which combine with suffixes marking successive actions involving same persons:

$$\text{vstMP-R4} \quad \begin{bmatrix} \text{XL} \\ \text{XA} \end{bmatrix} \rightarrow \begin{bmatrix} \text{Xlo} \\ \text{Xo} \end{bmatrix} / _ \text{N-Term (suc-sp)},$$

where in the case of examples (40) and (41) the vowel harmony rule applies to the vowel preceding the successive-same person suffix, i.e. -a becomes -u:

- (36) péla 'to pull out' + -a → pélo-a píra-wa
'I pulled it out and sat down'
- (37) ráképéá 'to husk' + -a → ráképéá-a píra-wa
'I husked it and sat down'
- (38) roa(E) 'to pluck' + -a → roá-a píra-wa
'I plucked it and sat down'
- (39) póná 'to sharpen' + -a → pónó-a píra-wa
'I sharpened it and sat down'
- (40) rípína 'to grasp' + -a → rípínu-a píra-wa
'I grasped it and sat down'
- (41) sá¹⁶ 'to put' + -a → sú-a píra-wa
'I placed it and sat down'
- (41a) sáá-wa píra-wa 'I placed it (for someone) and sat down'

In all of the above examples the tense is signalled by the terminal suffix -wa (1 sg Pa).

If the persons involved in the successive actions are different the following rule applies:

$$\text{vstMP-R5} \quad \left[\begin{array}{c} \text{XL} \\ \left\{ \begin{array}{c} \text{XA} \\ \text{XE} \end{array} \right\} \end{array} \right] \rightarrow \left[\begin{array}{c} \text{X} \\ \text{Xe} \end{array} \right] \quad / \text{--- 3rd person} \\ \text{(any number)}$$

A variation of vafMP-R1 provides for the only other suffix alternants:

$$\text{L} + \left[\begin{array}{c} \text{-lipi} \\ \text{-limi} \end{array} \right] \rightarrow \left[\begin{array}{c} \text{-tepe} \\ \text{-teme} \end{array} \right] \quad / \text{--- 2 dl, pl}$$

Some examples are:

- (42) áwá 'to dig' + -na → áwé-na píra-wa
'He dug it and I sat down'
- (43) ádíá 'to fasten' + -na → ádí-na píra-wa
'He fastened it and I sat down'
- (44) yólá 'to pull' + -na → yó-na píra-wa
'He pulled it and I sat down'
- (45) ródópea 'to break' + -na → ródópe-na píra-wa
'He broke it and I sat down'

- (46) ábúlá 'to compensate' + -na → ábú-na píra-wa
'He compensated and I sat down'
- (47) ípu 'to come' + -na épe-na píra-wa
'He came and I sat down',¹⁷

In example (43) the vowel harmony rule must also be applied.

When two successive actions occur the first may be marked for purpose, rather than simply for time (as in previous examples). The person, number and tense of the action is again specified in the suffix of the final verb but the total action is a verb phrase (§5.42). The benefactive nature of the purpose suffix may be specified as egocentric or altrocentric (note the contrast in (51) and (51a) below).

Some examples are:

- (48) ádo-la pú-lu 'I am going to see it'
- (49) ri-ta pú-a 'He went to carry it'
- (50) ráképe-ta pá-limi 'They will go to husk it'
- (51) pógota-ép-eme 'They have come to jump'
- (51a) pógolaa-ta ép-eme 'They have come to jump on behalf of someone else'
- (52) rúmaa-ta yalá-a 'In order to ration it out, he yelled out'

The morphophonemic rule which applies to the combination of active verb stems and the purpose suffix (basic -la) is a continuation of earlier rules:

$$\text{vstMP-5b} \quad \begin{bmatrix} \text{XE} \\ \text{XL} \\ \text{XA} \end{bmatrix} + \begin{bmatrix} \text{XV} \\ \text{X} \\ \text{Xo} \end{bmatrix} \quad / \text{ ___ Pur,}$$

where V is the penultimate of an XE pattern. If any pattern is also H, then o → u/H__ according to regular vowel harmony rules. Additionally, the purpose suffix variation follows vafMP-R1 such that:

$$\text{VB-L,E} + \text{-la} \rightarrow \text{-ta}$$

Note examples (49-51) above.

Gerundive actions which are always by the same person are also part of a vp and have morphophonemic rules which are the same as those of R5,

so that the environment can now be expanded to read: Pur, Ger. Some examples are:

- (53) pú píra-wa 'Going on, I sat down'
 (54) ló píra-wa 'Talking, I sat down'
 (55) íru píra-wa 'Cooking, I sat down'
 (56) sù píra-wa 'Placing it, I sat down'
 (57) ráképé píra-wa 'Husking it, I sat down'
 (58) ábúló píra-wa 'Compensating, I sat down'

The gerundive marker can be interpreted either as a zero suffix, or as the morphophonemic change which takes place, or as both. Example (53) also illustrates how the gerundive form of the verb *to go* is often used to express an on-going or repetitive action.

Verbs denoting altrocentric simultaneous actions by the same person or by different persons are marked by the suffixes indicated in Chart 8 and by the accompanying vstMP-R1:

- (59) láá-ma píra-wa 'While speaking on his behalf,
 I sat down'

3.24 Verb Syntagmemes

Active, stative, or derived stative stems expound the **Nucleus** of verb syntagmemes. The **Pheriphery** is expounded by affixes which are diagnostic of the type of verb syntagmeme. The Terminal and Non-Terminal suffixes of the pheriphery are obligatory; other suffixes are optional within the framework of the particular type of verb syntagmeme, still other suffixes and clitics are optional to any verb syntagmeme:

$$\begin{array}{l} \text{NUC} : \text{va} / _ + (\text{ASP}^1) + \text{SET I} \\ \quad : \text{vs} \quad \left. \vphantom{\text{NUC}} \right\} \\ \quad : \text{dvs} \quad \left. \vphantom{\text{NUC}} \right\} \quad (\text{CAS}) + _ + (\text{ASP}^2) + \text{SET II} \end{array}$$

The Pheriphery can be expounded as follows:

$$\begin{array}{l} \text{PHERI:} \quad \left\{ \begin{array}{l} \text{Term I} \\ \text{N-Term I} \end{array} \right\} \quad / \text{ABASE} + (\text{ASP}^1) + _ \\ \quad \left\{ \begin{array}{l} \text{Term II} \\ \text{N-Term II} \end{array} \right\} \quad / (\text{CAS}) + \left\{ \begin{array}{l} \text{ABASE} \\ \text{SBASE} \end{array} \right\} + \text{ASP}^2 + _ \end{array}$$

where if an **ABASE** is expounded, vst-MP-R1 must be applied.

The remaining functional points for any verb syntagmeme are:

$$v \rightarrow (\text{NEG}) + \text{NUC} + \text{PHERI} + (\text{ASP}^3) + \left(\begin{array}{c} \text{CON} \\ \text{MOD} \end{array} \right),$$

where CON and MOD denote Sentence Connectors and Sentence Modals, which are relevant to and discussed in Chapter 6.

The obligatory exponents have already been reviewed. Optional categories expound NEG, CAS, ASP¹, ASP², and ASP³. Each of these will now be dealt with.

3.24.1 Negative

The pre-clitic *na-* negates the action signalled by certain verb phrases (see §5.42 and 5.43), the complemented action of certain clauses (see §4.24), or simply the verbal action of verb syntagmemes. Some examples are:

- (60) *na-pálua* (neg-go I will = 'I will not go')
- (61) *na-ádo-la pálua* (neg-see-pur, go I will = 'I will not to to see it')
- (62) *adaalu na-ya-lia* (long, neg-affirm-he will = 'He will not grow tall')
- (63) *na-ma-adaalu yaa-lia* (neg-cas-long, affirm-he will = 'He will not shorten it')

In the latter case, in order for the negative to not attach to a verb, it must co-occur with the causative pre-clitic. Other examples of the use of *na-* follow:

- (64) *na-pú-lupaa-pe* 'Don't all of you go now'
- (65) *na-toa* 'I will not talk'
- (66) *na-ma-adóaa-lia* 'He should not cause (me) to wait...'
- (67) *na-mú-la pú-lu* 'I am not going to get it'
- (68) *na-mú-a púa-wa* 'I did not get it and I went'
- (69) *na-méá-no púa-a* 'I did not get it and he went'
- (70) *na-méá-no na-púa-a* 'I did not get it and he did not go'

In example (64), *na-* negates an imperative action; in (65) an action to be carried out in the future; in (66) also a future action, but one which will be caused; in (67) and (68) the use of the negative reveals two different structures and the fact that *na-* is a pre-clitic rather than a prefix. In (67) it negates a verb phrase of purpose while in

(68) it negates only the first action of two successive actions by the same person. Thus, in order to negate both of two successive actions, the negator must occur twice, as in (70), or:

(68a) na-mú-a na-púa-wa 'I did not get it and I did not go'

However, there is no counterpart to the verb phrase of (67):

(*67a) na-mú-la na-pú-lu 'Not in order to get it, I am not going'

In other words, na- always moves to the beginning of the constituent which it negates; in the case of (67) a verb phrase (§5.41, 42). Example (69) is parallel to (68), but the identity of the actors change. The actors are again different in (70) (1 sg and then 3 sg), but na- occurs twice and negates both actions.

3.24.2 Causative

As indicated in the formula, if the causative pre-clitic occurs, Terminal or Non-Terminal suffixes of Set II must occur in the Pheriphery. The causative also changes a clause syntagmeme to transitive, if it is already transitive (Cf. §4.23).

- | | | |
|-------|-----------------------|--|
| (71) | píra-pe | (sit-imp imm sg = 'Sit down') |
| (71a) | ma-píraa-pe | (cas-sit-alo imp imm sg = 'Cause (someone) to sit down') |
| (72) | píra-wa | (sit-l sg Pa = 'I sat down') |
| (72a) | ma-píraa-ru | (cas-sit-l sg Pa alo = 'I caused (someone) to sit down') |
| (73) | ma-rékaa | 'Cause it to stand up for someone' |
| (74) | ma-íraa-to | 'I am causing it to be cooked on behalf of someone' |
| (75) | ma-mináá-saa-tepaa-pe | 'You all cause it to be lifted upwards right now' |

3.24.3 Aspect¹

Many of the co-occurrence restrictions of aspects are outlined in the tagmemic rewrite rules suggested in Chapter 7. Here, the forms of the various aspect markers and examples are given:

- (1) -ba(A) '(inceptive)' specifies action that has begun at some point in time. It is one of the few affixes where morphophonemic rules outlined earlier apply; it belongs to pattern A and co-occurs with Set I or Set II, Terminal or N-Terminal suffixes.

(76) íra 'to cook' + -ba + vstMP-R4 + -a (consec sp) =

íra-bo-a... 'having begun to cook it and ...'

(77) íra-baa-ru-de 'I started to cook it once'

If -ba(A) interrupts a morphophonemic tense alternant which co-occurs with a base pattern other than XA, the tense is always from those which co-occur with pattern A:

(78) íra 'to cook' + 1 sg Pf = íri-tu 'I have cooked it'

(79) íra + -ba + 1 sg Pf = íra-be 'I have begun cooking it'

In other words MP rules apply now to -ba(A), not the verb base.

- (2) -pa '(completive)' specifies action completed with altrocentric benefaction, sometime in the past. That is, it co-occurs only with past tense suffixes of Set II. Similarly to the 'inceptive' aspect marker, vstMP-R1 applies to this suffix, which optionally interrupts the vbase and tense suffix:

(80) íra + -pa + 1 sg Pa alo = íra-paa-ru 'I finished cooking it (for someone)'

- (3) -la and -ta '(prolongation)' are forms which mark egocentric and altrocentric benefaction respectively. They occur only with N-Terminal suffixes which mark different persons:

(81) íra + -la + 1 sg dp = íra-la-no 'I continue cooking it for sometime and then...'

(81a) íra + -ta + 1 sg dp = íra-taa-no 'I continue cooking it for (alo) someone for some time and then...'

These suffixes also give some idea of simultaneous actions by different persons, but the first action is prolonged (Cf. also §6.14.1).

- (4) -wa '(residual)' specifies that some part of the action remains to be completed. It co-occurs only with Set II Terminal suffixes:¹⁸

(82) íra + -wa + 1 sg Pa alo = íra-waa-ru 'I cooked part of it (for someone)'

3.24.4 Aspect²

The two aspect markers in this set function as directional aspects and co-occur only with suffixes of Set II.

- (1) -niaa '(downward motion)' specified action performed upon something in a downward fashion:

(83) íra + -niaa + 1 sg Pa alo = íra-niaa-ru 'I burned it downward' (as a hill)

- (2) -saa '(upward motion)' specified action performed upon something in an upward fashion:

(84) íra + -saa + 1 sg Pa alo = íra-saa-ru 'I burned it upward' (as a hill)

3.24.5 Aspect³

Several aspect markers only follow Terminal or N-Terminal suffixes. These are:

- (1) -de '(punctiliar)' specified action performed at a point in time; it occurs with a slightly different function with other word classes and constructions.

(85) íra + 1 sg Pa + -de = íra-wa-de 'I cooked it'

- (2) -na '(reported seen action)' occurs only with past actions of Set I-suffixes. It is also used for reported speech (§6.26).

(86) íra + 3 sg Pa + -na = íra-a-na 'He was seen to cook it'

- (3) -ya '(reported unseen action)' occurs parallel to the form above:

(87) íra + 3 sg Pa + -ya = íra-a-ya 'He is said to have cooked it'

- (4) -lo '(desiderative)' expressed a desire that an action take place. It mainly follows only N-Terminal dp suffixes or suffixes which indicate purpose (§5.42):

(88) íra + Pur + -lo = íra-la-lo '[I] want to cook it'

(89) íra + 3 dp + -lo = íri-na-lo 'He wants to cook it and ...'

- (5) -loa '(serialisation)' indicates that the action is completed as one in a series of actions. It follows only N-Terminal dp suffixes (Cf. §6.14.2).

- (90) íra + 3 dp + -loa = íri-na-loa 'After he cooks it, then...'
- (6) -paa '(exclusive)' indicates that the action is exclusive in nature (Cf. §6.14.5):
- (91) íra + 1 pl dp + -pas = íra-mina-paa 'We all (alone) should cook it'

Because all other clitics that occur with verbs mark a grammatical function which can better be described on the clause or sentence level, these are described in later chapters. In the following section suffixes and clitics occurring with nouns and other word classes are described.

3.25 Noun Syntagmemes

Noun stems consist of bases which are either Simple or Compound. Compounds are combinations of general nouns which function as a semantic unit and which have the properties of a singular general noun (i.e. occur with the usual clitics, have the same syntactic settings, perturbation patterns with tone, and so on). Compounds often appear to be derived from other noun phrase patterns. For example, one possible underlying pattern for compounds is based on N-ná N, where -ná in a full phrase type marks the item-as-possessor. Examples such as:

- (92) répena-úni (tree bone = 'sticks')
- (93) yágáá-írí (chin hair = 'whiskers')
- (94) póré-rúmu (mountain knee = 'ridge')
- (95) pora-úni (road bone = 'trail')

appear to be derived from répena-ná úni, yágáá-ná írí, and so on.

A further type of noun compound can be recognised often by the fact that the first noun specifies a generic property for the compound as a whole:

- (96) raí-kutu (axe, bamboo knife = 'bush knife')
- (97) aapu-ásála (tanket asala = 'asala [cordyline] leaves')
- (98) kábe-lápo (pit-pit lapo = 'harden lapo type of cane')
- (99) yági-putí (kunai grass, aggregate = 'grassland')
- (100) írí-kati (hair grey = 'elderly')

Two nouns which share the same semantic characteristics and which can be counted collectively as a unit, can be considered as derived

from a np_{num} which contains *lápo* 'both' as the M_{gan} exponent. For example, compounds such as:

- (101) *oná-áá* (woman, man = 'people')
 (102) *nogó-naakí* (girl, boy = 'children')
 (103) *íní-ágaa* (eyes, mouth = 'face')
 (104) *kí-kómaa* (hand, upper arm = 'whole arm')
 (105) *pádi-rááni* (edible pit-pit, cress = 'vegetables')
 (106) *mená-irikai* (pig, dog = 'animals')

appear to be derived from *oná áá lápo*, *nogó naakí lápo*, and so on.

Body parts are most frequently in a part-whole kind of relationship and it is important to note that subordinate semantic relationships are often due to physiological function (K. Franklin 1963). Thus the form *kídipaa* must be glossed simply 'nails', but the compounds based upon the form are either *aa-kídipaa* (foot nails = 'toenails') or *kí-kídipaa* (hand nails = 'fingernails').

Other compounds which appear similar in form may be derived from quite different sources:

- (107) *oná-ada* (woman house = 'women's house')
 (108) *tápa-ada* (platform house = 'men's house')
 (109) *kábe-ada* (pit-pit house = 'menstrual hut')
 (110) *kúku-ada* (cook [Pidgin Eng.] house = 'kitchen')
 (111) *répena-ágaa* (fire mouth = 'headlights')
 (112) *répena-réke* (wood stairs = 'ladder')
 (113) *répena-káápu* (wood dry = 'firewood')

Examples (108-110) are derived from a common Modifier-Head functional phrase pattern, but (107) is more similar to (93-96), based on the pattern of *N-ná N*. Likewise (111-113), although similar in form, appear to be derived from different patterns.

There are no other characteristics which would serve to distinguish separate types of nouns. There are also no clitics or suffixes which occur solely with nouns. There are, however, four which function on the word-level and which may be considered together because none of them occurs with verbs.¹⁹

3.25.1 Word-Level Clitics

Clitics which primarily attach to word-level tagmemes and which therefore show no phrase or clause relationships are:

- aa- 'information question': aa-áá (ques-man = 'what man?');
aa-rabu (ques-time = 'what time?'); aa-para (ques-loc =
'where?'); aa-maapú-nu (ques-garden-coll = 'what gardens?')
- si 'diminutive quality': yómagae-si (old man-dim =
'a slightly old man'); láápo-si 'two little ones'; adaa-si
'a slightly big one'.
- nu 'collective': yómagae-nu 'all of the old men'; ékéráá-nu
(tomorrow-all = 'in the future'); nimú-nu 'all of them'.
- lu 'durative quality': aaráá-lu (father-dur = 'a family');
pora-lu (road-dur = 'a long way')

Combinations of word-level clitics which are permissible are:

- (114) mená-si-nu 'all of the little pigs'
- (115) adaa-lu-nu 'all of the long ones'

Because -nu specifies an aggregate, it cannot co-occur with an aj_{nm} such as: *mená-nu láápo 'all the pigs, two'.

3.26 Other Word Patterns

The three word-level clitics which have been described combine freely with stems of other non-verb word classes. Each word class will now be discussed individually.

3.26.1 Adjectivals

In addition to the basic class of adjectives described (§3.13) other adjectives may be derived from verbs. Such forms expound the Modification function of a np_{des} , most often occurring as the relator of an embedded clause. The derivational clitic is of two basic forms: egocentric, where the shape of the clitic is determined according to the underlying morphophonemic pattern of the verb base; and altrocentric, which is invariably the clitic -e. Examples for each verb pattern are (Cf. also vstMP-R5):

- (a) XL → Xne, e.g. yalá → yané 'the yelling (one)'
- (b) Xa → Xe, e.g. áwá → áwé 'the digging (one)'

- (c) XE → Xni, e.g. ria → rini 'the carrying (one)'
 (d) Xaa → Xaae, e.g. ní mínaa → ní mínaae 'the understanding (one)'

In example (c), because XE is also XH (includes a high vowel), ne → ni.

Although word-level clitics may attach to the derived adjective, the preferred pattern attached the clitic to the noun expounding the Head:

- (116) rini áá-nu, rather than rini-nu áá 'all of the men
 who carry'
 (117) yané áá-si, rather than yané-si áá 'the smallest man
 who yells out'

If the adjective is a cardinal number such as pádáne 'one', láápo 'two', repo 'three' and máálá 'four', all additional cardinal numbers are based on multiples of four (Franklin and Franklin 1962a; Cf. also Franklin 1968b). Structurally the forms are numerical noun phrases and possessive noun phrases, and these are described in Chapter 5. However, body parts may also be named as ordinal numbers and the base cardinal numbers may become ordinal. To do this the numerical derivational clitic -pú 'quantifier' is added. It may be added to stems of certain other word classes as well:

- (118) láápo-pú 'two of them'
 (119) ekáta-pú (little finger-quant. = 'the first of them')
 (120) adaa-pú (big-quant. = 'plenty of them')
 (121) ake-pú (what-quant. = 'how many of them?')

