

PRECIS

This study consists of two parts.

Part I contains a review of previous linguistic and other studies made in the Central and Northern Districts of Papua (hereafter referred to as Central Papua) as background information to an integrated historical and linguistic description of the hitherto undescribed Koiarian Language Family. This family consists of six non-Austronesian languages and stretches across Papua from the coast around Port Moresby almost to the sea on the north coast at the eastern end of the Hydrographers' Ranges. The family is defined primarily on lexicostatistic evidence although grammatical and phonological characteristics of the family are also presented and discussed. Part I concludes with a discussion of a possible centre of distribution of the Koiarian languages.

Part II contains a syntactic sketch of Koiari, one of the member languages of the Koiarian Family which was studied in more detail. This sketch uses Noam A. Chomsky's theory of Transformational Generative Grammar as a framework to present a set of Base and Transformational rules which generate many Koiari sentences. Other, more complex aspects of the grammar of Koiari, are presented and discussed informally within this framework. This sketch will provide the basis for

a continuing and more detailed study of the language later.

The two parts of the thesis are separate though interdependent units each with its own Introduction, Appendices, and Bibliography for convenient presentation. Both parts are interdependent: in Part I Koiari is defined as a language in terms of its dialects and is placed in its linguistic setting in relation to the other languages of the family, while the syntactic sketch of Koiari in Part II provides deeper insight into the grammatical structure of one of the family's constituent languages.

This study aims at making a contribution to our linguistic and historical knowledge of an area of Papua, which, although the first to be contacted and pacified by European colonizers, has largely escaped scientific attention.

T.E. Dutton

THE KOIARIAN LANGUAGES OF CENTRAL PAPUA:
An Historical, and Descriptive Linguistic Study

by

Thomas Edward Dutton

This thesis was submitted in partial
fulfilment of the requirements for
the degree of Doctor of Philosophy in
The Australian National University

February 1969

Except where otherwise acknowledged in the text,
this thesis represents the original research of the
author.

T.E. Dutton

PREFACE

This thesis is the outcome of an interest I first developed in the indigenous peoples of the Port Moresby area of the Central District of Papua with whom I worked some ten years ago as an Education Officer for the Administration of the Territory of Papua and New Guinea. At that time I was unacquainted with linguistics, but was, nonetheless, surprised at the poor body of knowledge about the peoples with whom I was working, especially the Koita and Koiari. This deficiency was rather more surprising since these districts were the first to be contacted and pacified by our European colonizers.

In 1966 I was given the opportunity of revisiting New Guinea for linguistic fieldwork and so I returned to the area of my former interest. Initially I planned to make a descriptive and comparative study of what was generally referred to as the Koita-Koiari 'dialects'. These are non-Austronesian 'dialects' which have long been recognised as being related, though they have never been adequately defined geographically nor described linguistically. However, during my pre-fieldwork reading I came upon the suggestion (first made by Strong and later repeated by Capell) that these 'dialects' may be related to other non-Austronesian ones as yet even less clearly defined on the north side of the Owen Stanley Range. It seemed natural, therefore, as a beginning

point in the description of the linguistic position of the Koita-Koiari 'dialects' to determine the boundaries of them as well as something of their relationship with one another and with neighbouring ones. I planned to accomplish this by a linguistic survey of as many villages as possible in the time at my disposal after spending some months learning and recording the local 'language' used by Kailakinumu villagers on the eastern end of the Sogeri Plateau.

As the survey developed I also became interested in the historical implications of the linguistic picture that was unfolding (particularly in regard to the movement of what I now call the Koiarian peoples), and of the geographical distribution of other non-Austronesian (or Papuan) and Austronesian languages in the immediate area. In this thesis therefore I have attempted to do three things:

- (a) to define and describe the Koiarian Language Family;
- (b) to set down and integrate historical information on the recent movement of the Koiarians with an account of the present linguistic situation in the area;
- (c) to give a syntactic sketch of Koiari, one of the member languages of the Koiarian Family, which was studied in more detail.

This thesis therefore falls conveniently into two parts.

Part I contains a review of previous linguistic and other studies made in the Central and Northern Districts of Papua (which, for the purposes of this study is referred to as Central Papua) as background information to an integrated historical and linguistic description of the hitherto undescribed Koiarian Language Family. This family consists of six non-Austronesian languages and stretches across Papua from the coast around Port Moresby almost to the sea on the north coast at the eastern end of the Hydrographers' Ranges. The family is defined primarily on lexicostatistic evidence although grammatical and phonological characteristics of the family are also presented and discussed. Part I concludes with a discussion of a possible centre of distribution of the Koiarian languages.