3.26.2 Adverbials

Derived adverbs have already been mentioned in §3.14. They consist of a syntagme marked by -rupa. Adverbial clauses and adverbs which function as clause modifiers are described in the next chapter.

3.26.3 Deictics

Personal and interrogative pronouns combine with all word-level clitics except -lu:

- (122) ne-si 'little you'
 (123) ní áá-nu 'all of us'
 (124) áápí-nu 'who all?'
 (125) ake-si 'the little what?'

Interrogative pronouns combine with clitics which function at various levels of the grammar. In Chart 9 these are outlined and the clitic is given a very general gloss. In two instances *ake* adds the vowel /a/ before a clitic and in one instance the final vowel of *ake* changes in a manner apparently following *vstMP-R5b*.

Clitics		Animate áápí 'who'		Inanimate ake 'what'
-nu	'coll'	áápí-nu	'who all'	ake-nu 'what all'
-ná	'poss'	áápí-ná	'whose'	
-mé	'agn'	áápí-mí	'who'	ake-mé 'what'
-para	'ben'	áápí-para	'to whom'	ake-para 'about what'
-ne	'adjz'	--		akea-ne 'due to what'
-daa	'obj'	áápí-daa	'due to whom'	--
-lo	'desr'	--		ako-lo 'for what desire (or purpose)'

Chart 9: Interrogatives

Demonstratives, on the other hand, may combine with not only word-level clitics but also with themselves. Examples with clitics are:

- (126) go-si 'those little ones'
 (127) só-nu 'all those up there'
 (128) ápo-si-nu 'all those little ones somewhere over there'

Examples of demonstrative compounds are:

- (129) mó-go 'over there (seen)'
 (130) só-go 'up there (seen)'
 (131) no-go 'down there (seen)'
 (129a) mó-po 'over there (unseen)'
 (130a) só-po 'up there (unseen)'
 (131a) no-po 'down there (unseen)'

but not forms such as *mo-so, *mo-no, *go-po. In demonstrative compounds comprising *ápo*, the initial vowel of the stem is lost.

N O T E S

1. Matthews (1966:156) notes that exhaustiveness is only required when word classes are conceived as a taxonomic system. He also makes two further relevant observations about the notion of word classes: (1) definitions can naturally be heterogeneous, i.e. employ 'notional' as well as 'formal' evidence, 'morphological' as well as 'syntactic' criteria; (2) at least some of the definitions should refer to universal properties of grammars (*ibid.*, pp. 156-9).
2. In other Highland languages possessive suffixes often divide noun stems into such categories as kinship and kin or body parts and functions on the one hand, and animate-inanimate nouns on the other. Cf. for example, D. Bee (1965, to appear) on Usarufa for the former, or P. Healey (1965:6) for the latter.
3. In E. Kewa names given to females are optionally suffixed by -nyu or -me: Rumú-nyu '(the woman) Rumúnyu', Waruá-me '(the woman) Warúame'. In addition, any name may be suffixed to show the parentage: Rumúnyu-ráá 'the father of Rumunyu', waruáme-gi 'the mother of Wareame', where the suffixes -ráá and -gi are contractions of the kinship terms of reference aaráá 'father' and ági 'mother'. (Cf. K. Franklin 1967a:78). Although both types of suffixation occur in W. Kewa, the system appears to be less developed. In W. Kewa female names are frequently formed by compounds employing nogó 'girl', e.g. Kádípí-nogó, Amala-nogó, Ipáre-nogó.
4. It is interesting to note that P. Healey (1965a:15-18) describes four sub-classes of qualifier [=adjectives] which are very similar: colour, size, quality and quantifiers. The latter is subdivided into general and kin types.

5. See K. and J. Franklin (1962a) and also Franklin (1968b) for a description on how body parts are used as a system of counting in Kewa.
6. Categories of benefaction are described in the section on verb affixation. Certain morphophonemic rules outlined there also apply when adjectives are derived from verbs.
7. See Jakobson (1957), especially his discussion of shifters and their semantic components.
8. In some cases if an alveopalatal or dental consonant occurs a high vowel preceding it may be absent in present day Kewa. However, forms such as *ita 'to hit' can be reconstructed.
9. In KVM the altrocentric Set is called Non-Personal Benefactive. KCM introduces the terms altrocentric and egocentric but applies them only to tense. In this study altrocentric and egocentric apply to either terminal or non-terminal suffixes. Typologically, the specification of egocentric or altrocentric benefaction in verbal categories is a distinctive characteristic of Kewa in particular, and the West-Central Family in general. Wurm (1962:117) cites what he calls the use of "applicative verb forms", i.e. "action for the sake or benefit of, a person other than the one speaking, spoken to, or spoken about", as a typical feature of the West-Central Family. In Telefol, of the Ok Family, P. Healey (1965c:6ff) describes a general dichotomy between benefactive and non-benefactive stems. On the other hand, languages of the Eastern Family have a benefactive morpheme which must be preceded by an indirect object marker. (For Awa, see R. Loving and McKaughan 1964:19; for Gadsup, C. Frantz and McKaughan 1964:86; for Usarufa, D. Bee 1965:46.) In Benabena, a language of the East Central Family, benefactive verbs take indirect object prefixes but are part of a compound unit (R.A. Young 1964:65n and 74ff). The category of benefaction appears to be an important universal and how it is formed could well be added to Wurm's typological features for Highland languages (1964b, *et seq.*).
10. For example, consider the following as morphs which mark only tense: -te- (Pr), -ri- (Pa), -si- (RP), -li- (Fu), and -e- (Pf). Basic person-number forms are:

	1	2	3
Sg	-o	-e	-a
Dl	-pa	-pe	-pe
Pl	-ma	-me	-me

Morphophonemic rules provide surface representations:

$$\begin{bmatrix} -o \\ -e \\ -a \end{bmatrix} + \text{Pr} \rightarrow \begin{bmatrix} -to \\ -te \\ -ta \end{bmatrix}; \quad + \text{Pa} \rightarrow \begin{bmatrix} -ru \\ -ri \\ -ria \end{bmatrix},$$

and so on, where vowel harmony rules convert $o \rightarrow u/-r$ __. There seems to be little to be gained by such an exercise: person-number-tense always occur together (or person-number-time relationship) and must ultimately be rejoined and specified as co-occurring obligatorily.

11. In a sense, stative bases are inherently altrocentric, i.e. the action of the verb always relates to some implied person or circumstance other than the speaker. Although benefaction is signalled by the affixes as a set, stative bases which combine only with Set II suffixes might also simply be called benefactive stems.

12. The obvious gap of *-le is due to a regular sound loss between the East and West dialects (Cf. Franklin 1968b).

13. See especially Wurm (1964b:81) on typological variations. This medial/final characteristic is widespread in New Guinea. G.B. Milner (1967:735) refers to it as "Pilhofer's distinction" in his review of Cowan's *Grammar of the Sentani Language*. Pilhofer (1933-35) reported "Unselbständige Formen" or "Satzinnen Formen" (sentence medial forms) in Kâte of the Huon peninsula. These medial forms had either the same form and subject throughout ("Durchgangsformen") or changed forms ("Wechselformen") and different subjects ("Subjektswechsel").

Chapters 4 and 6 give examples in Kewa and also references to other New Guinea language descriptions.

14. See again Pilhofer (*ibid*) who reported three kinds of actions in Kâte: successive ("postemporäres"), simultaneous ("kontemporäres") and durative ("kontinuatives").

15. This rule also accounts simply for variants occasionally heard which correspond to what I called class A-3 verbs in E. Kewa (1964: 104), e.g. ábú-tua 'I will compensate' instead of *abu-toa. Other special vowel harmony rules are necessary for the verbs pú 'to go' and ípu 'to come'. Usually these bases conform to Pattern A, with additional Pattern H rules in some cases. Note however:

$$(i)pu + \begin{bmatrix} \text{imm imp} \\ \text{sg Fu} \\ \text{sg Pa} \\ \text{N-Term dp} \end{bmatrix} \rightarrow \begin{bmatrix} (\acute{e})p\acute{o}-pe \\ (\acute{e})p\acute{a}-lua \\ (\acute{e})p\acute{a}-a; p\acute{u}-a \\ (\acute{e})p\acute{o}-no \end{bmatrix}$$

Alternately, the forms for 'go' and 'come' may be considered púa and épa respectively (see Appendix A). Once this is done the "irregularities" are resolved by more regular morphophonemic rules.

16. This form is reconstructed as *sia 'to put' in pre-Kewa.

17. ípu 'to come' + épe / ___ -na. This apparent irregularity can be overcome as suggested in note 15.

18. Unless the form which marks permission with N-Terminal suffixes is considered the same (Cf. §6.14.3). If so, a transformation rule is required to place it following N-Terminal suffixes.

19. A further qualification is necessary here. Phrases such as ómé-nu-mí (to die nom-coll-AGN = 'those who are dying') are common, but the full phrase can always be supplied:

ómé onáá-nu-mí 'the people who are dying'. I consider the use of the collective clitic -nu in ómé-nu-(mí) as a contraction of the full phrase.

APPENDIX A

Verb Paradigms

pú 'to go'

púlu 'I am...'
 púi 'you are...'
 púla 'he is...'
 púlupa 'we two are...'
 púlupi 'you two are...'
 púluma 'we all are...'
 púlumi 'you all/they are...'

púawa 'I ... recently'
 púae 'you ... recently'
 púaa 'he ... recently'
 púapa 'we two ... recently'
 púape 'you two ... recently'
 púama 'we all ... recently'
 púame 'you all/they ... recently'

pálua 'I will...'
 páli 'you will...'
 pália 'he will...'
 pálipa 'we two will...'
 pálipi 'you two will...'
 pálima 'we all will...'
 pálimi 'you all/they will...'

písu 'I ... sometime ago'
 písi 'you ... sometime ago'
 písa 'he ... sometime ago'
 písipá 'we two ... sometime ago'
 písipi 'you two ... sometime ago'
 písimá 'we all ... sometime ago'
 písimi 'you all/they ... sometime ago'

pé 'I have...'
 pé 'you have...'
 péa 'he has...'
 pépa 'we two have...'
 pépe 'you two have...'
 péma 'we all have...'
 péme 'you all/they have...'

ípu 'to come'

ípulu
 ípui
 ípula
 ípulupa
 ípulupi
 ípuluma
 ípulumi

épawa
 épaé
 épaá
 épapa
 épape
 épama
 épame

épalua
 épali
 épalia
 épalipa
 épalipi
 épalima
 épalimi

ípisu
 ípisi
 ípisa
 ípisipa
 ípisipi
 ípisima
 ípisimi

épe
 épe
 épea
 épepa
 épepe
 épema
 épeme

Chapter 4

CLAUSES

4.0 INTRODUCTION

The structure of clauses, with obligatory Predicate functions, is given before the description of phrases following in Chapter 5. This is because clauses follow more naturally the previous description of verbs, which serve as exponents of the Predicate.

Clauses consist of a limited number of grammatical functions with a correspondingly greater variety of semantic co-functions. Certain clause-level functions, such as Subject-as-Agent, Object-as-Location, or Object-as-Recipient are marked by clitics which are analogous to case markers.¹

The functional characteristics of clause patterns, as well as the exponential set of the Predicate tagmemes, distinguish three main types of clauses: Intransitive, Transitive and Complementive; each also has certain sub-types. Each clause type is described in terms of its constituent tagmemes and functional pattern, though the rules given for clauses are not complete. The distribution of clauses in sentences is described later in Chapter 6, specifically the conjoining of clauses. Chapter 4 has already presented the morphological characteristics of the grammatical categories which serve as ultimate exponents of clause-level tagmemes. The structure of embedded clauses is also covered in this chapter.

4.1 CLAUSE-LEVEL TAGMEMES

Before turning to the individual clause types, the grammatical functions which occur in them are briefly reviewed. These grammatical functions are Subject, Object, Complement, Predicate and Adjunct. The latter tagmeme corresponds most closely to what is often called sentence adverbials; they function as various kinds of modifiers at the

clause-level. Except for Adjunct, these tagmemes are most often what Longacre (1964a:35) has called plot and *dramatis personae*. Other non-diagnostic tagmemes, which Longacre has also called props, scenery and local color, are expressed as semantic co-functions of the grammatical functions.²

4.11 Subject Tagmemes

Subject tagmemes function semantically as Agent, Actor, Topic, Goal, Instrument, Action, Location and perhaps others.³ According to the format proposed earlier each of these will be subscripted to the Subject tagmeme notationally as: S_{AGN}, S_{ATR}, S_{IN}, S_{ATN}, and so on, where capital letters indicate the functional status. Examples of each of these now follows:

S_{AGN}: [áá-mé] répena póá-a ([man-AGN], tree, cut-he did =
'The man cut the tree')

S_{ATR}: [áá] ada púa-a ([man ATR], house, go-he did =
'The man went home')

S_{TOP}: [áá-re] yaina ómá-a ([man-TOP] sick, die-he did =
'The man was sick')

S_{GOL}: [ada] rá-a ([house GOL], burn-it did =
'The house burned')

S_{IN}: [raí-mí] tá-a ([axe-IN], hit-he did =
'The axe hit it')

S_{ATN}: [ná-pe] épé ta ([eat-for ATN], good, it says =
'Eating is good')

S_{LOC}: [Putí] épé ta ([Puti LOC], good, it says =
'Puti is a good place')

Becker (1967b) has suggested certain discovery procedures for establishing what is called in this grammar semantic functions. One apparently quite general restraint is that identical functions are conjoinable.⁴ This condition is met in such examples as the following where the tagmeme S_{AGN} includes two conjoined Heads:

- (1) áá-para naakí láápo-mé ní gé-pe 'The man and the boy
gave it to me'

áá 'man' and naakí 'boy' are conjoined by -para within a phrase which is marked by láápo-mé 'two-AGN'. The dual nature of the exponents of

the phrase is supported by the verb *gé-pe* 'give-they two did', which occurs in cross-reference with the person of the Subject. The semantic function of AGN is thus conjoinable.

Another way of contrasting such functions is in terms of their interrogative substitutes, or what Becker (1967b:84) calls "category words". Thus in a clause such as:

(2) *áá-para raí láápo-mé ní tá-pe* 'The man and the axe hit me',

there is but one Subject, corresponding to H_{AGN} on the one hand, and H_{IN} on the other. This can be demonstrated in the following paired sentences where $S:pro_{inter}$:

(2a) *áápí-mí ní tá-a* 'Who hit me?'

(2b) *ake-mé ní tá-a* 'What hit me?'

The correct answers *áá-mé* 'the man' and *raí-mí* 'the axe' indicate the functions S_{AGN} and S_{IN} respectively. However, such pairs may simply show that the categories of animate vs. inanimate are properly those inherent in lexical forms, rather than being specified by functional markers. Either way the information must be supplied in the grammar, and if they are specified by functions of AGN vs. IN they need not redundantly be specified by categories of animate vs. inanimate.⁵

If conjoining cannot occur within a particular tagmeme position according to regular rules, the function of the conjoined Heads is obviously different:

(*3) *Putí-para ná-pe láápo épé ta* 'Puti and something to eat are good'

Such restrictions in conjoining underscore the need to specify the semantic co-functions of grammatical functions in formulae. Some examples of conjoined Heads within a Subject tagmeme are:

(4) *áá-para naakí láápo épa-pe* (man-AND, boy, two, come-they did = 'The man and the boy came')

(5) *áá-para naakí láápo-mé ní gía-pe* (man-AND, boy, two-AGN, I, give-they did = 'The man and boy gave (it) to me')

(6) *né-mé mená répena-para raí láápo-mé tá-wa* (I-AGN, pig, stick-AND, axe two-IN, hit-I did = 'I hit the pig with a stick and with an axe')

(7) *ada-para áá láápo répena-mé rá-a* (house-AND, man, two, fire-IN, burn-it did = 'The house and man were burned by the fire')⁶

- (8) ná-pe íra-pe láápo épé ta (eat-for, cook-for, two, good, it says = '(Things for) eating and cooking are good')
- (9) Putí-para Usa láápo-re⁷ épé su (Puti-AND, Usa, two-TOP, good, place = 'Puti and Usa are good places')

Each of the above sentences illustrates conjoining of S tagmemes with various semantic co-functions. The functions are:

- S_{ATR}: áá-para naakí láápo 'the man and boy' (4);
- S_{AGN}: áá-para naakí láápo-mé 'the man and boy' (5);
- : né-mé 'I' (6);
- S_{GOL}: ada-para áá láápo 'the house and man' (7);
- S_{ATN}: ná-pe íra-pe láápo 'eating and cooking' (8);
- S_{LOC}: Putí-para Usa láápo-re 'Puti and Usa' (9);
- S_{IN}: répena-para raí láápo-mé 'the stick and axe' (6);
- : répena-mé 'fire' (7);

Other functions and their exponents are:

- O_{REC}: ní 'me' (5);
- O_{GOL}: mená 'pig' (6);
- P_{ATN}: épa-pe 'they two came' (4);
- P_{GD}: gía-pe 'they two gave it (to me)' (5);
- : tá-wa 'I hit (it)' (6);
- P_{STA}: ra-a 'it burned' (7);
- : ta 'it says' (8);
- C_{QAL}: épé 'good' (8);
- COM_{DES}: épé su 'a good place' or 'good places' (9).

There are other permissible structures for K-equivalent Subject tagmemes which need to be included in a rule-schemata for conjoining. These are:

- (a) simple juxtaposition of Heads within the Subject: áá naakí épa-pe 'the man and boy came'; Putí Usa épé ta 'Puti and Usa are good (places)'.
 (b) adding the conjoining marker -para to either Head or to láápo 'two': áá-para naakí-para épa-pe or áá-para naakí láápo-para épa-pe.

(c) if *-para* is used twice, then *-mé* (AGN) can be added twice: *áá-para-mé naakí-para-mé tá-pe* 'The man and the boy hit it'; the same holds for an *S_{IN}*: *répena-para raí-para-mé tá-wa*.

(d) the use of *páge* 'also', rather than *-para*: *áá páge naakí páge épa-pe* 'A man and also a boy came'. In this case two *S_{ACT}* tagmemes occur on the clause-level and are conjoined by *páge* 'also', rather than two Heads on the phrase-level. The form *páge* is also used for conjoining Object-of-Location, if *-para* would be ambiguous.

4.12 Object Tagmemes

Object tagmemes function semantically as Goal, Recipient, Action, Location, Beneficiary or Direction. An example of each is:

- O_{GOL}*: *áá-mé [mená] tá-a* (*man-AGN*, [*pig*], *hit-he did* = 'The man hit the pig')
- O_{REC}*: *né-mé [áá] kála-wa* (*I-AGN*, [*man*], *gave him-I did* = 'I gave it to the man')
- O_{ATN}*: *né-mé [ná-pe] kála-wa* (*I-AGN*, [*eat-for*], *gave him-I did* = 'I gave him something for eating')
- O_{LOC}*: [*ada-para*] *pá-lua* ([*house-LOC*], *go-I will* = 'I will go home')
- O_{BEN}*: [*ní-ná méáá-ria*] (*[I-POSS]*, *get-he did (alo)* = 'He got it for me')
- O_{DIR}*: [*go-nane*] *pá-lua* ([*this-DIR*], *go-I will* = 'I will go this way').

By specifying Objects in this manner there is no need to postulate a separate Indirect Object tagmeme. Its equivalent is specified by *O_{REC}* or *O_{BEN}* which are governed by the exponent of the Predicate. These will be dealt with in §4.3 on transitive clauses.

Some examples of conjoined Heads within an Object tagmeme are:

- (10) *né-mé sápi-para mená láápo kála-lo* (*I-AGN*, *sweet potato-AND*, *pig*, *two*, *give* (3rd person)-*I am* = 'I am giving sweet potato and pig (to someone)')
- (11) *né-mé sápi áá-para mená láápo kála-lo* (*I-AGN*, *sweet potato*, *man-AND*, *pig*, *two*, *give-I am* = 'I am giving sweet potato to the man and pig')
- (12) *né-mé áá-para naakí-para mená-para lá-lo* (*I-AGN*, *man-and*, *boy-and*, *pig-REC*, *talk-I am* = 'I am talking to the man, boy and pig')

- (13) né-mé maapú-para móni kála-lo (*I-AGN, garden-LOC, money, give-I am = 'I am giving (him) money in the garden'*)
- (13a) né-mé maapú-para ada-para láápo móni kála-wa (*I-AGN, garden-LOC, house-LOC, two, money, give (him)-I did = 'I gave him money in the garden and in the house'*)

The functions to be identified are:

- S_{AGN}: né-mé '*I-AGN*' (10-13);
- P_{GD}: kála-lo '*I am giving (him)*' (10, 11, 13);
- O_{GOL}: sápi-para mena láápo '*sweet potato and pig*' (10);
- O_{REC}: áá-para naakí-para mená-para '*to the man, boy and pig*' (12);
- O_{GOL}: sápi '*sweet potato*' (11); móni '*money*' (13);
- O_{REC}: áá-para mená láápo '*to the man and pig*' (11);
- O_{LOC}: maapú-para '*in the garden*' (13).
- : maapú-para ada-para láápo '*in the garden and house*' (13a).