Part II contains a syntactic sketch of Koiari, one of the member languages of the Koiarian Family which was studied in more detail. This sketch uses Noam A. Chomsky's Aspects of the Theory of Syntax Transformational Generative theoretical framework to present a set of Base and Transformational rules which generate many Koiari sentences. Other more complex aspects of the grammar of Koiari are presented and discussed informally within this framework. This sketch will provide the basis for a continuing and more detailed study of this language later.

The two parts of the thesis are separate though interdependent units each with its own Introduction, Appendices, and Bibliography for convenient presentation.

Both parts are interdependent: in Part I Koiari is defined as a language in terms of its dialects and is placed in its linguistic setting in relation to the other languages of the family, while the syntactic sketch of Koiari in Part II provides deeper insight into the grammatical structure of one of the family's constituent languages.

In broad terms this study aims at making a contribution to our linguistic and historical knowledge of an area of Papua, which, although the first to be contacted and pacified by European colonizers, has largely escaped scientific attention.

I have been stimulated in this work by others also interested in the Port Moresby area, especially by my supervisors Professor S.A. Wurm and Dr C.L. Voorhoeve, by Mr J. Golson, and Mr N.D. Oram of the Australian National University, by Dr A.V.G. Price, Port Moresby, and by Dr A. Capell of the University of Sydney who kindly loaned me his Koita and Koiari materials. I should also like to thank my many colleagues and friends who have discussed aspects of my work with me, though no responsibility for the final form of this study rests with them.

I am indebted to the Australian National University for the opportunity and funds made available to me to make this initial study, and particularly to the following personnel of this institution for their respective aid: to the Department of Human Geography for the preparation of maps that are being used in a forthcoming publication of Part I of this thesis; to

Miss M. Rose, Supervising Programmer, Programming Section, Research Schools of Social Sciences and Pacific Studies, for the compilation of a morpheme concordance programme and its application to my Koiari text material.

I should also like to express my sincere thanks to Messrs A. Pence (Director), B. Hooley (Associate Director), D. Wilson, J. Austing, J. Parlier, and H. Weimer, members of the Summer Institute of Linguistics, from whom I received nothing but kindness, and who shared and discussed with me their published and unpublished materials in their respective and related languages, and/or discussed problems of mutual interest. I am no less indebted to members of the Christian Missions who generously gave of their knowledge and experience in the Koiarian area. I am especially indebted here to Rev. P. Chatterton, M.H.A., and Rev. F. Butler of the London Missionary Society, Port Moresby, and to Fr. J. Sharpe, Rev. W. Haughton and Mr K. Farrow of the Anglican Mission, Northern District.

I also wish to express my gratitude to the following Officials of the Administration of the Territory of Papua and New Guinea for their sympathetic co-operation: Messrs J.K. McCarthy (Director), J. Gauchi (Assistant District Commissioner, Port Moresby), E.S. Sharp (Assistant District Commissioner, Rigo), C. Day (Assistant District Commissioner, Kokoda), C. Viner-Smith (Patrol Officer, Afore) of the Department of District Administration; Mr R. Black of the Department of Agriculture, Stock and Fisheries,

Popondetta; Messrs J.T. Bramell and F. Jones of the Land Titles Commission, Port Moresby; and to a number of plantation personnel (especially to those of Itikinumu and Subitana Rubber Estates, Sogeri, and Mamba and Kokoda Rubber Estates, Kokoda), who, in very practical ways, assisted in the production of this volume.

Lastly, but no less sincerely, I should like to thank all those indigenous informants who co-operated with me in providing the linguistic materials upon which this thesis is based.

T.E. Dutton

TABLE OF CONTENTS

	Page
TITLE PAGE	i
DECLARATION	ii
PREFACE	iii-viii
TABLE OF CONTENTS	ix-xi
A NOTE ON PRESENTATION	xii
<u>PART I:</u> <u>HISTORICAL AND DESCRIPTIVE ACCOUNT OF</u> <u>THE KOIARIAN LANGUAGE FAMILY</u>	1-182
1.0 PRELIMINARIES	3-8
1.1 Introduction	3
1.2 Materials	5
1.3 Methods	5
1.4 Conventions	8
2.0 OVERVIEW OF STUDIES ON CENTRAL PAPUA	11-20
2.1 Linguistics	11
2.2 Anthropology	15
2.3 Genetics	17
2.4 Archaeology	17
2.5 Geology	19
3.0 THE KOIARIAN LANGUAGE FAMILY	23-76
3.1 Introduction	23
3.2 The Koiaric Sub-Family	25-59
3.21 General	25
3.22 Koita	26
3.23 Koiari	37
3.24 Mountain Koiari	48
3.3 The Baraic Sub-Family	62-76
3.31 General	62
3.32 Managalasi	62
3.33 Barai	66
3.34 Aomie	74