The general pattern for coordinated Heads within the Object is again the same as within the Subject, except that Objects never co-function as Actor, Agent or Instrument. The clitic *-para* also occurs optionally as a simple marker of O_{LOC}, as well as specifying conjoining, or it may function as both (13a). If the functions O_{BEN} are indicated, the benefactive set of terminal suffixes is used:

- (13b) né-mé maapú-para móni kálaa-to '*I am giving (him) money for the garden*',

where *maapú-para* is now O_{BEN} rather than O_{LOC}. This is further confirmed by the following paired questions:

- (14) aa-para móni kála-e (*ques-LOC, money, give (him)-you did (alo) = 'Where did you give (him) money?'*)
- (14') maapú-para '*in the garden*'
- (15) ake-para móni kálaa-ri (*what-BEN, money, give (him)-you did (alo) = 'What did you give (him) money for?'*)
- (15') maapú or maapú-ná '*garden*' or (*garden-POSS = 'for the garden'*)

The form *aa-para* is the category word specifying O_{LOC}, while *ake-para* specifies O_{BEN}.

4.13 Complement Tagmemes

Complement tagmemes function semantically as Instrument, Location, Quality, Size, Colour, and Negative.

The Complement is in a close relationship with the Predicate and the exponents of the P are verbs which can be sub-categorised as verbs-of-existence, i.e. giving some expression of a verb 'to be'. The function of the P is therefore one which expresses a state, e.g. it is not primarily directed toward a goal or oriented toward a location.

Some examples of Complements are:

- C_{IN} : ní [paalá-mé] ómá-lo (*I*, [fright-AGN], *die-I am* = 'I am afraid')
- C_{LOC} : ada [ípa-para] aa-eya (*house*, [water-LOC], *stand-it does* = 'The house is in the water')
- C_{QAL} : ní [épe] pí (*I*, [good], *sit-I* = 'I am good')
- C_{SZ} : naakí [adaa] ta (*boy*, [big], *say-he does* = 'The boy is big')
- C_{COL} : nipú-ná tó [abu] pía (*he-POS*, *body*, [yellow], *sit-it does* = 'His body is yellow' [= he has hepatitis])
- C_{NEG} : sápi [dia] ta (*sweet potato*, [no], *say-it is* = 'There isn't any sweet potato')

Conjoined Heads in the Complement tagmeme follow earlier patterns specified. Notice the function C_{AGN} :

- (16) ní yaina-para óró-para-mé ómá-lo (*I*, *sick-AND*, *cough-AND-AGN*, *die-I am* = 'I am both sick and have a cold')

$cl_{cmp} \rightarrow S_{ACT} + C_{AGN} + P_{STA}$, where $C_{AGN} = np$

with the functional pattern of [H -para + H -para]-mé. The C is not considered a Subject-as-Instrument tagmeme because ní 'I' cannot become the Agent, i.e. it belongs to a different clause type. The difference between transitive and complementive clauses is outlined in §4.2.

To indicate that one's sickness is a cold, yaina 'sick' must become the Topic:

- (17) ní-ná yaina-re óró-mé ómá-lo (*I-POS*, *sick-TOP*, *cough-AGN*, *die-I am* = 'My sickness is due to a cold')

In other instances the functions of C_{QAL} are repeated in the conjoined Heads:

- (18) ní paalá-para yaina-para ómá-lo (*I, fright-AND, sick-AND, die-I am = 'I am both afraid and sick'*)

Because of the close relationship between Complement and Predicate, the effect of conjoining Complements can also be accomplished by conjoining clauses. Notice the following sentence where the Predicate exponent represented by ómá 'to die' is repeated twice in two separate clauses. Predicate conjoining is considered a feature of clause-level exponents and is dealt with in detail in Chapter 6. The following example is for comparison with (16):

- (19) ní paalá ómó-a yaina ómá-lo (*I, fright, die-AND, sick, die-I am = 'I am afraid and I am sick'*)

4.14 Predicate Tagmemes

As indicated earlier (§1.5) the semantic co-functions of a Predicate are in part supplied if other tagmemes are also present in a clause. For example, if a tagmeme O_{LOC} occurs the P is most often a P_{MOT} :

- (20) ní maapú-para púa-wa (*I, garden-LOC, go-I did = 'I went to the garden'*), where the functional pattern is:

$S_{ACT} + O_{LOC} + P_{MOT}$

However, in other instances there seems to be a rank in the functions of P. This is apparent if a Complement occurs as well as O_{LOC} . In such cases the P is then a P_{STA} rather than a P_{MOT} :

- (21) ní maapú-para yaina ómá-wa (*I, garden-LOC, sick, die-I did = 'I was sick in the garden'*)

$S_{GOL} + O_{LOC} + C_{QAL} + P_{STA}$

Although Predicate tagmemes can be shown to function semantically as: Motion, Goal-Direction, State, Benefaction, these functions are determined from other tagmemes which occur optionally in a clause. An example of just the P for each is:

- P_{MOT} : ní [píra-wa] (*I, [sit-I did] = 'I sat down'*)
 P_{GD} : ní [kála-wa] (*I, [give them-I did] = 'I gave it to (them)'*)
 P_{STA} : ní go [pí] (*I, here, [sit-I am] = 'I am here'*)
 P_{BEN} : ní [kálaa-ru] (*give them-I did (alo) = 'I gave it to (them) on someone's behalf'*)

Because the exponents of any P are obligatory in a clause and are in fact the diagnostic criteria for establishing a clause, it follows that conjoining exponents of any P also conjoin clauses and is a sentence-level operation. When the exponents of any two or more Predicates are conjoined, regardless of whether or not other tagmemes occur, such conjoining is described at the sentence-level. The particular affixal exponents which occur with the verbs most often mark the kind of clause coordination which takes place.

4.15 Adjunct Tagmemes

Adjunct tagmemes function semantically as **Time, Manner, Degree, Irrealis**:

- A_{TM}**: [ékéráá] ní pálua ([tomorrow], I, go-I will = 'Tomorrow I will go')
- A_{MAN}**: [pawá] pá-lua ([slow], go-I will = 'I will go slowly')
- A_{DEG}**: [ora] pá-lua ([really], go-I will = 'I will really go')
- A_{IRE}**: nipú-mí [pa] tea (he-AGN, [just], talk-he will = 'He will just talk')

One characteristic of an Adjunct tagmeme is its free permutation in the clause and the fact that any **A_{MAN}** may be marked by the clitic *-rupa*. For example, sentences such as the following, where a *nt* expounds an **A_{MAN}**, are common: *ába-rupa pá-lua* (*before-MAN, go-I will = 'I will go like I did before'*) (Cf. also §3.14. on its use to derive adverbials)

The exponents *ora* 'truly' and *waru* 'really' occur frequently⁸ and often, it appears, interchangeably with the function of Adjunct. They may also be conjoined:

- (22) *nipú ora waru tá-a* (he, truly, really, hit-he did = 'He REALLY did hit it')

However, only *ora* is used as a tag question:

- (23) *ogé naakí ráá-para pá-tea ora* (little, boy, bush-LOC, sleep-he does, true = 'The little boy sleeps in the bush, doesn't he?')

4.2 CLAUSE SYNTAGMEMES

The only obligatory tagmeme in a clause is the Predicate. The exponents of the Predicate alone are therefore often diagnostic of a clause type. For example, *píra* 'to sit' as an intransitive verb expounds a P_{MOT} in an intransitive clause type. However, in other instances such verbs may become derived transitives, especially when used in a benefactive sense where an O_{BEN} is implied or stated. Basic clause types are therefore described first and derived transitives are based upon them. In a complementive clause such as *ní épé pí* 'I am good', the verb *pí* which expounds the P_{STA} is also apparently based on *píra* 'to sit' as a form of the verb 'to be'. So it can be seen that at least one verb expounding the P_{STA} in a complementive clause can also be considered as basically an intransitive verb. Categories such as intransitive verbs, and verbs of existence are considered semantic sub-categories of the grammatical category 'verb'.

4.21 Intransitive Clauses

Intransitive clauses are characterised by:

- (1) the obligatory occurrence of a Predicate-as-Motion function expounded by verbs sub-categorised as intransitive;
- (2) the obligatory absence of an Object-as-Goal tagmeme which corresponds to the optional presence of an Object-as-Location tagmeme marked (optionally) by the clitic *-para*;
- (3) the obligatory absence of the clitic *-mé* with the Subject tagmeme.

Some examples of intransitive clauses are:

- (24) *píra-wa* (*sit-I did* = 'I sat down')
 $cl_{int} \rightarrow P_{MOT}$, where $P_{MOT} : v_{int}$
- (25) *ní píra-wa* (*I, sit-I did* = 'I sat down')
 $cl_{int} \rightarrow S_{ACT} + P_{MOT}$, where $S_{ACT} : pro_{pers}$
- (26) *ní ada píra-wa* (*I, house, sit-I did* = 'I sat in the house')
 $cl_{int} \rightarrow S_{ACT} + O_{LOC} + P_{MOT}$, where $O_{LOC} : ng.$

The O_{LOC} may also be marked with *-para*:

- (26a) *ní ada-para píra-wa* 'I sat in the house'

The exponent of S_{ACT} always occurs in cross-reference to the suffix

of the verb, i.e. *ní* 'I' and *-wa* '(1 sg Pa)' both include the categories of 1st person singular. Cross-reference is a general feature of the exponents of any S_{ACT} and P.

4.22 Transitive Clauses

Clauses which are transitive are distinguished by:

(1) the obligatory occurrence of a Predicate-as-Goal Directed function manifested by verbs sub-categorised as transitive;

(2) the optional presence of a Subject-as-Agent tagmeme marked obligatorily by the clitic *-mé*.

(3) the optional presence of an Object-as-Goal tagmeme. These distinguishing characteristics may be noted in the following examples:

(27) *tá-wa* (*hit-I did = 'I hit it'*)

$cl_{tr} \rightarrow P_{GD}$, where $P_{GD} : v_{tr}$

(27a) *né-mé tá-wa* (*I-AGN, hit-I did = 'I hit it'*)

$cl_{tr} \rightarrow S_{AGN} + P_{GD}$, where $S_{AGN} : pro_{pers} + -mé$

(28) *né-mé irikai tá-wa* (*I-AGN, dog, hit-I did = 'I hit the dog'*)

$cl_{tr} \rightarrow S_{AGN} + O_{GOL} + P_{GD}$, where $O_{GOL} : ng$ which is unmarked.

(28a) *irikai tá-wa* 'I hit the dog'

Following standard tagmemic heuristic procedures it would be necessary to distinguish a further clause type called ditransitive in Kewa. The contrastive features between it and the transitive are: (1) different verb exponents; (2) ditransitives have (optionally) an Object-as-Recipient tagmeme, which may be marked (also optionally) by *-para*. In other respects the two clause types are alike; (3) both have the Subject-as-Agent marked by *-mé*; (4) both include an optional Object-as-Goal tagmeme. However, because only the verb exponents of the Predicate tagmeme are obligatory, i.e. the only obligatory difference is one involving a sub-categorisation of verbs, and because the functions of the Predicate in both cases are Goal Directed, ditransitives are considered simply as a further degree or expansion of basic transitive clauses. Examples are:

(29) *kála-wa* (*give to him-I did = 'I gave it (to him)'*)

(29a) *né-mé kála-wa* 'I gave it (to him)'

(30) *né-mé sápi kála-wa* 'I gave the sweet potato (to him)'

(31) *né-mé mená sápi kála-wa* 'I gave the sweet potato to the pig'

marked by *-mé* and the selection of Set II altrocentric suffixes (Cf. §3.22.1)⁹:

- (35) *né-mé áá ma-épaá-ru* (*I-AGN, man, cas-come-I did (alo) = 'I made the man come'*)
- (36) *nipú-mí onáá ma-píraa-ria* (*he-AGN, people, cas-sit-he did (alo) = 'He made the people sit down'*)

Transitives which are derived from complementive clauses (§4.3) also are formed with the causative clitic *ma-* and accompanying suffixes of Set II. However, in such cases *ma-* may precede the exponent of the Complement tagmeme:

- (37) *né-mé me-yaina sáá-to* (*I-ACT, cas-sick, put-I am (alo) = 'I am causing the sickness, i.e. spreading a disease'*)
- (38) *né-mé ma-épe yaa-to* (*I-ACT, cas-good, affirm-I am (alo) = 'I am causing the goodness'*)
- (39) *né-mé ma-keda paa-to* (*I-ACT, cas-heavy, make-I am (alo) = 'I am causing the heaviness'*)

The formula for a derived transitive is:

$cl_{d-tr} \rightarrow S_{ACT} -mé + O_{GOL} + P$, where the semantic function of *P* is determined by the verb exponents such that:

$$P \rightarrow \begin{cases} P_{MOT} / _ : v_{int} \\ P_{STA} / _ : v_{exis} \end{cases}, \text{ and the clitic } ma- \text{ precedes the}$$

verb if the function of *P* is *MOT*, but may precede the exponent of the Complement if the function of *P* is *STA*. This must be represented by an optional transformation rule:

$C + ma- + P_{STA} \rightarrow ma- + C + P_{STA}$, where the exponents of *C* and *P_{STA}* co-occur in particular sets as outlined later.

4.24 Complementive Clauses

Clauses which are complementive are determined by: (1) the obligatory presence of a Complement tagmeme; (2) the optional presence of a Subject-as-Topic tagmeme; (3) the obligatory occurrence of a Predicate-as-State tagmeme. These distinguishing characteristics are illustrated in the following clauses:

- (40) *sápi o ta* (*sweet potato, bad, affirm-it is = 'The sweet potato is bad'*)
- $cl_{cmp} \rightarrow S_{TOP} + C_{QAL} + P_{STA}$

- (41) go oyaé keda pía (*this, something, heavy, sit-it has = 'This thing is heavy'*)
 cl_{cmp} + S_{TOP} + C_{QAL} + P_{STA}
- (42) naakí adaa ya-a (*boy, big, affirm-he was = 'The boy grew large'*)
 cl_{cmp} + S_{TOP} + C_{SZ} + P_{STA}
- (43) ní kóne sá-lo (*I, behaviour, put-I am = 'I am thinking'*)
 cl_{cmp} + S_{TOP} + C_{IN} + P_{STA}

In each case the S_{TOP} may be marked by the clitic *-re*. The verb expounding the Predicate tagmeme in complementive clauses can often be recognised as a form of the verb 'to be' which is based, e.g. upon such verbs as: *píra* 'to sit', *sá* 'to put', *aa* 'to stand' and *ya* 'to affirm'. When these verbs expound the P_{STA} they most often occur in some form of the Perfect tense. Previous examples in this section are based upon some of these verbs.

In other cases, the verb expounding the Predicate in a complement clause co-occurs according to the exponent of the Complement tagmeme. The following give an indication of the range of such paired exponents:

- (1) *lá* 'to speak': *kunaná lá* 'to court'; *ápe lá* 'to argue';
kíri lá 'to laugh'; *rídu lá* 'to stretch'.
- (2) *méá* 'to bring': *káá méá* 'to smell'; *ágaa méá* 'to ask'.
- (3) *ná* 'to eat': *ádu ná* 'to suckle'; *ópé ná* 'to commit suicide';
páge ná 'to steal'.
- (4) *ra* 'to emit': *i ra* 'to defecate'; *sópe ra* 'to spit';
nááre ra 'to wilt'; *ípa ra* 'to flood'.
- (5) *tá* 'to hit': *girá tá* 'to sneeze'; *mátaa tá* 'to dance';
áári tá 'to thunder'.
- (6) *pa* 'to make': *nága pa* 'to file'; *kiru pa* 'to itch';
pépéna pa 'to decorate'; *puri pa* 'to be strong'.

The verb *ómá* 'to die' is used to expound the P_{STA} if the C is intensified, or marked as Instrument.

The functional pattern of C + P often comprises an idiom. Notice, for example, the following two clauses, the first a simple transitive, the second a complementive:

- (44) *nipú-mí róbáá ná-la* (*he-AGN, stomach, eat-he is = 'He is eating stomach' (as of a pig)*)

(45) nipú róbáá ná-la 'He has a stomachache'

In (44) róbáá 'stomach' is the exponent of an O_{GOL} and ná 'to eat' expounds a P_{GD} . In (45) róbáá expounds a C_{IN} and ná expounds a P_{STA} . Thus neither of the following interpretations occurs:

(*44a) nipú róbáá-mé ná-la 'He is eating with his stomach'

(44') nipú-mí róbáá ná-la '*He is aching his stomach', i.e. the meaning must be the same as in (44). However, such clauses as the following may occur:

(46) nipú-mí ágaa-mé ná-la 'He is eating with his teeth'

(47) ní róbáá ná-la 'I have a stomachache'

(48) ní róbáá-mé ómá-la (ómá-la = die-it is) 'I have an intense stomachache'

In other words, although both a S_{AGN} and S_{IN} may occur in a transitive clause, only the latter may occur in a complementive clause.

4.3 SO-CALLED EQUATIONAL CLAUSES

It is convenient to postulate equational clauses for at least two reasons. First of all, tagmemic studies frequently set-up Predicate tagmemes which have exponents that are not verbs. In such cases it is not difficult to find at least two structural differences which would separate equational clauses from other clauses.¹⁰ Secondly, in tagmemics the function of Predicate is obligatory to the definition of a clause. In Kewa, however, so-called equational clauses are simply based upon underlying Complementive clauses, or are not clauses at all. Rather, their equivalents are sentences, in which case the function of Predicate is not relevant. In other words, there is no reason why sentence-level tagmemes have to be expounded by a lower-level syntagmeme which must include a Predicate. Note the following sentences, which are called thematic:

(49) waé kóne-re báli-ná kóne (bad, behaviour-TOP, red man-POS, behaviour = 'The bad behaviour is the European's')

(50) go áá-re irilai-rupa (that man-TOP, dog-MAN = 'That man acts like a dog')

(51) ní áá (I, man = 'I am a man')

The final S_{TOP} ní could also be ní-ri (I-TOP), and in each example the Topic can be permuted:

- (49') báli-ná kóne-re waé kóne 'The European's behaviour is bad'
- (50') irikai-rupa-re go áá 'The one like a dog is that man'
- (51') áá-re ní 'Concerning men, I am one'

In each example the structure is considered:

$$s_{them} \rightarrow TOP + COM$$

Such grammatical functions as Topic and Comment are most relevant on the sentence-level. It may, however, be necessary later to specify semantic co-functions of T and C, in the same manner as such co-functions have been specified on the clause-level.

In other instances, however, so-called equational clauses are clearly a reduction of either complementive clauses where the Predicate is not expounded, or are similar to embedded clauses. Notice, for example, the following:

- (52) adaalu oná (tall, woman = 'The woman is tall' or 'It is a tall woman')
- (53) áá rúdu (man, short = 'It is a short man' or 'He is a man who is short')
- (54) mená (pig = 'It is a pig')

Rather than postulate a structure:

$$cl_{eq} \rightarrow (S) + P, \text{ where } P : n, aj, \text{ or even:}$$

$$s_{them} \rightarrow (T) + C, \text{ the examples can be considered:}$$

$$cl_{cmp} \rightarrow S + (P), \text{ where } P \text{ is a } P_{STA} \text{ such as } pfa \text{ 'to be'}$$

which is in these instances deleted. The structure of the S_{TOP} is then expounded by either an np or an n. The permutation of the exponents $n + aj$ rather than the expected $aj + n$ also suggests that (53) is based on an embedded cl_{cmp} such as:

- (53') áá rúdu pí áá púa-a (man, short, sit-ADJZ, man, go-he did = 'The man who is short went')

This leads to the structure of embedded clauses.

4.4 EMBEDDED CLAUSES

Embedded clauses are exponents which function as Modifiers on the phrase-level, i.e. they are in an attributive grammatical relationship to either a Head tagmeme or an Axis tagmeme.

4.41 Clauses Embedded in Subject Position

Clauses which are embedded in the Subject have a shared noun with the noun expounding the Head. In most instances either one or the other of the shared nouns may optionally be deleted.