4.0	CONCLUSION	79-81
5.0	APPENDICES	
5.1	Population Figures For Languages Of The Koiarian Family	82
5.2	Listing Of Linguistic Materials Collected	89
5.3	Koiarian Origin Stories	92
5.4	Contrast Between Koiari-Barai and Motu-Sinagoro	107
5.5	Outline History Of Contact With, And Pacification Of, Koiarian Peoples	113
5.6	Comparison Of Grouping Of Non-AN Languages By Ray, Capell, And Dutton	116
5.7	Six Koiarian Word Lists	117
5.8	Phonological Characteristics Of The Koiarian Languages	131
5.9	Grammatical Characteristics Of The Koiarian Languages	146
6.0	BIBLIOGRAPHY	167
Maps:	1 Language Families of Central Papua	1
	2 Koiarian Languages	2
	3 Capell's Regional Languages	9
	4 Distribution of Archaeological Sites in Central Papua	10
	5 Distribution of Koita and Motu Villages	21
	6 Distribution of Koiari Villages	22
	7 Distribution of Mountain Koiari Villages	46
	8 Movement of Villages in the Kokoda Area	47
	9 Distribution of Managalasi Villages	60
	10 Distribution of Barai Villages	61
	11 Distribution of Aomie Villages	77
	12 Koiarian Dialect Chains	78

	<u>PART II: A SYNTACTIC SKETCH OF KOIARI</u>	183-443
7.0	INTRODUCTION	184-205
7.1	Aim	184
7.2	Theoretical Framework: Chomsky's 'Aspects' Model	184
7.3	Two Recent Proposed Revisions of Chomsky's 'Aspects' Model	186
	7.3.1 Fillmore's Proposals	186
	7.3.2 McCawley's Proposals	191
7.4	Choosing a Descriptive Framework	195
7.5	The Application of Chomsky's 'Aspects' Model to Koiari	197
7.6	Presentation	200
8.0	KOIARI BASE COMPONENT	206-346
8.1	Phrase-Structure Rules	206
8.2	Lexical Rules	308
9.0	TRANSFORMATIONAL SUBCOMPONENT	347-400
9.1	Rearrangement and Agreement Transformations	347
9.2	Embedding and Conjoining Transformations	365
10.0	MORPHEME REALIZATION RULES	401-12
11.0	MORPHOPHONEMIC RULES	412-17
12.0	BIBLIOGRAPHY	418-38
13.0	APPENDIX: Summary of Phrase- Structure Rules	439