- (55) [áá-mé mená ká-ne] áá pú-a ([man-AGN, pig, give (him)-ADJZ], man, go-he did = 'The man who gives him pig, went')

$cl_{int} \rightarrow S_{ACT} + P_{MOT}$, where $S_{ACT} : np_{des}$, and
 $np_{des} \rightarrow M_{ATN} + H_{ACT}$. The $M_{ATN} : e^{cl}_{tr}$, i.e. an embedded transitive clause. The ng expounding the H_{ACT} is the shared noun with the noun expounding the S_{AGN} of the embedded clause, but only the noun of the embedded S_{AGN} can be marked with -mé (AGN). The Adjectiviser -ne is optional: any permitted morphological structure may be represented in this position, e.g.:

- (55a) [áá-mé mená kála-a] áá 'The man who gave the pig'

- (55b) [áá-mé mená kálaa-e] áá 'The man who gave the pig on (his) behalf'

- (55c) [áá-mé mená ká-tea] áá 'The man who will give the pig'

However, if the adjectivised form is used the shared noun expounding the Head is most often deleted:

- (55') [áá-mé mená ká-ne] púa-a 'The man who gives pig went'

Some examples of other clause types embedded in the S of an intransitive clause are:

- (56) [aa ada pir-i] aa pu-a ([man, house, sit-ADJZ], man, go-he did = 'The man who sits at home went')

$cl_{int} \rightarrow S_{ACT} + P_{MOT}$, where $S_{ACT} : np_{des}$, and
 $np_{des} \rightarrow M_{STA} + H_{ACT}$ and $M : e^{cl}_{int}$

- (57) [áá áálú-írí yááko pí] áá pú-a ([man, hair, white, to be-ADJZ], man, go-he did = 'The man who is elderly went')

$cl_{int} \rightarrow S_{ACT} + P_{MOT}$, where $S_{ACT} : np_{des}$ and
 $np_{des} \rightarrow M_{STA} + H_{ACT}$ and $M_{STA} : e^{cl}_{cmp}$.

In examples (56-57) either shared noun may be deleted. The structure of the embedded complement clause is:

$$\text{cl}_{\text{cmp}} \rightarrow \text{S}_{\text{TOP}} : \text{áálú-írí} + \text{C}_{\text{COL}} : \text{yááko} + \text{P}_{\text{STA}} : \\ \text{pía, where pía} \rightarrow \text{pí / M} : \text{---} + (\text{H}).$$

If the main clause is transitive the S may be marked by -mé to co-function as agent:

(58) [áá-mé mená ká-ne] áá-mé ní gí-a 'The man who gives (him) pig gave it to me'

$$\text{cl}_{\text{tr}} \rightarrow \text{S}_{\text{AGN}} + \text{P}_{\text{REC}} + \text{P}_{\text{GD}}, \text{ where} \\ \text{S}_{\text{AGN}} : \text{np}_{\text{des}}, \text{ and} \\ \text{np}_{\text{des}} \rightarrow \text{M}_{\text{ATN}} + \text{H}_{\text{AGN}}.$$

Again, either of the shared nouns may be deleted with no change in the meaning:

(58a) áá-mé mená ká-ne ní gí-a } 'The man who gives him pig
(58b) mená ká-ne áá-mé ní gí-a } gave it to me'

Some further examples of clauses embedded in the Subject tagmeme are:

(59) [mátaa épé-rupa tí] áá púa-a ([dance, good-manner, hit-ADJZ], man, go-he did = 'The man who dances well went')

$$\text{cl}_{\text{intr}} \rightarrow \text{S}_{\text{ACT}} + \text{P}_{\text{MOT}} ; \\ \text{e}_{\text{cl}_{\text{tr}}} \rightarrow \text{O}_{\text{GOL}} + \text{A}_{\text{MAN}} + \text{P}_{\text{GD}}$$

(60) [ní súkulu maláá-e] áá ípu-la ([I, school, teach-ADJZ (alo)] man, come-he is = 'The man who teaches me school is coming')

$$\text{cl}_{\text{intr}} \rightarrow \text{S}_{\text{ACT}} + \text{P}_{\text{MOT}} ; \\ \text{e}_{\text{cl}_{\text{tr}}} \rightarrow \text{O}_{\text{BEN}} + \text{O}_{\text{GOL}} + \text{P}_{\text{GD}}$$

(61) [mená adaapu púní] áá ómá-a ([pig, many, shepherd-ADJZ], man, die-he did = 'The man who shepherds many pigs died')

$$\text{cl}_{\text{intr}} \rightarrow \text{S}_{\text{ACT}} + \text{P}_{\text{MOT}} ; \\ \text{e}_{\text{cl}_{\text{tr}}} \rightarrow \text{O}_{\text{GOL}} + \text{P}_{\text{GD}}, \text{ where} \\ \text{O}_{\text{GOL}} : \text{np}_{\text{num}}$$

- (62) [épé kóne í] áá-mé ni tá-a ([good, behaviour, put-ADJZ], man-AGN, me, hit-he did = 'The man with the good thoughts hit me')
- $cl_{tr} \rightarrow S_{AGN} + O_{GOL} + P_{GD}$;
 $e^{cl}_{cmp} \rightarrow C_{ABS} + P_{STA}$, where $C_{QAL} : np_{des}$
- (63) pé pádáne [rubí-ní] kála-wa (container, one, [overflow-ADJZ], give him-I did = 'I gave him a container which was overflowing')
- $cl_{tr} \rightarrow O_{GOL} + P_{GD}$;
 $e^{cl}_{int} \rightarrow P_{MOT}$, and pé pádáne 'one container' is the exponent of the O_{GOL} of the main clause.
- (64) [sápí ná-be] mená ná-lo ([sweet potato, eat-continue ADJZ], pig, eat-I am = 'I am eating the pig which continuously ate sweet potato')
- $cl_{tr} \rightarrow O_{GOL} + P_{GD}$;
 $e^{cl}_{tr} \rightarrow O_{GOL} + P_{GD}$, where $P_{GD} : vst + asp_{cont}$
- (65) [áá ada píra-a-de] áá-mé ká-tea ([man, house, sit-he did-pun], man-AGN, give him-he will = 'The man who was in the house will give it to him')
- $cl_{tr} \rightarrow S_{AGN} + P_{GD}$;
 $e^{cl}_{int} \rightarrow S_{ATR} + O_{LOC} + P_{STA}$, where
 $P_{STA} : vs + tense_{pa} + asp_{cont}$
- (66) [aaná keda pí] lópa-a ([stone, heavy sit-ADJZ], fall-it did = 'The stone which is heavy fell down')
- $cl_{intr} \rightarrow S_{TOP} + F_{ATN}$;
 $e^{cl}_{cmp} \rightarrow S_{TOP} + C_{QAL} + P_{STA}$

4.42 Clauses Embedded in Object Position

If the Object is specified as an O_{LOC} the clitic *-para* marks the embedded clause:

- (67) nípú [nimú-mí maapú sá-me]-para pú-a (*he, [they-AGN, garden, put-they did]-LOC, go-he did = 'He went to the place where they planted the garden'*)

$cl_{int} \rightarrow S_{ACT} + O_{LOC} + P_{MOT}$, where
 O_{LOC} : AR (Axis Relator phrase) in which
 the A: $e_{cl_{tr}} + R$: -para

- (68) né-mé [sáá gúpá lá-pa]-para áá kála-wa (*I-AGN, [we two, likewise, say-we did]-LOC, man, give him-I did = 'I gave (it) to the man at the specified place'*)

$cl_{tr} \rightarrow S_{AGN} + O_{LOC} + P_{REC} + P_{GD}$, where

$AR_{LOC} \rightarrow A : e_{cl_{tr}} + R$: -para. The AR_{LOC} is layered within the Modification tagmeme which is in turn in an attributive relationship with the Head tagmeme, expounded by áá 'man'. Layering in phrases will be described in Chapter 5.

- (69) ní [maapú mógo áá pfa]-pare pú-lu (*I, [garden, that, man, sits]-LOC, go-I am = 'I am going to the garden where the man is'*)

$cl_{int} \rightarrow S_{ACT} + P_{LOC} + P_{MOT}$, where O : AR_{LOC} and
 $AR_{LOC} \rightarrow A : e_{cl_{int}} + R$: -para.¹¹

If the Object is an O_{GOL} the clitic -daa marks the embedded clause:

- (70) [mená-mé náá maapú maráá-ria]-daa mená méá-wa (*[pig-AGN, my garden, destroy-it did]-GOL, pig, get-I did = 'I got the pig which destroyed my garden'*)

$cl_{tr} \rightarrow O_{GOL} + P_{GD}$, where the AR phrase is again, as in (61), attributive to the Head, expounded by mená 'pig'. The structure of the AR is:

$AR_{GOL} \rightarrow A : e_{cl_{tr}} + R$: -daa

- (71) ní [oná mená púnf-ta]-daa pédó pí (*I, [woman, pig, cares for-she does]-GOL, happy, I am = 'I am happy about the woman who cares for the pigs'*)

$cl_{cmp} \rightarrow S_{ACT} + O_{REC} + C_{QAL} + P_{STA}$, where
 O_{REC} : AR_{REC} and

$AR_{REC} \rightarrow A : e_{cl_{tr}} + R$: -daa

The clitic *-daa* marks the O_{REC} as well as the O_{GOL} of an embedded clause, as seen in the above examples, as well as the following:

- (72) né-mé [áá-nu-mí ní raba mí-simi]-daa mená kála-wa
 (I-AGN, [man-coll-AGN, I help, get-they did]-REC
 pig, give them-I did = 'I gave pig to the men who
 helped me')
- (73) né-mé [mená-mé maapú maráá-ria]-daa áá-nu kála-wa
 (I-AGN, [pig-AGN, garden, destroy-it did]-GOL,
 man-coll, give them-I did = 'I gave the pig which
 destroyed the garden to the men')

In both cases the structure of the main clause is:

$$S_{AGN} + O_{GOL} + O_{REC} + P_{GD}, \text{ where}$$

$$\left. \begin{array}{l} O_{GOL} \\ O_{REC} \end{array} \right\} : e^{dl}_{tr} -daa, \text{ i.e. an embedded transitive}$$

clause marked as Object of the main clause by the clitic *-daa*.

4.43 Clauses Embedded in Complement Position

Because the Complement must co-occur with a particular Predicate exponent, it is not possible for embedding to take place within the Complement. However, given two complementive clauses such as:

- (74) go áá adaa ta (that, man, big, he is = 'That is a
 big man')
- (75) go áá épé pía (that, man, good, sits-he is = 'That
 man is good')

it is possible to derive such clauses as the following:

- (76) go épé pía [áá adaa ta] 'That man who is good is big'
- (76a) go adaa ne [áá épé pía] 'That man who is big is good'

However, in both (76) and (76a) one of the complementive clauses is embedded in the Subject position (indicated by square brackets).

4.44 Clauses Embedded in Adjunct Position

The most frequent embedded clause in Adjunct position functions as time clause or manner clause. Some examples of each are:

- (77) [nipú-ná irikai ní ná-a] rábú ní ré sú-de ([he-pos, dog, me, eat-he did], TIME, I tears, say-I did-once = 'When his dog bit me, I cried')
- (78) [nimú nogó-naakí] rábú báli-nu ípi-simi ([they, girl-boy], TIME, red man-coll, come-they did = 'When they were children, the Europeans came')
- (79) [ne épé pí] rábú oyaé gía-lia ([you, good, sit-you have], TIME, something, give-he will = 'When you are good, he will give you something')
- (80) [ní púa-wa] rábú áápi-mí ne ádi-sa ([I, go-I did], TIME, who-AGN, you, saw-he did = 'When I went, who saw you?')

In each case $A_{TM} : e_{cl}$ rabu 'when'. The embedded structures are a transitive clause (77), a complementive clause (79), a thematic sentence (78), and an intransitive clause (80).

Examples of clauses embedded in an A_{MAN} are:

- (81) oná nipú kírí [áá-mé ta-me-de]-rupa ta (woman, she, laugh [man-AGN, says-they have-pun]-MAN, say-she does = 'That woman laughs like a man')

$cl_{cmp} \rightarrow S_{ACT} + C_{QAL} + A_{MAN} + P_{STA}$, where
 $A_{MAN} : e_{cl_{tr}} + -rupa$

- (82) [amá lá-wa]-rupa toa ([mother, say-I did]-MAN, say-I will = 'I will tell it like I told mother')

$cl_{tr} \rightarrow A_{MAN} + P_{GD}$, where
 $A_{MAN} : e_{cl_{tr}} + -rupa$

4.5 CLAUSE PERMUTATIONS

Regardless of the particular clause type being expounded, there is a preferred order in the arrangement of functional points. Usually they are:

$cl_{int} \rightarrow S_{ACT} + O_{LOC} + P_{MOT}$
 $cl_{tr} \rightarrow S_{AGN} + (O_{REC}) + O_{GOL} + P_{GD}$
 $cl_{cmp} \rightarrow S_{TOP} + C_{QAL} + P_{STA}$

Other rules for functional points are:

- (1) For any A_{TM} , the preferred order is pre-S; for any A_{MAN} , pre-P.

(2) If any S_{IN} occurs, it always occurs pre-P unless an A_{MAN} intervenes.

(3) In any clause the O_{LOC} follows the S, if an S occurs.

(4) Any tagmeme can be brought into focus or emphasis by its permutation to the first position of a clause, even the predicate:

(83) *pálua ní (go I will, I = 'I will GO')*

In such cases there is a marked intonational juncture following the P exponent.

(5) A passive semantic interpretation can be rendered by permuting the S_{ACT} or S_{AGN} to pre-P position; or if a S_{IN} co-occurs, preceding it:

(84) *né-mé naakí táwade (I-AGN, boy, I hit = 'I hit the boy')*

$cl_{tr} \rightarrow S_{AGN} + O_{GOL} + P_{GD} \rightarrow$

$O_{GOL} + S_{AGN} + P_{GD}$ 'The boy was hit by me'

$cl_{tr} \rightarrow S_{AGN} + O_{GOL} + S_{IN} + P_{GD}$ (where $S_{IN} : raímí$
'with an axe')

$\rightarrow O_{GOL} + S_{AGN} + S_{IN} + P_{GD}$ 'The boy was hit by me
with an axe')

Such permutations may also simply demonstrate how the item in clause initial position receives emphasis.

(6) If the S_{AGN} is emphasised as also being the S_{ACT} or the initiator of the action the S_{AGN} is not repeated twice, each time marked by -mé. Instead the pre-P Subject is marked by -ná, the possessive clitic. This will be described in Chapter 5 of Possessive Phrases. An example is:

(85) *áámé oná nipú-ná tália (man-AGN, woman, he-POS, he
will hit = 'The man himself will hit the woman' or
'The man will hit the woman himself')*

The phrase *nipú-ná tália* represents a vp_{pos} , which allows a verb exponent as the Head, rather than the more normal noun Head.

(7) Permutations and deletions within an embedded clause have already been noted.

N O T E S

1. Case grammars and the possible conversion of their diagrams to tagmemic formulas is mentioned by Fillmore (1968:87-8, quoted in Becker 1967b:160). It is important to note that I describe case markers in Kewa according to their function at various grammatical levels, e.g. what would correspond to the genitive case is described in Chapter 5 on Phrases.

2. In other New Guinea languages the variables, which I list as semantic co-functions of grammatical functions, commonly consist of such tagmemes as location, time, instrument, accompaniment, referent-reason, and topic (for example see Bee 1965:143). P. Healey (1965c:3) describes clause-level units (= tagmemes) which include beneficiary, time, accompaniment, quote, location, and manner, as well as the main tagmemes of subject, object and predicate.

3. My attempt to identify such semantic functions in this grammar has benefitted from Becker's work on English (1967b). He outlines a great many more for English than I do for Kewa and many of his would appear to be universal features.

4. Fillmore (1968:22) makes the same point, but in English Agentive and Instrument Subjects are not conjoinable. Dik (1968:200ff) points out that coordinated constructions occur on any level of the grammatical hierarchy, but that in each case it is the coordination of functions that is specified, not simply the categories. Becker (1967a) calls tagmemes which are conjoinable 'K-equivalent' and introduces K rules for conjoining them (see also §1.3). I have not formally outlined a schema for coordination, but that proposed by Dik would appear to be the most logical to adopt in a tagmemic grammar.

5. Becker (1967b:85-7; 149-51) feels that features of lexical sub-categorisation can be supplied by the functional labels rather than by sub-categorisation according to semantic features, as done, for example, in transformational grammars.

6. Note that the conjoining clitic *-para* is identical in form to the clitic which specifies, for example, Object-as-Location. To say that *'The fire burned two men in the house'* a clause is embedded in the Modification tagmeme of the np which expounds the Subject:

(7') *ada-para píri áá láápo répena-me ra-a* , where the noun phrase *ada-para píri áá láápo* (*house-LOC, sit-ADJZ, man, two = 'two men who were in the house'*) contains a clause embedded in the Modification tagmeme.

Other examples are given later.

7. The clitic *-re* is considered primarily a marker on the sentence-level, so that *Putí* and *Usa* are the TOPIC-as-LOCATION of a simple thematic sentence (§6.25). In other words, the role of Topic, although a sentence-level function (due to reasons discussed later in Chapter 6) often has its functional role carry through to the clause-level.

8. In our E. Kewa text concordance *ora* occurs 171 times, *waru* only 26 times; in W. Kewa *ora* is again much more frequent: 100 vs. 28 times.

9. In Chapter 4 *ma-* was discussed only in relation to its function on the word-level, i.e. how stative stems are derived.

10. See, for example, P. Healey (1965b:20-21) on Telefó. Her Equational clauses have fewer optional units, their exponents are General Noun Phrases, a type of accompaniment Phrase, or negative Phrases. She does, however, state that the Equational is most similar to the Complementary Clause (*ibid*, p. 20). Bee (1965:150) contrasts transitive, intransitive, and equational clauses in Usarufa.

11. *-pare* is an alternant of *-para*. In E. Kewa its equivalent is *-lena*. There is no apparent difference in meaning between the two clitics.

Chapter 5

PHRASES

5.0 INTRODUCTION

Kewa phrases are either centred, i.e. consist of a Head which is in a syntactic and semantic relationship with one or more Modification tagmemes, or they are in an Axis-Relator relationship.¹ Within these two main types there are two main exponential sets: attributive phrases with either a noun or noun phrase expounding the Head are Nominal: those with a verb or verb phrase expounding the Head are Verbal.

5.1 NOUN PHRASES

Noun phrases are of two broad types: Descriptive and Possessive. The former have (typically) adjectives as exponents of the Modification functions² and have (typically) nouns as exponents of the Head. Descriptive noun phrases may also be marked by clitics which specify the functional role of the phrase as a clause-level exponent. Possessive phrases are marked by the clitic -ná occurring in the pre-Head position, i.e. -ná marks the Possessor tagmeme.

5.11 Descriptive Noun Phrases (np_{des})

The generalised formula for a np_{des} consists of the following function points:

$$np_{des} \rightarrow (M_{QAL}) + (M_{SZ}) + (M_{COL}) + H + (M_{QAN}),$$

where typical exponents are:

M_{QAL} : adj (épe 'good', waé 'bad', ...)

M_{SZ} : adj (ogé 'small', adaa 'big', ...)

M_{COL} : adj (kóbere 'dark', abu 'yellow' ...)

M_{QAN} : adj (láápo 'two', meda 'another' ...)

The Head of an np_{des} may be expounded by any general noun (ng), but there are collocational restrictions (not stated here) between the noun and certain adj exponents. Some examples of np_{des} are:

- | | | |
|-----|--------------------------|---------------------------|
| (1) | ogé áá | 'little man' |
| (2) | rúdu áá | 'short man' |
| (3) | kóbere áá | 'dark (= black) man' |
| (4) | áá láápo | 'two men' |
| (5) | ogé kóbere áá láápo | 'two little dark men' |
| (6) | rúdu kóbere áá láápo | 'two short dark men' |
| (7) | épé rúdu kóbere áá láápo | 'two good short dark men' |

In each example the Head is expounded by the noun áá 'man'. The selection of ogé 'small' is frequently accompanied by the clitic -si (diminutive) on the ng exponent:

- | | | |
|------|-----------|------------------|
| (1') | ogé áá-si | 'very small man' |
|------|-----------|------------------|

Permutations of the sequence of pre-Head Modifier tagmemes are permissible. In such cases the first tagmeme receives the emphasis or focus:

- | | | |
|------|--------------------------|-----------------------------|
| (7a) | rúdu ogé kóbere áá láápo | 'two SHORT little dark men' |
| (7b) | kóbere ogé rúdu áá láápo | 'two DARK little short men' |

These examples also illustrate how M tagmemes with the same semantic co-functions may sometimes be conjoined by juxtaposition:

M_{SZ} : ogé 'little' + M_{SZ} : rúdu 'short'.

Adjectives which expound the M of an np_{des} may also expound the C of a cl_{cmp} (Cf. §4.24), so that embedded adjectival clauses such as the following occur:

- | | | |
|-------|---------------|---------------------------|
| (7') | kóbere pí áá | 'a man who is dark' from: |
| (7'') | áá kóbere píá | 'the man is dark', where |

cl_{cmp} + S_{TOP} + C_{COL} + P_{STA} allows

np_{des} + M : $e_{cl_{cmp}}$ + H : n, with deletion of the shared noun áá 'man'.

There are certain characteristics of the M_{QAN} function which suggest that noun phrases containing a M_{QAN} should be treated as a sub-type of the np_{des} . Any np_{num} has two main restrictions: (1) deictics can occur as exponents; (2) names of body parts and certain other forms (when suffixed with -pú; Cf. §3.13; 3.26.1) may expound the M_{QAN} .

When substitutes occur as exponents the following are all acceptable (where the structure is H : dei + M : adj_{num}):

- (8) nipú láápo 'the two of them'
 (9) go láápo 'those two'
 (10) áá pí láápo 'what two?' (literally, 'who two?')

Any of the following are not acceptable (where the proposed structure is M : adj {QAL, SZ, COL} + H : dei):

- (*11) épé nipú 'good he'
 (*12) rúdu nipú 'short he'
 (*13) kóbere go 'dark that'
 (*14) abu áá pí 'yellow who?'

When body parts occur as exponents longer numerals may be complicated and represent other conjoined or embedded phrases:

- (15) áá su-pú (man, thumb-qan = 'five men')³
 (16) áá kí láápo aa láápo pége-pú (man, hand, two, foot,
 two, doubled-qan = 'twenty men')

Examples such as (16) must include a conjoining rule⁴ within the M point of an np_{num} where the exponent of the Head (áá 'man') is modified by the string of forms expounding the M_{QAN} (kí...pége-pú = '20'), which is marked by -pú. The marker -pú is a quantity specifier for any given np:

- (17) onáá ake-pú (people, how-qan = 'How many people?')
 (18) onáá adaa-pú (people, big-qan = 'plenty of people')
 (19) répena kegaa-pú (fire, hot-qan = 'plenty of heat')

An np_{des} may therefore be read specifically as an np_{num} by the following rule:

$$\text{np}_{\text{des}} \rightarrow \text{np}_{\text{num}} / (\text{M}) \dots + \text{H} + \text{M}_{\text{QAN}} (-\text{pú})$$

5.12 Possessive Noun Phrases (np_{pos})

Phrases marked by the clitic -ná signal a grammatical relationship of possession or inclusion between the Head and Modification point marked by the clitic. To provide for the type of linear recursion common to the structure of an np_{pos} it is necessary to insert a 'dummy' tagmeme which simply provides that the function point preceding it may be duplicated any number of times before the H is added. Such a rule does not, of course, do anything more than repeat the marked function point;

exponence rules must provide the forms.⁵ In the case of an np_{pos} the generalised rule will look something like the following:

$$np_{pos} \rightarrow (M) + POSR-ná + (K) + H + (M_{QAN}) ,$$

where M is any pre-Head tagmeme of a np_{des} . Before discussing this further, some examples follow:

- (20) nipú-ná wane (3 sg Pro-POSR, *daughter* = 'his daughter')
- (21) nipú-ná wane-ná aani (3 sg Pro-POSR, *daughter-POSR*, *husband* = 'his daughter's husband' or 'her daughter's husband')
- (22) nipú-ná épé wane-ná aani 'her good daughter's husband'
- (23) nipú-ná wane-ná épé aani 'his daughter's good husband'
- (24) go wane-ná aani láápo 'that daughter's two husbands'
- (25) rúdu kóbere wane-ná aani-ná ági-ná akuá 'the short dark daughter's husband's mother's grandfather'

Example (20) is a simple instance of POSR + H, where the exponents are respectively, a pronoun (which is a sub-class of deictics) marked by -ná and a general noun. In (21) two POSR function points occur. The K 'tagmeme' specifies that the marker -ná may re-occur (in example (25) three times) marking the Possessor tagmeme. A condition is that the exponent of any Potential H cannot be a deictic. Examples (22) and (23) illustrate np_{pos} which also include the characteristic adj exponents of an np_{des} . It is therefore necessary to simply specify that the exponent of any POSR may be an np_{des} . In such cases the np_{pos} is embedded within the Head tagmeme of an np_{des} .

Some of the apparent complexity of embedded np_{pos} is probably due to the fact that deletions of shared noun Heads take place. Such deletions would most easily be accounted for by transformational rules. An example with considerable embedding will illustrate the structures which apparently underlie them:

- (26) go áá-ná áme múpa-ná ada láápo 'the two houses belonging to that man's elder brother'

The main phrase can then be considered to consist of three function points:

$np_{des} \rightarrow M_{DES} + H + M_{QAN}$, where M_{DES} is a cover symbol specifying a function point with an embedded phrase. The $M_{DES} : e^{np_{pos}}$ which also consists of a conjoined np_{pos} , i.e.:

$e^{np_{pos}} \rightarrow POSR-ná + POSR-ná + H.$

However, the exponent of the H of the $e^{np_{pos}}$ is the same as the H of the np_{des} , i.e. *ada* 'house' expounds the H of the $e^{np_{pos}}$...*múpa-ná* *ada* 'elder's house' as well as the H of the np_{des} *ada láápo* 'two houses', so the exponent of one H is deleted. In addition the exponent of one H in the conjoined np_{pos} must also be considered deleted, i.e. *áme* 'brother' underlies *áme múpa-ná* 'elder brother's' as well as *áá-ná* *áme* 'the man's brother'.

In such cases the deletion of the exponent of one Head is obligatory, whereas in conjoined clause-level tagmemes (§4.1ff), it is optional. This leads to further comments on conjoining.

5.13 Conjoined Noun Phrases

The conjoining of noun phrases as exponents of clause-level tagmemes has already been dealt with in some detail. By way of review, there are two main methods of conjoining noun phrases: (1) by the attachment of the clitic *-para* to the exponents of the conjoined tagmemes; (2) by simple juxtaposition, accompanied by appropriate intonation patterns.

In both instances the structure can be considered a simple case of repetition of adjacent tagmemes. Note the following phrase:

- (27) *yómagae meda-para ogé naakí repo* (*old man, another -conj, little, boy, three = 'an old man and three small boys'*)

This is an instance of $np_{num} + -para + np_{num}$, where the marker *-para* specifies that the three boys are accompanying the old man. Both structures of the np_{num} are full: no transformational rules are necessary to account for shared nouns or deleted numerals. As indicated, other markers, such as the following where *-mé* marks the S_{AGN} , may follow *-para*:

- (28) *nipú-ná kóne épé-para-mé kógono-para-mé* (3 sg-POSR, *behaviour, good-AND-AGN work-AND-AGN = 'by means of his good thoughts and work'*)

$S_{AGN} : e^{np_{des}}$

$e^{np_{pos}} \rightarrow POSR-ná + H : n + M_{QAL} + K$, where K specifies: *H-para + H(-para)* and the first Head (*kóne*) is followed by a $M_{QAL} : aj$. In example (28) *-para* still marks the conjoining of the Head functions, even though the first H is followed by a M_{QAL} .

Noun phrases which consist of a series of nouns are therefore also considered to be naturally derived from conjoined exponents of the Head tagmemes. Note the following examples:

(29) áá oná naakí mená ráyo ípu-lumi 'the man, woman, boy
and pig are coming'

(30) Kírapeaasi Ábali Úri repo ípulumi 'Kírapeaasi, Abali
and Uri are coming'

The first consideration might be to derive such phrases from several underlying clauses, each with the shared verb deleted. However, the (optional) insertion of ráyo 'all' in (32) and repo 'three' in (33), with corresponding cross-reference to plural number in the verb suffix confirms that this is a simple conjoining of Heads, similar to those treated earlier in §4. The forms repo 'three' and ráyo 'all' expound the M_{QAN} , exactly as in:

(29') áá pádáne oná pádáne... 'one man, one woman...'

(30') Kírapeaasi páge Ábali páge Úri páge... 'Kírapeaasi
also, Ambali also, Uri also...'

This is further confirmed by such instances as:

(29'') áá meda oná meda... 'man another, woman another...'

in which meda 'another of the same', páge 'also the same as' and pádáne 'one of the same' are all exponents of the M_{QAN} function point. Structures such as (28) are considerably more complicated than, for instance, (27) because they share the recursive properties of an np_{pos} (with accompanying deletion, and so on) as well as the conjoining of embedded np_{des} . In addition the occurrence of the total structure marked as agent allows the permutation of $M : aj + H : n$ (epe kone 'good behaviour') to $H + M/___ -mé + P$.

Examples of conjoining within the Modification tagmeme may be quite complex:

(31) ada adaa-pe-para épé ada-para pádáne pía-ne 'It is a
house which is at once big and good'

(32) abu pí-para kaane-para gú pía-ne láápo yaé 'It is
something which is both yellow and red'

In examples (31-32) -para again marks the boundaries of the conjoined nps, whether it is np_{des} : épé ada-para 'the good house', an embedded nominal as modifier: adaa-pe-para 'which is yellow'. In these examples the conjoining is within a Modification tagmeme represented by every-

thing which follows *ada* 'house' (31) and precedes *yaé* 'something' (32), both which are exponents of the H.

In a long string of juxtaposed phrases the exponent of the Head may be repeated:

- (33) *kánaka-nu-mí kábá-pe yaé, báli-mí kábá-pe, épé-pe yaé, kánaka-ná étaa, báli-ná étaa, ráyo ía* 'There are things there which are bought by the natives, things bought by the white men, good things to buy, native's food, and white men's food'

While (33) is admittedly complex, it illustrates the stringing together of five phrases by simple juxtaposition. In this instance the Head of the phrases vary from *yaé* 'something' (present in the first and third phrase, but deleted in the second), to *étaa* 'food' in the fourth and fifth phrases. The whole phrase is an example of a very complex descriptive noun phrase. The numerical exponent *ráyo* 'all' functions as a Modifier to each of the conjoined phrases.

5.2 NOMINALISATIONS

In the previous chapter examples of clauses embedded as exponents of various clause-level tagmemes were given. Such embedded clauses expound the Modification tagmeme in a np or the Axis of an Axis-Relator functional pattern, and are either adjectival or full clauses. Thus there are embedded clauses in the Modification tagmeme in the following:

- (34) [*sogo né*] *áá ípu-la* 'The man [who smokes] is coming'
 (35) [*sogo nísá*] *áá ípu-la* 'The man [who used to smoke] is coming'
 (36) [*sogo nólalo pí*] *áá ípu-la* 'The man [who wants to smoke] is coming'

Whenever the verb which expounds the Predicate of the embedded clause is marked according to regular rules for tense, the clause is simply based (except for the optional deletion of shared noun Heads) upon a full clause, e.g. *nísá* 'He ate sometime ago' is a full verb form. In cases of derived adjectivals (§3.23.1) however, there is no tense, person or number designated, e.g. *né* 'one who eats' and *pí* 'one who is' (i.e. 'one who sits') are no longer basic verb forms. In the latter case, the underlying clause expounding the Modification tagmeme can be given the interpretation of a nominal. The kind of nominalisation

expressed depends upon the function of the constituent tagmemes of the underlying clause and not simply upon the function of the main phrase. For example, in (34) and (35) the deleted noun of (34') and (35') functions as Agent:

(34') áá-mé sogo néa 'the man smokes'

(35') áá-mé sogo nisa 'the man smoked'

$cl_{tr} + S_{AGN} + O_{GOL} \pm P_{GD}$, where P_{GD} : néa = ná 'to eat' + (3 sg Pf); and nisa = ná 'to eat' + (3 sg RP). As a nominal exponent the Head of the main phrase must be recognised functionally as an Agentive Nominal, e.g. 'the smoker', 'the former smoker', 'the would-be smoker' and so on. It is on the basis of such underlying clause functions that the interpretation of nominals such as the following can be proposed:

(37) mátaa tí áá (dance, hit-ADJZ, man = 'a dancer')

(38) mátaa tí yaé (dance, hit-ADJZ, something = decorations')

In (37) the Head is expounded by áá 'man' and is thus agentive; in (38) yaé 'something' is inanimate and must be interpreted as instrumental.

In addition to the use of the adjectival forms so far described, there are two other main ways of forming nominals: (1) by the use of the clitic -pe which in general suggests that the meaning of the nominal is 'destined for', 'meant for', or 'capable of' the Head which it modifies; (2) by the use of the aspectual suffix -de which in general means a punctiliar action. Some examples of the first type are:

(39) píra-pe yaé (to sit-FOR, something = 'something for sitting on', i.e. 'a chair')

(40) sápi ná-pe (sweet potato, to eat-FOR = 'edible sweet potato')

(41) kógono pa-pe yápi (work, to do-FOR, day = 'a working day')

(42) áá-pe oná (man-FOR, woman = 'a married woman')

(43) waa-pe (sugar cane-FOR = 'a sugar cane pole')

(44) yámá-pe (to put on-FOR = 'for wearing', i.e. 'a coat')

(45) pawá-si áda-pe búkú (slow-dim, to look-FOR, book = 'difficult primer')

The usual structure is:

M-pe + H, although in (40) the order is reversed and in (43) and (44) there is no H given. The embedded structures are:

(39) $v_{int} -pe$; (40) $v_{tr} -pe$; (41) $e_{cl_{tr}} + O_{GOL} : k\acute{o}gono + P : v_{tr} -pe$; (42) $O_{GOL} : ng -pe$; (43) $ng -pe$; (44) $v_{tr} -pe$; and (45) $e_{cl_{tr}} + A_{MAN} : paw\acute{a}si + P : v_{tr} -pe$.

Examples of nominals marked with *-de* are:

- (46) *r\acute{a}\acute{a}para aa-ta-de kaane (bush, it stands-WH, pandanus = 'wild pandanus')*
- (47) *\acute{I}n\acute{i} r\acute{e}pena p\acute{a}galeme-de ya\acute{e} (nose, stick, they hide it-WH, something = 'sticks for putting in the nose', i.e. 'noseplugs')*
- (48) *y\acute{a}\acute{a}-mataan\acute{a} p\acute{o}paapara \acute{o}pala-de y\acute{a}\acute{a}riraa (cassowarie's, in the wing, it comes up-WH, quill = 'cassowary-wing quills')*
- (49) *k\acute{i}dipaa \acute{a}w\acute{a}liare \acute{o}m\acute{a}leme-de (nails, if it will go inside, they die-WH = 'claws which cause death', or 'fatal claws')*

The structure of such embedded nominals is typically much more complex: in (46-48) clauses are embedded; in (49) a sentence is embedded. The suffix *-de* not only retains its usual aspectual meaning but also functions as a type of relative marker--which is glossed in the examples above simply as WH. Embedded constructions of this type expounding the Modification tagmeme of an np_{des} are very similar to many of those outlined in §4.4.

5.3 AXIS-RELATOR PHRASES

Phrases which consist of an Axis expounded by a phrase (e.g. a np_{des} , np_{pos} , etc.) marked by a function specifying clitic are, in tagmemic terms, Axis-Relator phrases. For example, notice the following:

- (50) *\acute{e}p\acute{e} \acute{a}\acute{a} l\acute{a}\acute{a}po-para (good, man, two-LOC = 'to the two good men') where,*
AR + A : $np_{num} + R : -para$ (locator)
- (51) *d\acute{i}pi p\acute{a}d\acute{a}ne-m\acute{e} (jeep, one-IN = 'by means of a jeep')*
AR + A : $np_{num} + R : -m\acute{e}$ (specifier or instrument)
- (52) *adaa maap\acute{u}-nane (big, garden-DIR = 'toward the big garden')*
AR + A : $np_{des} + R : -nane$ (director)

In examples (50-52) the Relators of AR phrase types are the same as those which relate embedded clauses (§4.4). In other words, they function the same but are attached to exponents of any grammatical level. It seems that such 'Relators' are more analogous to case markers. They occur attached to exponents of a particular tagmeme and mark a syntactic function. The functional notions of S_{ACT} , S_{AGN} , S_{GOL} are often formally marked by clitics which include within their grammatical function the tagmemic notion of Relator. Such "case" markers in Kewa would be:

Agentive or Instrumentive (-mé), according to the exponents and clause type.

Genitive (-ná), including what we have called Possessive or Allotative.

Locative (-para), which includes the features of Ablative and Benefactive.

Accusative (-daa), except that this form often marks the Object-as-Referent, rather than simply as Goal.

Directive (-nane, etc.), depending upon the kinds of direction and other semantic considerations.

Free pronouns are often used as relators and as such bear no other functional role in a phrase. In such cases the pronoun (enclosed in brackets) relates a clause which is restrictive in interpretation:

- (53) *oná* [nipú] kírí waé-rupa ta (*woman*, [3 sg pro],
laugh, bad-MAN, she says = '*the woman is one who
is laughing in a bad manner*')

by omitting *nipú* the meaning is: '*the woman is laughing in a bad manner*'. Rather than introducing a special Appositional type of phrase, it is simply noted that pronouns which immediately follow an np function as relators to the remainder of the clause. The function of such pronouns is thus similar to clitics which mark embedded clauses, except that *nipú* (and other pronouns) disjoins the Head and the tagmemes which follow to specify that they do not modify the Head.

5.4 VERB PHRASES

The tagmemic notion of a vp is different than that described in transformational grammars. In the latter, a verb phrase may either dominate a noun phrase (and thus signal the function of Object) or it may dominate a verb (and thus, in their terms, signal the function of a Main

Verb). In tagmemics a *vp* generally includes an adverbial exponent which functions, for example, as Manner.

In this grammar adverbs are generally exponents of clause-level Adjunct tagmemes with co-functions of Manner, Time, Degree and so on (see §4.15). This is because such adverb exponents do not uniquely occur in an attributive relationship with main verbs or verbal constructions. Therefore the verb phrases given here do not include adverb functions. However, verb phrases are necessary for the same reason as noun phrases: in each case there is a main verb which expounds the Head and there are subsidiary exponents which function attributively. The verb phrases which occur are: Possessive (vp_{pos}); Purposive (vp_{pur}); Gerundive (vp_{ger}). Each *vp* expounds the Predicate function of any clause type except the complementive.⁶ Such verb phrases as the latter two could possibly be called pheriphrastic verbs, which are not uncommon in New Guinea languages.⁷

5.41 Possessive Verb Phrases (vp_{pos})

Phrases marked by the clitic *-ná*, as already mentioned (see §5.12), have inclusion or possession specified between the Head and Modification tagmemes. There are two important differences between a vp_{pos} and an np_{pos} : (1) only verbs expound the H of a vp_{pos} ; (2) the exponents cannot be conjoined, as is the case with any vp_{pos} . For example, notice *-ná* in the following:

- (54) *nipú-ná tea* (he-POSR, he will say = 'it is up to him',
or (literally) 'it is his to say')

In such instances the *-ná* form does not seem to alter the meaning from such clauses as:

- (55) *nipú-mí tea* (he-AGN, he will say = 'He will tell it')

$cl_{tr} \rightarrow S_{AGN}^{-mí} + P_{GD} : v_{tr}$

However, both *-ná* and *-mí* may mark functions in a clause such as:

- (56) *nipú-mí nipú-ná tea* 'He will tell what is his to say'

$cl_{tr} \rightarrow S_{AGN}^{-mí} + P_{GD} : vp_{pos}$

When the verb suffixes expounding benefaction are chosen *-ná* may also mark the O_{BEN} :

- (57) *nipú-mí nipú-ná méáária* (méá 'to get' + *-ria* (3 sg Pa alo) =
'He got something for someone else')

$cl_{tr} \rightarrow S_{AGN}^{-mí} + O_{BEN} + P_{GD}$

It is possible to also say:

(54a) nipú-ná áгаа tea 'He will tell his talk'

(55a) nipú-mí áгаа tea 'He will talk' ,

suggesting that some vp_{pos} may be in fact surface representations of clauses with deleted exponents which functioned as complements or quotes. When a vp_{pos} expounds a Possessor-as-Beneficiary tagmeme, it is not as easy to find examples to suggest underlying np_{pos} forms. This can usually only be done by postulating pro-forms to expound the assumed np_{pos} Head:

(57a) nipú-mí nipú-ná OYÁÉ méáária 'He got SOMETHING for him'

$cl_{tr} \rightarrow S_{AGN}^{-mí} + O_{GOL} : np_{pos} + P_{GD}$

although it is, of course, possible to find sentences such as:

(57c) nipú-mí nipú-ná sékere méáária 'He got the pearl shell for him'.