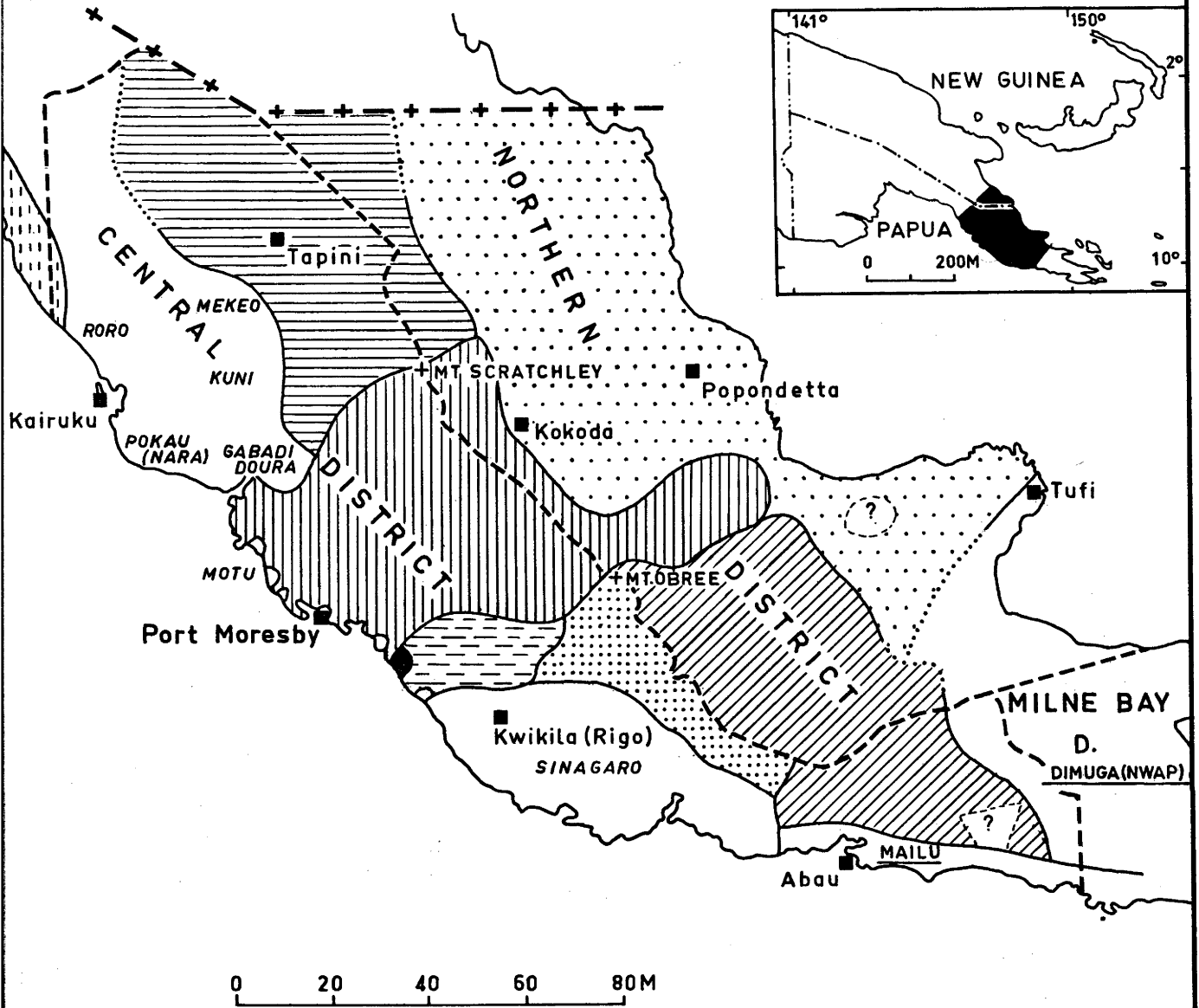
A NOTE ON PRESENTATION

For technical reasons the decimal numbering system used in Part II is slightly different from that used in Part I.