It seems reasonable to suggest that a vp_{pos} may be simply a surface representation of an np_{pos} expounding an O_{BEN} , O_{GOL} or even O_{LOC} tagmeme.

5.42 Purposive Verb Phrases (vp_{pur})

The most general formula for a vp_{pur} is characterised by the following function points:

$vp_{pur} \rightarrow PUR + (DES) + (K) + H$, where
 $PUR : vs + suf_{pur} + (suf_{des})$
 $H : vs + \left\{ \begin{array}{l} \text{terminal} \\ \text{non-terminal} \end{array} \right\}$ suffix

The combination of verb stems and suffixes of purpose follows morphophonemic rules outlined in §3.21.2 ($vstMP-R5b$). Some examples (omitting the desiderative suffix -lo) are:

(58) [mú-la] pá-lua 'I will go [to get it]'

(59) [ádo-la] pá-lua 'I will go [to see it]'

(60) [ká-ta] pá-lua "I will go [to give it to him]'

In every vp_{pur} the first verb is suffixed by -la ~ -ta; the form of the verb stem and the pur suffix in (60) being regulated by MP rules. The restrictions on the vp are: (1) it is negated as a unit by the preclitic na-; (2) no adv or other grammatical category may disjoin the

two verbs, i.e. the verb of purpose and the final verb. On the former, contrast the following forms⁸:

(58') na-mú-la pá-lua 'I will not go to get it', not

*mu-la na-pa-lua or *na-mú-la na-pá-lua.

Benefaction for someone other than the speaker may be signalled by the *pur* suffix:

(58a) [méáá-ta] pá-lua 'I will go and [get it for someone]'

(59a) [ádaa-ta] pá-lua 'I will go and [look for someone]'

(60a) [kálaa-ta] pá-lua 'I will go and [give it to him for someone]'

There are at least two alternant analyses to any vp_{pur} : (1) to consider a purposive suffix as a kind of conjoining of successive actions by the same person; (2) to consider verbs of purpose as a special set of Complement exponents. Both of these possibilities are for the present disregarded; in the first case because of the obvious absence of a similar set of suffixes which would signal successive actions of purpose by different persons. Thus in a sentence such as

(61) mú-la pó-no mú-la pá-lia 'I will go to get it and he will go to get it',

the purpose is in each instance marked by *-la* which signals a vp_{pur} , but the different persons and coordination of the action are marked by regular coordination suffixes (§6.2).⁹

To consider the function of PUR as a co-function of the Complement is only feasible because semantically the PUR is part of the total action and when the desiderative suffix *-lo* is also used, verbs of existence commonly expound the P_{STA} :

(62) ní mú-la-lo pí 'I want to get (it)'

However, *-lo* is clearly an aspect marker and can also be used following coordination suffixes such as:

(63) ní méá-no-lo nipú épaa 'I wanted to get it and he came'

The desiderative aspect suffix often co-occurs with the purposive suffix and is also often used in a vp_{pur} if the main verb is one of existence.

Conjoining vp_{pur} is by simple repetition of the PUR function:

(64) ní mú-la ádo-la épa-wa (I, get-pur, look-pur, come-I did = 'I came to get it and to see it')

5.43 Gerundive Verb Phrases (vp_{ger})

The structure of a vp_{ger} can be summarised by the following formula:

$$vp_{ger} \rightarrow GER + (K) + H, \text{ where}$$

$$GER : vs + vstMP-R5b$$

$$H : vs + \left\{ \begin{array}{l} \text{terminal} \\ \text{non-terminal} \end{array} \right\} \text{ suffix}$$

The similarity of forms denoting gerunds with those denoting purpose can be seen in Chart 10. In Chart 10 forms representing three basic verb stems are given: *tá* 'to hit', *lá* 'to speak' and *roá* 'to break off'.

	Ego			Alo		
	'hit'	'talk'	'break off'	'hit'	'talk'	'break off'
Ger	tu	lo	ro	taa	laa	roaa
Pur	tu-la	ta	ro-la	taa-ta	laa-ta	roaa-ta
Des	tu-la-lo	ta-lo	ro-la-lo	taa-ta-lo	laa-ta-lo	roaa-ta-lo

Chart 10: Verb Phrase Forms

Some examples of gerundive phrases are:

- (65) ní tú píra-wa (*I, hitting, sit-I did* = 'I sat hitting it')
- (66) ní ló pí 'I am talking'
- (67) ní méáá épa-lua (*I, bringing (alo), come-I will* = 'I will come bringing it (for someone)')
- (68) ní tú sú pa-wa (*I, hitting, putting, make-I did* = 'I, hitting and putting, made it')

The gerundive function is expounded by the following categories:

- (1) egocentric by *tú* 'hitting' in (65) and (68); *ló* 'talking' and *sú* 'putting' in (66) and (68) respectively;
- (2) altrocentric by *méáá* 'bringing (for someone)' in (67).

N O T E S

1. Longacre (1964a:74) notes that phrases may also be double-centred, e.g. John and Mary. I have considered such constructions as simple conjoining of clause-level tagmemes and have discussed them in Chapter 4. Axis-Relator is a phrase type which usually has some other construction type layered within the Axis.
2. Becker (1967b) uses the term Subjunct rather than Modifier to point out parallel features with Adjunct, which is a clause-level function. Demonstratives function on the phrase-level in a manner which is parallel to certain Adjunct tagmemes on the clause-level, e.g. adverbs which permute freely such as those expounding A_{DEG} or A_{TM} . It seems plausible to postulate a Subjunct function which is expounded by demonstratives. Typically they modify the chain of a discourse or co-occur with any other Modification exponent, as well as the Head exponent of phrases. However, details are not clear so I have not set up an additional phrase-level grammatical function here.
3. See also Franklin (1968b) and Franklin and Franklin (1962a) for a discussion on Kewa counting systems.
4. Example (16) also illustrates how the conjoiner -para (§4.1) may not occur, i.e. the conjoining is indicated by juxtaposition.
5. As indicated earlier in Chapter 1, Becker (1967a:113-4) suggests K^n as a tagmeme symbol which defines such an operation. Although his proposal is specifically to conjoin clauses in terms of semantic equivalence classes, the symbol K can conveniently be used as a 'dummy' tagmeme symbol for repeating function points within a phrase. Formally, K rules and symbols in clause and sentence formulae might be noted as K' and K'' . I have already mentioned in §1.3 that the concept of an 'empty slot' in tagmemics is not new.

6. This is perhaps why P. Healey (1965c) describes as pheriphrastic phrases or as adjunct plus auxiliary verbs what I have most often described as a Complement + Predicate function combination. Some of the vp structures I treat here are similar to those given as compound verb units by R.A. Young (1964:71).

7. R.A. Young (1964) and P. Healey (1965c) treat such forms in Bena-bena and Telefol respectively. In general, they define a pheriphrase as a stem followed by a special set of verbs which together form a complex verb. The meaning is derived from the unit, but only the special set is marked by normal verb affixation. In the following description none of the verb phrases are exactly parallel (except in the semantic or total meaning sense) with those of either Young or Healey.

8. For additional examples, see §3.21.3.

9. In the following chapter I discuss the characteristics of conjoining clauses and how the exponents of shared Subject tagmemes (for example) are often deleted. If the person of the Subject is different between two clauses, the exponent of the Subject in the second clause would, of course, have to be given; this is done with a different set of suffixes. Example (61) could alternantly be described as a series of four clauses. However, this would be a much more complicated solution.

Chapter 6

SENTENCES

6.0 INTRODUCTION

A sentence consists of main functional points such as Base, Antecedent, Sequel, Protasis, Apodosis, Thesis, Antithesis, Topic, Comment, Quote, as well as others.¹ The name of the sentence-type described in each section corresponds most often to the function of the particle, clitic, or (in coordinate sentences) the suffix which signals the relationship between expounded units. Sentences in Kewa are thus **Simple, Coordinate, Reason, Antithetical, Alternative, Result, Thematic, and Quotative**. In addition, several of the major sentence-types have subtypes, particularly coordinate and quotative sentences.

In tagmemic descriptions any sentence with the overall structure of a single clause (which may include embedded syntagmemes) and which has appropriate sentence final intonation (Cf. §2.4) is generally considered a simple sentence. The Nuclear constituent is:

$s_{\text{simp}} \rightarrow$ Base: clause,

where clause represents any syntagme exponent of that level. It is unclear if the notion of a simple sentence is more than a descriptive convenience, i.e. no new functional notion is introduced. The clause exponent, not the simple sentence, defines the function. While in every other sentence type there are markers which indicate the function of the sentence tagme, in simple sentences only the intonation can be thought of as in any way signalling a function, and this is true of any sentence type. The notion of a simple sentence is therefore not used again in this chapter.

6.1 COORDINATE SENTENCES (s_{co})

Sentences which are coordinate consist of at least two conjoined Bases expounded by clauses. Although in practice certain kinds of co-

ordination may be signalled by simple juxtaposition of clauses, there are always overt coordinators which can mark coordinate sentences. Semantically the coordinators most often indicate successive actions or simultaneous actions. However, these two main features may be modified in some other way.

Generally speaking, in New Guinea languages such time relationships have not been described as coordinate clauses. They have, rather, been described as dependent and independent clauses within a sentence. The dependent clauses which involve time relationships are marked by 'medial' verbs, sometimes also called non-final, non-terminal, secondary, or non-finite. The co-occurring independent clauses, on the other hand, are marked by 'final' verbs called also by antonyms such as terminal, primary or finite. The clauses (or in some cases the verbs) in turn have also been called dependent or subordinate on the one hand vs. independent, superordinate or principal on the other hand, according to their syntactic setting.²

It seems more appropriate in Kewa to consider certain medial-final distinctions as properties of coordinate sentences and the clauses which expound the Bases as interdependent. The important feature is that clause coordination is often marked by special sets of suffixes which also distinguish other categories, such as the identity or non-identity of the person of the actors. Coordination, therefore, often involves same or different person categories between the coordinated Bases. The same person (sp) or different person (dp) markers are of two sets.³

In addition, certain other markers may modify the relative timing of the coordinated clauses. For example, the successive or simultaneous dp coordinators may have co-occurring suffixes which indicate such features as prolonged action for either of two conjoined clauses, or the first clause action may be interrupted before the second one takes place. Such variations of coordinate sentences will also be discussed.

6.11 Sequential Coordination

Sequential sentences (s_{seq}) consist of the following function points:

$$s_{seq} \rightarrow ANTE + CO_{SUC} + SEQL$$

In this section only COs which are expounded by suffixes indicating the same person are given. The following sentences are paired, the first with a CO expounded by sp_{ego} , the second by sp_{alo} (the CO is enclosed in square brackets):

- (1) ní réko-[a] áгаа lá-lo (*I, stand-[CO sp ego], talk, say-I am = 'I stood up and am speaking'*)
- (1a) ní rékaa-[wa] áгаа lá-lo (*I, stand-[CO sp alo], talk, say-I am = 'I stood up on account of something and am speaking'*)
- (2) sáá píru-[a] áгаа lá-pa (*we, two, sat down-[CO sp ego], talk, say-we are = 'We two sat down and talked'*)
- (2a) sáá píraa-[wa] áгаа lá-pa (*'We two sat down for something and talked'*)
- (3) rúdu yo-[a] madá na-riaa (*short, affirm-[CO sp ego], enough, neg-it carried = 'It was short and didn't reach'*)
- (3a) ní ma-adaalu yaa-[wa] keda ma-paa-ru (*I, cas-long, affirm-[CO sp alo], heavy, cas-make-I did alo = 'I made it long and heavy'*)

The exponents are as follows:

ANTE	:	cl _{int}	(1, 2)	'I stand'
	:	cl _{cmp}	(3)	'It is short'
	:	cl _{d-tr}	(3a)	'I make it long'
CO _{SUC}	:	sp _{ego}	(1, 2, 3)	(-a)
	:	sp _{alo}	(1a, 2a, 3a)	(-wa)
SEQL	:	cl _{tr}	(1, 2)	'I am talking'
	:	cl _{cmp}	(3)	'It was short'
	:	cl _{d-tr}	(3a)	'I made it (be) heavy'

In the formula given, the Antecedent tagmeme may be repeated several times; as long as it is marked each time with the successive coordinator (CO_{SUC}).⁴

Examples where the person of the actor remains the same in the ANTE and SEQL, but where number varies will be given in §6.13.

Transformational rules operate when clauses of different types are conjoined. Thus in two underlying clauses:

- (4) áá píra-a *'The man sat down'*
- (5) áá-mé étaa ná-a *'The man ate the food',*

both an intransitive and transitive clause are involved. When the clauses are conjoined the S may be repeated or deleted in the second clause, but it must function the same throughout the sentence, i.e. as either S_{ACT} (áá) or S_{AGN} (áá-mé). In other words, just as in clauses which are embedded in the S, one of the shared nouns may be deleted (see §4.4ff), so in clauses which are conjoined, one of the shared Ss may be deleted. For example, any of the following are acceptable, and all mean 'The man sat down and ate the food':

(6) áá-mé píru-a étaa ná-a (man-AGN, sit-CO sp, food, eat-he did)

(6a) áá-me étaa (áá-mé) píru-a ná-a (man, AGN, food, (man-AGN), sit-CO sp, eat-he did)

(6b) áá píru-a (áá) étaa ná-a (man, sit-CO sp, (man), food, eat-he did)

(6c) áá étaa píru-a ná-a (man, food, sit-CO sp, eat-he did)

However, the following are not permissible:

(*6d) áá píru-a áá-mé étaa ná-a

(*6e) áá-mé étaa píru-a áá ná-a , and so on,

because the functions of S in the shared clauses are contrastive. It is therefore necessary to have rules such as (based on (4) and (5)):

$$\begin{array}{l}
 \text{cl}_{\text{int}} \rightarrow \begin{array}{c} \text{S}_{\text{ACT}} \\ 1 \end{array} + \begin{array}{c} \text{P}_{\text{MOT}} \\ 2 \end{array} + \\
 \text{cl}_{\text{tr}} \rightarrow \begin{array}{c} \text{S}_{\text{AGN}} \\ 3 \end{array} + \begin{array}{c} \text{O}_{\text{GOL}} \\ 4 \end{array} + \begin{array}{c} \text{P}_{\text{GD}} \\ 5 \end{array} \longrightarrow \\
 \text{S}_{\text{seq}} \rightarrow \left\{ \begin{array}{l} 1/3 + 4 + 2\text{-CO} + 5 \\ 1/3 + 2\text{-CO} + 4 + 5 \end{array} \right\} , \text{ and so on,}
 \end{array}$$

where 1/3 indicates that the S may be either unmarked by -mé and thus ACT, or marked as AGN. Further rules would be necessary to account for the optional reoccurrence of the S (as in 6a and 6b).

Because of such examples as (6c) coordination might be considered on two different levels: on the one hand, as between the Predicates only, not between whole clauses. Any time the coordination involves same-person/number identity it would be considered as between Predicate functions; on the other hand, when different-person/number identity is involved, the coordination might be considered as between total clauses with functions of Antecedent, Sequel and so on. Neither solution would

eliminate the necessity for transformational rules involving Subject deletions.

6.12 Simultaneous Coordination

Simultaneous sentences (s_{sim}) consist of the following functional points:

$$s_{sim} \rightarrow COTM + CO_{SIM} + SEQL$$

Again the illustrations are paired, the first with a CO expounded by sp_{ego} , the second by sp_{alo} :

- (7) épo lá-ri épa-wa (*whistle, say-CO sp ego, come- I did = 'I whistled while I came'*)
- (7a) épo láá-ma épa-wa *'I whistled (for him) while I came'*
- (8) nipú tá-ri pá-mua-la (*he, hit-CO sp ego, walk-he is = 'He is hitting it while he is walking'*)
- (8a) nipú táá-ma pá-mua-la *'He is hitting it (for someone) while he is walking'*

The exponents are:

COTM	:	cl _{cmp}	(7)	'I whistle'
	:	cl _{tr}	(8)	'He hits'
CO _{SIM}	:	sp _{ego}	(7, 8)	(-ri)
	:	sp _{alo}	(7a, 8a)	(-ma)
SEQL	:	cl _{int}	(7)	'I came'
	:	cl _{int}	(8)	'He walks'

In a s_{sim} the clause action which expounds the Contemporaneous tagmeme goes on for some time while the second action, which expounds the Sequel tagmeme, takes place. The notion of absolute simultaneity, that is two actions absolutely at the same point in time can only be performed by the same actor and is provided for by the gerundive verb phrase construction (§5.43).

There are many (semantic) restrictions on the tagmemes which may be represented in conjoined clauses of a s_{sim} . For example, sentences like the following cannot occur:

- (*9) né-mé maapú-para irikai tá-ri étáa ada-para ná-lo
'I am hitting the dog in the garden while I am eating the food in the house',

simply because the O_{LOC} would have to be expounded identically. Also, there are many actions which (semantically) cannot occur simultaneously. Such restrictions have not been accounted for in this grammar.

Because the verb or verb phrase is the only obligatory exponent in a clause, several clauses may be conjoined with only the P expounded.⁵ For example, note the following:

- (10) áálú-írí ípa-para lópaa-wa órópeaa-ma pu-a rubá-la
 pi-simi (*hair, water-LOC, fall-CO sp alo, turn-
 CO sp alo, make-CO sp ego, throw-pur, make-they did =
 'They put (their) hair in the water, while they made
 it turn over in order to comb it'*)

Structurally this may be represented as:

- (1) $s_{seq} \rightarrow ANTE + CO_{SUC} + SEQL$, where the final SEQ: $vp_{pur} \rightarrow$
 PUR : rubá-la 'in order to throw' + H : pisimi 'they did it'

However, the sentence displays considerable embedding which is bracketed in Chart 11:

	áálúírí ípapara lópaa-wa órópeaa-ma pu-a rubá-la pisimi
(1) [ANTE ₁]+[CO ₁]+[SEQL ₁]
(2) [CONTM ₁]+[CO ₂]+[SEQL ₂]
(3) [ANTE ₂]+[CO ₃]+[SEQL ₃]

Chart 11: Sentence-Level Recursiveness

The exponents of the function points given in Chart 11 are:

ANTE₁ : s_{sim} -ma, i.e. a simultaneous sentence marked by -ma, a sp alo coordinator. This is represented in the second bracketing:

- (2) $s_{sim} \rightarrow CONTM + CO_2 + SEQL_2$, where

CONTM : s_{seq} -wa, i.e. an additional sequential sentence marked by -wa, a sp alo coordinator. This is represented in the third bracketing:

- (3) $s_{seq} \rightarrow ANTE_2 + CO_3 + SEQL_3$, where
 ANTE₂ : $cl_{int} \rightarrow O_{GOL} + O_{LOC} + P_{GD}$.

It is important to note that none of the above derivations involve sentences with K-equivalent functions, i.e. there is no conjoining of

sentence-level tagmemes. Examples of such conjoining (based on example 10) would be either of the following:

(10a) áálúírí ípapara lópaawa órópeaawa pua rubála pisimi
*'They put the hair in the water and turned it and
 did this in order to comb it'*

(10b) áálúírí ípapara lópaama órópeaama pari rubála pisimi
*'While they put the hair in the water (for someone)
 and while they turned it over (for someone), they
 did this in order to comb it'*

The functions represented are, respectively:

(10a) $s_{seq} \rightarrow ANTE + CO_{SUC} + K^2 + SEQL$

(10b) $s_{sim} \rightarrow CONTM + CO_{SIM} + K^2 + SEQL$

However, in introducing a K-equivalent operation in a coordinate sentence it must be stipulated that both the Coordinator and the tagmeme preceding are repeated, i.e. not simply the coordinator. This is true of any function marking suffix, particle or clitic: they mark a function which may be repeated, but the marker cannot follow itself.

6.13 Coordination Involving Different Persons (dp)

The functional points in sequential and simultaneous sentences with different person-actor identity between clauses is the same as in sentences with the same person-actor identity. However, the semantic co-functions of the sentence-level tagmemes is of a greater variety if dp are involved between clauses. Before illustrating these variations, examples of simple coordination between clauses with dp are given. These are again paired, egocentric benefaction signalled by the verb on the one hand, altrocentric on the other⁶:

(11) ní réka-[no] ágaa lá-a (*I, stand-[CO dp ego 1 sg],
 talk, say-he did = 'I stood up and he talked'*)

(11a) ní rékaa-no ágaa lá-a (*'I stood up (for something)
 and he talked'*)

(12) sáá píra-[pona] ágaa lá-a (*we two, sit-[CO dp ego
 1 dl], talk, say-he did = 'We two sat down and
 he talked'*)

(12a) sáá píraa-pona ágaa lá-a (*'We two sat down (on account
 of something) and he talked'*)

- (13) nipú ma-rúdu vaa-nia ní ma-adaalu paa-ru (*he-cas-short, affirm-[CO dp alo 3], I, cas-long, make-I did = 'He made it short and I made it long'*)

The exponents are:

ANTE	:	cl _{int}	(11, 12)	'I stand'; 'we two sit'
	:	cl _{d-tr}	(13)	'he shortened it'
CO _{SUC}	:	dp _{ego}	(11, 12)	(-no '1 sg'); (-pona '1 dl')
	:	dp _{alo}	(11a, 12a, 13)	+ vstMP-R1
SEQL	:	cl _{tr}	(11, 12)	'he talked'
	:	cl _{d-tr}	(13)	'I lengthened it'

Whenever successive coordination involving a *dp* is used the category of the person of the first verb is signalled by *-no* (1 sg), *-pona* (1 dl), and so on (Cf. §3.22.2, Chart 8, for the whole set. Occasionally the variants *-pana* and *-mana*, or even *-puna* and *-muna* are heard for the 1 dl and 1 pl forms.).

Examples of person agreement between actions, but where the number of the actor varies, are provided in the following coordinated clauses:

- (14) níáá púa-a ní walá épa-lua (*we all, go-CO sp, I, again, come-I will = 'We all go and I will return'*)
- (15) nímu púa-a nípu walá épa-lia '*They all go and he will return'*
- (16) sáá púa-a níáá walá épa-lima '*We two go and all of us will return'*
- (17) nípu púa-a ne walá épa-li '*You two go and you alone will return'*

If the first free pronoun were not supplied in each sentence the person of the actor would be interpreted as identical in both of the conjoined clauses: (14) '*I go and will return'*'; (15) '*he goes and will return'*'; (16) '*we all go and will return'*'; (17) '*you go and will return'*'. The free pronoun in each second clause is optional, regardless of the interpretation. A further example of different clause subjects conjoined, but identical person categories can be seen in the following:

- (18) yaf na-fpu-a nípu na-ópea (*rain, neg-come-CO sp, grass, neg-appear-it has = 'It did not rain and the grass has not come up'*)

Very few suffixes may co-occur with sequential coordination markers if such same persons are involved.⁷ Examples (14-18) can also optionally have CO dp suffixes, so that the v + CO dp would be: p6-mona rather than p6-a in (14);⁸ p6-na rather than p6-a in (15) and (17); p6-pona in (16).

It is re-emphasised here that it is the function of coordination which applies between two or more clauses, and not simply a time relationship. In the case of coordinate sentences involving at least one tagmeme expounded by an imperative clause, the time relationship is not necessarily in the order of the expounded clauses:

- (19) pa-no gí (do-I CO dp 1 sg, give it-immed =
'Give it to me to do', or 'I (should) do it
and you give it')
- (20) ne sápi ná-ina gía-no (you, sweet potato, eat-CO
dp 2 sg, give (to you)-CO dp 1 sg = 'I am giving
you sweet potato to eat', or (literally) 'You
(should) eat sweet potato and I gave it to you')
- (21) go raí méá-ina ípu (this, axe, get-CO dp 2 sg,
come-immed = 'Come and get this axe')

In each sentence the action of the second clause logically precedes the first. The feature of coordination thus does not always specify the sequence of the actions: this must be a semantic interpretation derived from the particular type of clause exponents which are coordinated. In most cases the action of the first clause as an exponent of the ANTE tagmeme will logically precede the action of the second clause.

Although (20) appears to have two CO dp markers (-ina (2 sg)) and -no (1 sg)), the second is affixed to a clause which occurs alone so that neither clause has a verb which specifies the person-number-tense of the action. The result in such cases is a semantic interpretation much like a future subjunctive. This is a regular feature of any clause which is marked in the same manner as a clause + CO_{dp}, but which occurs alone.

6.14 Other Time Relationships

There are several suffixes which may co-occur with CO dp markers to modify the temporal-spatial relationships between adjacent clauses. The suffixes express Prolongation, Serialisation, Permission, Disassociation and Exclusion.

6.14.1 *Prolongation*

When two clauses are coordinated and the action of the first clause is prolonged so that the action of the second clause is completed first, the suffix *-la* co-occurs with the CO dp markers:⁹

(22) *íra-la-nia épo-pe* (cook-prol-CO dp 3, come-imper =
'While they (or he) cook it, you come')

(23) *ípu-la-pona pú-a* (come-prol-CO dp 2 dl, go-he did =
'While we two were coming he went')

The prolongation marker *-la* contrasts clearly with the homophonous *-la* (purpose), in that the latter is never followed by a CO dp marker:

(22') *íru-la épo-pe* (cook-pur, come-imp¹⁰ = 'Come in order
to cook it')

The coordinate sentences in (22) and (23) consist of:

$s_{sim} \rightarrow CONTM + CO_{dp} + SEQL$, where
 CONTM : cl_{int}
 CO : dp (*-nia* '3'; *-pona* '2 dl')
 SEQL : cl_{imp} (22); cl_{int} (23)

The Contemporaneous tagmeme is marked by *-la*, an exponent of ASPECT on the word-level.

6.14.2 *Serialisation*

When two clauses are coordinated and the action of the second clause is specified as beginning just as the action of the first clause is complete, the suffix *-loa* co-occurs immediately following the CO dp marker:¹¹

(24) *pó-no-loa épa-a* (go-CO dp 1 sg-ser, come-he did =
'I went and after that he came')

(25) *ne rípína-ina-loa ní tá-lua* (you, grasp-CO dp 2 sg-ser,
I, hit-I will = 'You grab him and then I will hit him')

Combinations of serialisation and prolongation are acceptable:

(26) *ira-la-na-loa epa-wa* 'After he had cooked it awhile,
then I came'

Two clauses, one with a CO dp marker and with serialisation specified, followed by a subjunctive clause, may occur:

- (27) kála-no-loa moge wárí-na (*give to him-CO dp 1
sg-ser, try, make-3 dp = 'After I give it to
him he can (or should) try to make it'*)

The same interpretation can be provided by simply juxtaposing two clauses which are specified for person-number-tense, as long as the tense is future and the person-number is not identical:

- (27a) ká-toa moge wáríá-lia (*give to him-I will, try,
make-he will = 'I will give it to him; he will
try to make it'*)

Such paraphrases may in fact indicate that two coordinate clauses with dp specified (where the second action is interpreted subjunctively) may be based upon the future tense.

6.14.3 Permission

When two clauses are coordinated and one action is specified as allowed or permitted, the suffix *-wa* co-occurs following the CO dp marker:¹²

- (28) go áá yaé ía ní kábá-no-wa (*that, man, something,
put-he has, I buy-CO dp 1 sg = 'That man has
something and I should be allowed to buy it'*)
- (29) sáá nipú tá-pono-wa nipú péna (*we two, he, hit-CO
dp 2 dl-perm, he, go-CO dp 3 = 'Allow us to hit
-him and he might go'*)

6.14.4 Disassociation

When two clauses are in a time relationship such that the first clause action can only take place if the second action does not, the first clause is marked with *-pana*. The meaning implies a negative reason¹³ and two separate morphemes may actually be involved: *-pa* 'inceptive aspect',¹⁴ followed by *-na* 'CO dp 3'. The inclusion of the examples which follow are tentative. It may prove more accurate to consider *-pana* as a sentence connector, parallel to others described later (Cf. §6.2ff).

- (30) lópa-pana pawá ádo-a pó-pe (*fall-disas CO dp 3,
slow, look-CO sp, go-imper = 'So that it does
not fall, look and go slowly'*)
- (31) re-para pá-li rábú róbó-a ne-ná áálú tá-pena
(*close-loc, go-you will, time, break-CO sp,
you-poss, head, hit-disas CO dp 3 = 'When you
go close, it could fall and hit your head'*)

6.14.5 Exclusion

As indicated, clauses which occur in isolation with CO dp markers imply a future subjunctive mode. In addition, any 1st person non-singular CO dp suffix may be followed by *-paa* signalling that the actor is excluding anyone except himself and the addressee(s):

- (32) *ná-mina-paa* (eat-CO dp 1 pl-excl = 'We all should eat it')¹⁵
 (33) *ná-pana-paa* (eat-CO dp 1 dl-excl = 'We two should eat it')

If two CO dp clauses occur only one of them needs to be marked for exclusion and the interpretation will be the same for both:

- (34) *rogaa-mina tápa pa-mina-paa* (bind-CO dp 1 pl, platform, make-CO dp 1 pl = 'We two (only) can make a platform and bind [=bury] him')

6.14.6 Other Observations

Markers which are CO dp commonly co-occur with *-lo* which signals 'desire' or 'to want to':

- (35) *súkulu poae-nu-mí áde-na-lo pea* (school, boy-coll-AGN, look-CO dp 3-des, do-he has = 'The school boys want to see and he is doing it')
 (36) *étaa né-na-lo ma-nágola-wa sáá-to* (food, eat-CO dp 3-des, cas-set out-CO sp alo, put-I am alo = 'He wants to eat and I am preparing (the table for him)')

One verb form *ba* 'to start to go' occurs in a very restricted paradigmatic set; the suffixes which occur with it are in some cases obviously based upon ones already described. The full set is:

- (37) *bá* 'Let we 2 (exclusive) go'
 (37a) *bái* 'Let we 2 (inclusive) go'
 (38) *bána* 'Let we all (exclusive) go'
 (38a) *báina* 'Let we all (inclusive) go'
 (39) *bálepaa* 'Let us go (imperative)'

The suffix in (39) *-lepaa* is from the imperative set given in Chart 6 of Chapter 3; *-na* in (38) and (38a) appears to be from the Non-Terminal set given in Chart 8 of Chapter 3.

The verb form is similar in semantic effect to the 'inceptive' suffix *-ba* with the same form.

6.2 SENTENCE CONNECTORS

The difference between a sentence coordinator (in usual terms, a conjunction) and a sentence connector is often one of freedom of placement: coordinators conjoin clauses and in so doing impose constraints upon the functional nature of the shared exponents; the clause exponents in turn may be permuted as a whole, but the coordinators alone cannot be. Connectors, on the other hand, relate other sentence-level functions and, in relation to clause exponents, move about quite freely.

6.21 Reason Sentences (s_{re})

Reason sentences consist of two nuclear function points or tagmemes: the Reason (RE) which is marked by the general clitic $-ga^{16}$, and the Result (RS). The RS tagmeme is often expounded by imperative or subjunctive clauses:

- (40) *sáá pú-lupa-ga píra-lepaa-pe* (we two, go-we two are-RE, sit-imp pl-immed = 'Because we two are going, you all sit down')

$s_{re} \rightarrow RE : cl_{int}^{-ga} + RS : cl_{imp}$

- (41) *ní yaina ía-ga ré-para na-épo -pe* (I, sick, put-it has-RE, base-loc, neg-come-imm imp = 'Since I am sick, do not come close (to me)')

$s_{re} \rightarrow RE : cl_{cmp}^{-ga} + RS : cl_{imp}$

- (42) *épo lá-lo-ga nipú épé-na* (whistle, say-I am-RE, he, come-CO dp 3 = 'Because I am whistling, he should come')

$s_{re} \rightarrow RE : cl_{cmp}^{-ga} + RS : cl_{intr}(\text{subjun})$

- (43) *lópa-wa-de-ga ne ápe lá-no* (fall-I did-compl pun -RE, you, cross, say-CO dp 1 sg = 'Because I fell down, I should be cross with you')

The last two sentences are also further examples of how subjunctive clauses are a semantic interpretation of any dependent clause which occurs final. Permutations may occur, where the Reason tagmeme may occur finally in the sentence:

- (44) *póra póá míru rú-nane ípu-la-ga* (door, strike imp, smoke, inside-dir, come-it-is-RE = 'Close the door because the smoke is coming inside')

$s_{re} \rightarrow RS : cl_{imp} + RE : cl_{int}^{-ga}$

Because of such permutations -ga is not considered as simply a disjunctive marker between juxtaposed clauses.

In other examples considerable embedding may occur within the RE tagmeme:

- (45) [áá maa lórá paa-ga áá adaa-pe] kóne sá-lo ([man, neck, cut, make-RE, man big-for], behaviour, put-I am = 'I think that because it is a man who has been cut off at the neck he is a big man')

The part of the sentence included within square brackets is the Q tagmeme of a Quotative sentence (Cf. §6.26). This Q tagmeme is expounded by a s_{re} , in which the RE is marked by -ga and the RS is expounded by a nominalised phrase. Note also the following example:

- (46) [né-mé ába pia-wa] ne gí-a-lo-ga ne írí púdía ([I-AGN, before, shoot-I did], you give you-I am-RE, you, feathers, pluck-imp) 'I am giving you that which I shot before so that you can pluck its feathers').

In this case the RE is expounded by a cl_{tr} which contains an embedded clause *ába pia-wa* 'I shot it before' with the object deleted (in this case obviously *yáá* 'bird').

6.22 Antithetical Sentences (s_{ant})

Sentences which are antithetical consist of a Thesis tagmeme (THS) and an Antithesis (ANT) tagmeme which are most frequently connected by *para*, or by *yapare* if the previous clauses exponent is complementive:

- (47) *nipú ípu-la pare ní paalá na-pía* (he, come-he is, but, afraid, neg-it is = 'He is coming but I am not afraid')

s_{ant} + THS : cl_{intr} + *pare* + ANT : cl_{cmp}

- (48) *waé kóne ya-pare ní pa-wa* (bad, behaviour, but, I, do-I did = 'It is bad behaviour but I did it')

s_{ant} + THS : cl_{cmp} + *yapare* + ANT : cl_{tr}

Two independent clauses may be juxtaposed in an antithetical sentence which is begun with *pare*, but the first clause must still be interpreted as the Thesis:

- (49) pare káará áípápúlú pea áá-re pawási pópéma (*but, car, quickly, make-it does, man-TOP, slowly, travel-we do = 'A car goes quickly but a man travels slowly'*)

$s_{ant} \rightarrow \text{pare} + \text{THS} : \text{cl}_{intr} + \text{ANT} : \text{cl}_{intr}$

The above sentence also illustrates the use of antonyms in antithetical sentences,¹⁷ where áípápúlú 'quickly' occurs in the THS and pawási 'slowly' in the ANT. The same meaning also occurs when the THS and ANT are juxtaposed with both pare and the shared verb deleted:

- (47a) káará áípápúlú pámea áá-re pawási 'A car goes quickly but a man is slow'¹⁸

In other instances, if the THS is negated, only the antonym need remain in the ANT:

- (50) ora kóko na-rea pare pa ogépú kegaapú pea
(*really, cold, neg-emits-it does, but, just, little, hot, make-it does = 'It is not really cold but (rather) just a little bit hot'*)

- (50a) ora kóko na-réa pare rírípú 'It is not cold but hot'

In (50a) pare can also be deleted so that only the antonym remains in the ANT.

A reversal of the THS-ANT is not normally permissible unless the negative remains in the THS (i.e. the ANT already implies negation):

- (*50b) pa ogépú rírípú pea pare kóko na-réa 'It is just a little hot but it is not cold'

- (50c) pa ogépú rírípú na-pea. ora kóko réa. 'It is not just (even) a little hot. It is really cold'

Comparative sentences are therefore in every instance easily formulated within the framework of an s_{ant} such as (50).¹⁹

In other examples of s_{ant} only the ANT tagmeme may be signalled:

- (51) pare mená-mé réa-mé ómó-a sápi ná-la (*but, pig-AGN, hunger-AGN, die-AGN, die-CO sp, sweet potato, eat-it is = 'However, the pig is hungry and is eating sweet potato'*)

$s_{ant} \rightarrow \text{pare} + \text{ANT} : s_{seq}$

$s_{seq} \rightarrow \text{ANTE} : \text{cl}_{cmp} + \text{CO}_{SUC} : -a + \text{SEQ} : \text{cl}_{tr}$,

where the ANTE is marked by the CO sp suffix -a and is expounded by a complementive clause: mená réa-mé ómá-la 'The pig is dying with hunger'.

6.23 Alternative Sentences (s_{alt})

Alternative sentences consist of two nuclear tagmemes: Consideration (CNS) and Option (OPT). The particle *pae* relates the two tagmemes unless the first one is expounded by certain complementive clauses, in which case *yapae* occurs.²⁰ The balance between the two clauses is most frequently one in which one or the other tagmeme is questioned, negated, or in some other manner given the semantic interpretation of an alternative choice. If the CNS is specified twice it is also marked both times by *pae*; the whole sentence then has the meaning of uncertainty:

- (52) *roto-mé tá-a pae ake-me tá-a pae (stick-AGN, hit-it did, or, what-AGN, hit-it did, or = 'A stick hit him, or what was it that hit him?')*

$s_{alt} \rightarrow$ CNS : cl_{tr} + *pae* + CNS : cl_{tr} + *pae*

- (53) *mená yapae ake yapae (pig, or, what, or = 'Is it a pig, or what is it?')*

$s_{alt} \rightarrow$ CNS : cl_{cmp} + *yapae* + CNS : cl_{cmp} : *yapae*

When the OPT is stated but marked as a question by the interrogative mood suffix the whole sentence is interpreted as an alternative question:

- (54) *kádípi yapae kóbere-yaa (red, or, dark-ques = 'Is it a European or a native?')*

$s_{alt} \rightarrow$ CNS : cl_{cmp} + *yapae* + OPT : cl_{cmp}

- (55) *go ípa-re ná-pe ípa yapae na-ná-pe ípa-yaa (this, water-top, drink, for, water, or, neg-drink, for, water-ques = 'Is this water for drinking or not?')*

In every instance the clauses which are expounded by the CNS and OPT tagmemes are of the same syntagmeme pattern, although ellipsis is common:

- (56) *go-re go yaé-nu-ri épé yaé-nu yapae waé yaé-nu yapae (this-top, this, something-coll-top, good, something-coll, or, bad, something-coll, or = 'All right, concerning these things, they are either good or they are bad')*

In (56) the sentence introducer and the topic (*gore go yaénuri*) are deleted in the clause which expounds the OPT tagmeme. In the following sentence the introducer and topic are deleted and a substitute also occurs:

- (57) go-re ada-re páta-pe yapae ake paa-pe yapae (*this-top, house-top, sleep, for, or, what, do, for, or = 'Concerning this house, is it for sleeping or what is it for?'*)

Both (56) and (57) have the following structure:

$s_{alt} \rightarrow \text{CNS} : \text{cl}_{cmp} + \text{yapae} + \text{CNS} : \text{cl}_{cmp} + \text{yapae}$

In other sentences the CNS tagmeme may appear only once:

- (58) go búkú mádáá ake pa-limi pae (*this, book, on top, what, do-they will, or = 'What will they do on top of the book?'*)

$s_{alt} \rightarrow \text{CNS} : \text{cl}_{tr} + \text{pae} ,$

where the OPT is deleted because the CNS includes a substitute 'what' (ake) and therefore no option is semantically possible. In such instances the question as CNS tagmeme is frequently supplied by one speaker and the OPT response is by another speaker. Note the following paired sentences (the first expounded by a CNS, the second by an OPT):

- (59) go-re ake paa-pe yapae (*that-TOP, what, do-for, or = 'What is that for?'*)

- (59a) oyaé táá-pe yaé (*something, hit, for, something = 'It is something for writing'*)

- (60) go yaé-re ake yapae (*this, something-TOP, what, or = 'What is this thing for?'*)

- (60a) penasole kóne sá-lo (*pencil, behaviour, put-I am = 'I think that it is a pencil'*)

The frequent question sentence ake yapae 'What can it be?' is accordingly built upon the CNS tagmeme as supplied in the fuller examples of (59) and (60).

6.24 Causal Sentences (s_{cas})

Causal sentences consist of two nuclear tagmemes: the Cause (C) which is marked by the general clitic -pulu²¹ and the Effect (E). Notice the following examples (which consist only of the obligatory tagmemes):

- (61) épo lá-lo-pulu irikai épa-lia (*whistle, say-I am-CAS, dog, come-he will = 'I am whistling so that the dog will come'*)

$s_{cas} \rightarrow \text{C} : \text{cl}_{int} + \text{-pulu} + \text{E} : \text{cl}_{int}$

- (62) ní maapú láápo ía-pulu meda ne madá gíá-lua (*I, garden, two, there are-CAS, another, you, able, give you-I will = 'I have two gardens so I will be able to give one to you'*)

$s_{cas} \rightarrow C : cl_{cmp} + -pulu + E : cl_{tr}$

- (63) káá na-píá-pulu o ta (*odor, neg-sit it does-CAS, bad, say-it does = 'It doesn't have an odor so it is bad'*,²²)

$s_{cas} \rightarrow C : cl_{cmp} + -pulu + E : cl_{cmp}$

- (64) ní madá na-lóra-lua naapí éke na-aeya-pulu (*I, able, neg-cut-I will, knife, sharp, neg-stand it does-CAS = 'I will not be able to cut it since the knife is not sharp'*)

Example (64) demonstrates how the C and E tagmemes may be permuted, but the C is still marked by *-pulu*. It also shows the juxtaposition of dependent type clauses which is characteristic of sentence structure.

6.25 Thematic Sentences (s_{them})

Sentences which are thematic consist of two nuclear tagmemes: the Topic (TOP) marked by *-re* (\sim *-ri*) and the Comment (COM).

On the one hand *-re* appears to act simply as an optional subordinator, e.g. when the clause which expounds the TOP is verbal. On the other hand, and as already outlined (e.g. §4.5), *-re* as a clitic marks a clause-level tagmeme which also functions as the topic. One advantage of considering *-re* as such a sentence-level connector is that it allows several consecutive Topics to be introduced. Thus it is not uncommon to find sentences such as the following:

- (65) áá meda-ná íníágaa-para-re kóbere áá meda-ná
 íníágaa-para-re páá pea (*man, another-pos, face-loc-TOP, black, man, another-pos, face-loc-TOP, light, it makes = 'On the face of a man, i.e. on the face of a native, there is light'*)

$s_{them} \rightarrow TOP + -re + K + COM$, where

TOP : áá medaná íníágaapara-re 'on a man's face'

: kóbere áá medaná íníágaapara-re
 'on the face of a native'

COM : paa pea 'there is light'

- (66) go áá-re ní-para áгаа lá-ina lá-a-re ní-ná aapá
 (that, man-TOP, I-rec, talk, say-CO dp 2 sg,
 say-he did-TOP, I-pos, father = 'That man, the
 one who told me to speak, is my father')

Constructions such as (65) and (66) can be analysed as consisting of simple conjoined phrase-level tagmemes by the use of a K rule. However, much more embedding occurs in the Topic than is characteristic of a sentence-level tagmeme.²³ For example, the second Topic marked in (66) [nípara...láare] is expounded by an embedded quotative sentence. By introducing Thematic Sentence types, the analysis would be:

- (65') $s_{them} \rightarrow TOP_{\alpha} : np_{loc} + TOP_{\alpha} : np_{loc} + COM:cl_{tr}$
 where α indicates TOPIC identity

- (66') $s_{them} \rightarrow TOP_{\alpha} : np_{des} + TOP_{\alpha} : s_{quot} + COM:np_{pos}$

It must be further stated then that any s_{them} , whose TOP and COM are expounded by verbal clauses, has the semantic interpretation of condition. This would seem to be the structure underlying all conditional sentences. For example:

- (67) kógono áfpápúlú pa-lima-re kógono dia ya-lia (work,
 quickly, make-we will-cond, work, no, it-will =
 'If we work quickly, the work will be done')
- (68) áápí alóma pá-lia-re lasá méá-lia (who, quickly, go-he
 will-cond, rice, get-he will = 'Whoever goes quickly
 will receive the rice')

In (67) and (68) the TOP has a sub-function of Protasis; the COM a sub-function of Apodosis. The sentence has a conditional interpretation and the analysis is:

- $s_{cond} \rightarrow PROT -re : cl_{tr,intr} + APOD : cl_{cmp,tr}$

Such sentences imply that -re may not be a true sentence connector in that it cannot be freely moved when verbal clauses are juxtaposed. It marks only the PROT.²⁴

6.26 Quotative Sentences (s_{qt})

Quotative sentences consist of two tagmemes: the Identification (ID) and the Quote (Q). The Identification is typically discontinuous, i.e. it appears on both sides of the Q. The Q is, in turn, unlimited in its range of syntagmemic exponents. The functional pattern of a quotational sentence is similar to that of a ditransitive clause where the Object

tagmeme is analogous to the Q and expounded by an embedded construction. However, the Predicate tagmeme in a s_{qt} is expounded by a limited set of verbs.

The ID tagmeme has exponent s which may signal who the quoter is, the time when the Q is made, to whom the Q is made, whether the Q is direct or indirect, whether it is reported, and so on. The nuclear exponents of the ID are (where square brackets mark the interrupting Q tagmeme):

ID : $S_{AGN} + (O_{REC}) + \{P [Q] P\}$, where P must be identical if it occurs on both sides of Q and is expounded by quotative verbs (v_q).

The v_q are of a small set, including the following: *lá* 'to say'; *yalá* 'to yell'; *lágíá* 'to tell (to a 1st or 2nd person)'; *lákála* 'to tell (to a 3rd person)'; and *áгаа méá* 'to ask'. This set also includes a sub-set of verbs which are perceptive in nature: *kóne sá* 'to think'; *kóne rúgulaa* 'to forget'; *kóne saapíra* 'to remember'; *íní ria* 'to lie'; *nímínaa* 'to understand'; *mákíraa* 'to lie'; and in certain instances perhaps *págá* 'to hear' and *áda* 'to look'.

Some examples (where the Q is enclosed in brackets) are:

- (69) *go áá-mé ta [ne-ná aapá épé ta] ta* (that man-AGN, he says, you-pos, father, good, he is, he says 'That man says "Your father is good"')

$s_{qt} \rightarrow ID + Q$, where Q : cl_{cmp} and the P occurs twice, each time expounded by the v_q *ta* 'he says'.²⁵

- (70) *nipú-mí láá-lo [ní pú-lu] ta* (he-AGN, say alo-des, [I go-I am] say-he is = 'He says that he is going')

$s_{qt} \rightarrow ID + Q$, where Q : $e_{cl_{int}}$ meaning 'I am going' and the first P : *láá-lo* (say alo-des) identifies the Q as indirect.

- (71) *nipú-mí ta [ní pú-lu] ta* 'He said: "I am going"'

In example (71) the embedded clause is exactly the same as (70) but the sentence is a direct quote. In direct quotes one form of the verb 'to say' is optional, but if both occur they must be the same form.

- (72) *né-mé kóne í [nipú épé áá] kóne í* (I-AGN, thought, put-I have [he good man] thought, put-I have = 'I think "he is a good man"')

- (73) né-mé kóne sú-la-lo [nipú épé áá] kóne sá-wa
'I thought that he was a good man'

In examples (72) and (73) the embedded form is a np_{des} .

In other words, to form an Indirect Quote the verb which expounds the P immediately before the Q co-occurs with the desiderative suffix -lo. Notice also:

- (69a) go áá-mé lá-lo ne-ná aapá épé ta ta *'That man said that your father is a good man'*

The final ta may also be deleted without any change in the meaning of the sentence, but it is usually retained so that the tense of the Q can be signalled. Some further examples of indirect quotes are:

- (74) áá meda-mé lá-lo go pora-re adaalu ía tea (man, another-AGN, say-des, that, road-TOP, long, it has, he says = *'Another man says that the road goes on for a long ways'*)

$s_{quot} \rightarrow ID + Q$, where $ID : S\text{-mé} + lá\text{-lo...tea}$
 $Q : s_{them}$, where $s_{them} \rightarrow TOP : np\text{-re}$
 $+ COM : cl_{cmp}^{26}$

- (75) áá meda-mé lá-lo mó-go yaé-ná keda-re ake-pu-yaa ta (man, another-AGN, say-des, that, something-pos, heavy-TOP, what-qan-ques, he says = *'A man says that (he wonders) how much that thing weighs'*)

The Q in (75) is expounded by a s_{them} , similar to (74).

It appears that all perceptive notions are to be semantically interpreted as indirect, regardless of the fact that they have no special pre-Q verb forms (and thus parallel the direct quote in (76) structurally):

- (76) áá-mé lá-a ní pá-lua lá-a (man-AGN, say-he did, I, go-I will, say-he did = *'The man said "I will go"'*)
 (77) áá gúpá kóne sá-a ní pá-lua kóne sá-a (man, like this, behaviour, put-he did, I, go-I will, behaviour, put-he did = *'The man decided that he would go'*)
 (78) nipú-mí nipú púa-a ádea (he-AGN, he, go-he did, look-he has = *'He can see (perceive) that he has gone'*)

In (77) kóne sá 'to think' and in (78) áda 'to look' parallel the verb lá 'to say' (76) in direct quotes. The desiderative suffix -lo does

not occur. It should be remembered that postulating these verbs as v_q is only in relation to the syntagmemic pattern which characterises a s_{qt} , not in respect to every instance when they occur. Usually $kóne$ $sá$ is a simple complement in sentences. Note again its use in a Coordinate Sentence:

- (79) *mataa-mé nipú kóne sú-a irikai rátu tea (cassowary-AGN, he, behaviour, put-CO sp, dog, anger, say-it will = 'The cassowary is one which knows how to frighten dogs')*

$s_{seq} \rightarrow ANTE : cl_{cmp} + CO : sp\ ego + SEQ : cl_{cmp}$

Both $sá$ 'to put' from $kóne$ $sá$ 'to think' and $lá$ from $rátu\ tea$ (or $rátu\ láa$ for the past) are in this sentence complement verbs.

In an indirect quote number is indicated only by the v_q at the end of the sentence:

- (80) *áá-mé nipú-para lá-lo akea pú-a rúmaa-lima yapae sí-mi (man-AGN, he-rec, say-des, what, make-CO sp, portion out-we will, or, say-they did = 'The men said that they did not know how to portion out the things')*

In (80) although $áá-mé$ is ambiguously 'man' or 'men', the number of the quoter is indicated in the final $v_q : sími$ 'they said'.

An additional type of s_{qt} is one which is reported to someone else. It appears to always consist of some form of the verb 'to say', according to the tense desired plus $-na$. An example is:

- (81) *áá-nu pé-na-loa sana nipú onáá lákelo-a pawá púlupaa-pe sa (man-col, go-CO dp 3-ser, report, he, people, tell-CO sp, slowly, go-pl-imm imp, he said = 'After the men were said to have gone he told the people "Go slowly"')*

However, the whole sentence is also coordinate and consists of three Bases:

$ANTE_1 : áánu péna\ loa$ 'after the men had gone'

$ANTE_2 : nipú\ onáá\ láké\ loa$ 'and he told the people'

$SEQL : pawá\ púlupaape\ sá$ 'he said "go slowly"'

The function of $sana$ may be more than one: in addition to marking reported speech, it may be the same form as the $-na$ in the preceding clause [... $pé-na-loa$], or the similarity in form may be coincidence.

6.3 MULTIPLE FUNCTIONS

There are often examples of sentence-level tagmemes which are marked for more than one function. In particular, coordinated Bases may have more than one marker. Note the function of sequential coordination occurring in combination with the normal topic marker in the following sentences:²⁷

(82) íra-baa-wa-re épa-lua (*cook-cont-CO sp alo-TOP, come-I will* = 'After I leave it cooking for him, then I will come')

(83) ní áda-no-loa-re ne-ná walá méá (*I, look-CO dp 1 sg-ser-TOP, you-pos, again, take-imp* = 'After I have seen it, you may have it again')

Instead of a simple conjoining (*and...then*) or condition (*if...then*), the meaning is a combination akin to '*contingent upon...then*'.

Other sentences have been noted which are simultaneously marked for coordination and reason:

(84) káará-para onáá píri-na-ga nipú-ná pea pae (*car-in, people, sit-CO dp 3-RE, it-pos, it does, or* = 'Since people are in the car (it goes), or is it done by itself')

$s_{re/seq} \rightarrow RE/ANTE + RS/SEQL$, where the tagmemes are expounded respectively by a cl_{int} and cl_{tr} . Some of the problems inherent in such an analysis may in fact be resolved when the discourse features of Kewa are examined in more detail.

Any sentence is also marked for mode. Most sentences which have been given thus far have been declarative, i.e. unmarked, or subjunctive. Sentences may also be marked as interrogative or emphatic. The imperative mood is marked firmly by a series of terminal suffixes which have been described in Chapter 3 on word classes.

Sentences which have the clitic *-yaa* attached to the exponent of their final tagmeme may either indicate a yes-no type of response, or simply make emphatic the normal question form:

(85) pá-lua-yaa (*go-I will-inter* = 'Shall I go?')

(86) oná-yaa (*woman-inter* = 'Is it a woman?')

(87) aa-rábó-yaa (*ques-time-inter* = 'When?')

(88) áápí-ná-yaa (*who-pos-inter* = 'Whose?')

Sentences which are not interrogative, but which indicate emphasis, can be marked with the clitic *-raa*:

(85a) *pá-lua-raa* 'I shall go!'

(86a) *oná-raa* 'It's a woman!'

(87a) and (88a) are not permissible: **aa-rábó-raa*; **áá-pí-ná-raa*.

6.4 PRE- AND POST- POSED SENTENCE TAGMEMES

At any given level certain tagmemes are nuclear (diagnostic to the syntagmeme type, but not necessarily obligatory), while others are peripheral. Longacre (1967) outlines what he calls Pre-posed tagmemes, which are peripheral to any sentence type and fill a marginal slot, analogous to a clause-level tagmeme such as Adjunct. These have not been examined in detail in Kewa but the following seem to illustrate Pre-posed tagmemes (enclosed in square brackets):

(89) [*áá meda.mó-pare-ípu-la*] *go áá-re áá-pí-yaa* ([*man, another, over there-at, come-he is*], *that, man-TOP, who-ques* = 'A man is coming over there--who is that man?')

Here the pre-posed tagmeme is expounded by a sentence which is re-identified as the topic by *go áá-re* 'that man', i.e. 'the man who is coming over there'. The following sentence has a pre-posed pheriphery with a *cl_{tr}* exponent, but the function is one of reason or cause:

(90) [*go ada suba-para yaí ípu-la*] *yági rásu ríaa ípu-a aló pa-mina-paa* ([*that, house, peak-LOC, rain, come-it is*], *grass, pull-ger ego, carry-ger alo, come-CO sp, quickly, do-CO dp l pl-excl* = 'The rain comes in at the peak of this house so let us go quickly, pull some grass and carry it here')

N O T E S

1. See, for example, Longacre (1967b) for illustrations of some of these in English. The description of a sentence given in this chapter has followed Longacre's work. On the other hand, in "Kewa Sentence Structure", (published in 1967 but written in 1963) I analysed East Kewa sentences in terms of reference and sequence markers, principal and subordinate clauses. The former were usually function point (tagmeme) markers, the latter exponents; together they should have constituted a sentence-level tagmeme. At the time I did not see this very clearly and the article must accordingly be viewed as preliminary. In "Kewa Clause Markers" (1965a) I briefly mentioned sentences as simple, compound and complex. The latter included all subordinate relationships.

2. P. Healey's terms (1966:14ff) for the opposing sets of suffixes are homopersonal and heteropersonal, finite and non-finite. These terms come closer to describing the semantic nature of the Kewa markers, but again (similar to the other terms mentioned above) refer to the relationship of the *subjects* between clauses.

In a recent study, A. Loving and H. McKaughan (1964) describe dependent medial and dependent final verbs in Awa (Eastern Family). Their medial verbs anticipate a second clause and/or its subject. R.A. Young (1964:46) calls secondary verbs those which occur in sequence within one sentence (i.e. in the medial position), while primary verbs have 'no formal dependent relationship with another clause in the sentence'. The terms primary and secondary are also used in McCarthy (1965), but in reference to subject markers between clauses. See also Chapter 3, notes 13 and 14 for other references.

3. Where person means the grammatical categories 1, 2 or 3. The markers alone never indicate the number of the 3rd person (free pronouns must be used) and in addition the number of the person may vary across clauses, but the grammatical function of Subject is identical from clause to clause regardless. For this reason I do not use the terms same-subject vs. different-subject. The two sets are Egocentric and Altrocentric.
4. In narrative texts the Antecedent has been repeated up to five times, and a reasonable upper limit could probably be defined. On the theoretical problem of adding units infinitely in a system, see C.F. Hockett (1968; Chapter 3).
5. P. Healey (1966) therefore concludes that clauses which are 'chained' with person-number-tense specified only in the finite verb are on a different grammatical level which she terms the 'dependent' level. For counter arguments and an alternant analysis of her materials see R.E. Longacre (n.d.).
6. In KVM (1964:109ff) the suffixes for E. Kewa are listed as showing change of *subject*, but it is pointed out that it is the change in the person of the actor which is important. Cf. §3.22.3 for the total array of W. Kewa forms, as well as MP rules which apply to them.

Those which can be given in §3.24; see also KVM for co-occurrence restrictions in E. Kewa.
8. See Chapter 3, note 15, for an explanation on the 'irregularities' of the verb 'to go'.
9. In E. Kewa (Franklin 1964:112) the form is *-loaa* or *-toaa* corresponding to *ego* and *alo* benefaction. In W. Kewa the *alo* benefactive form is *-ta*.
10. Imperative is signalled by a special set of terminal suffixes (§3.21.1). However, the verb may still also be subcategorised as intransitive.
11. In E. Kewa (KVM 1964:128-9) the corresponding form is *-loma*. However, there I incompletely identified it simply as a dp Nonparticipant Benefactive [=altrocentric] marker.

12. In E. Kewa the same form is called 'apposition' (KVM, p. 124), mainly because the related actions appear contrary. The actions are opposite only in the sense that they cannot be carried on at the same time.

13. Cf. KVM, p. 122 for the parallel form in E. Kewa.

14. If this is the case, *-pana* parallels such forms as *yana* or *sana*, where the action is reported by someone else (a dp hence *-na*). Such actions which are reported are thus affirmed (by *ya-*), quoted (with *sa-*, *la-* or *ta-*), or supposed (by using *pa-*).

The relationship between such clauses is asymmetrical and an adequate semantic explanation may require entailment rules (as outlined in Fillmore 1965). For example, '*lest you fall, go slowly*' would entail (where the symbol \supset means '*entails*' or '*supposes*')

$\left\{ \begin{array}{l} \text{expectation (future (you will fall } \supset \text{ imperative} \\ \text{(go slowly))} \\ \text{purpose (future (you will fall } \supset \text{ imperative} \\ \text{(go slowly))} \\ \text{negative (do not fall)} \end{array} \right.$

15. Note that this form is similar to the normal non-singular imperative morpheme (*-lepaa*). These dp markers appear to be the only instance of any sort of an exclusive-inclusive dichotomy in the language. Again entailment rules might provide for (31):

$\left\{ \begin{array}{l} \text{expectation (future (we two will eat } \supset \text{ imperative} \\ \text{(you won't))} \\ \text{negative (do not eat it)} \end{array} \right.$

In other words, entailment rules provide the logical **SEQUEL** to many coordinate constructions.

16. The form *-ga* is equivalent to E. Kewa *-le* (\sim *-li*) described in 1965a:282 and 1967b:30.

17. Cf. Longacre (1967:18ff) for observations on English.

18. This sentence also illustrates the fact that many, if not all, so-called equational clauses (§4.3) in context can actually be based upon fuller clause types: *áá-re pawási* '*man (or men) is slow*', e.g. upon the intransitive clause: *áá-re pawási pámea* '*men travel slowly*'.

ples as 65) and is therefore similar to a relative such as 'who', 'that' or 'which'.

25. The ta 'it says' following *épe* 'good', although the same verb, is in a complement relationship (Cf. §4.5).

26. The cl_{cmp} has the shared np between it and the TOP exponent deleted, so that *pora* 'road' does not occur twice. *go pora-re pora adaa-lu ía* would also be acceptable.

27. Rather than being marked for more than one sentence-level grammatical function, some of the notions such as conditional may be semantic co-functions and range over various sentence types. For a discussion of multiple tagmeme function, see for example, Reid (1966:8-11).

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 - AL = *Anthropological Linguistics*
 - ASEHNG = *Anthropological Studies in the Eastern Highlands of New Guinea*, University of Washington Press
 - GUM = *Monograph Series on Languages and Linguistics*, Georgetown University
 - LCC = *Linguistic Circle of Canberra Publications* (now called *Pacific Linguistics*)
 - PL = *Pacific Linguistics*
 - OLM = *Oceania Linguistic Monographs*

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