PART I

HISTORICAL AND DESCRIPTIVE ACCOUNT OF THE
KOIARIAN LANGUAGE FAMILY

LANGUAGE FAMILIES OF CENTRAL PAPUA



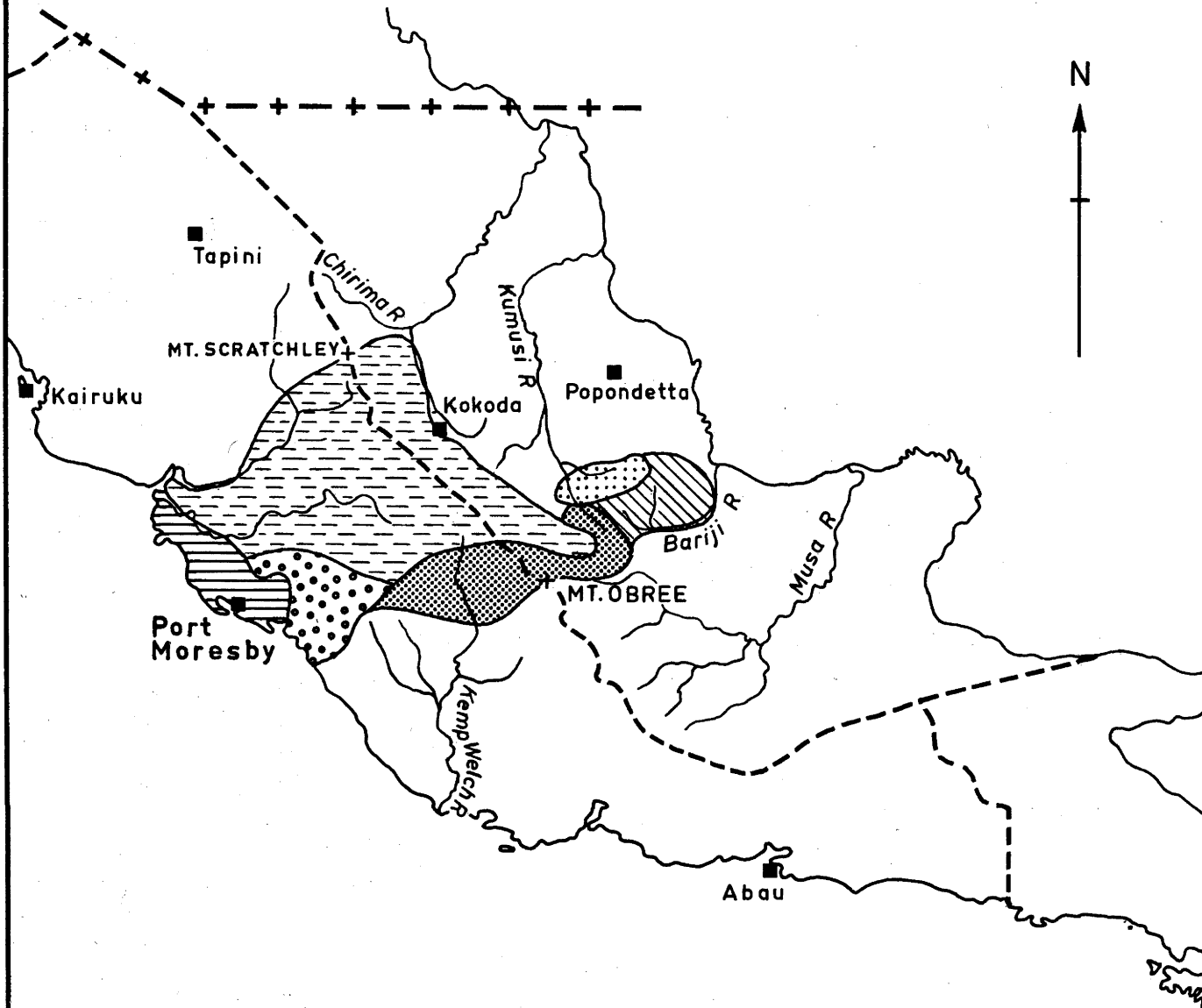
- GOILALAN
- BINANDEREAN
- KOIARIAN
- KWALEAN
- MANUBARAN
- YAREBAN
- MULAHA (EXTINCT)
- TOARIPIAN

- LANGUAGE FAMILY BOUNDARY
- UNCERTAIN BOUNDARY
- ADMINISTRATIVE DISTRICT BOUNDARY
- UNCERTAIN LANGUAGE AREA
- MOTU AN LANGUAGE
- MAILU OTHER NON-AN LANGUAGES OF UNCERTAIN RELATIONSHIP



MP

KOIARIAN LANGUAGES



- | | | | |
|---|-----------------|---|------------|
|  | MOUNTAIN KOIARI |  | BARAI |
|  | KOITA |  | MANAGALASI |
|  | KOIARI |  | AOMIE |

MP

1.0 PRELIMINARIES

1.1 INTRODUCTION

Village communalects¹ in Central Papua² may be broadly classified into two distinct genetically unrelated groups--Austronesian (hereafter symbolised AN) and non-Austronesian (hereafter symbolised non-AN).³ The AN languages are to be found scattered around the coast and inland for some distance in the Rigo and Kairuku Sub-Districts of the Central District (see Map 1 p.1). Some of these languages are Mekeo, Roro, Gabadi, Doura, Motu and Sinagoro. These are all closely related (Capell, 1943; 1954; 1962a).

The non-AN or Papuan languages can also be grouped into genetically related units of varying sizes and degrees of closeness of relationship. They occupy the remainder of Central Papua. Hitherto their separateness has been emphasised but my research suggests that most of them belong to a common stock, and possibly phylum, distantly related to the languages of the Central Highlands of New Guinea (Wurm, 1968).

The Koiarian Family is central to this large non-AN grouping. It stretches across Papua from the coast around Port Moresby almost to the sea on the north coast at the eastern end of the Hydrographers' Ranges. It is surrounded by other distantly related families of the

¹

"Communalect" is here used to designate the speech of a particular community (e.g., village, or part-village) before that speech is classified as dialect, language, etc. by the methods outlined below.

²

I use the term Central Papua to refer to the area corresponding roughly to the Central and Northern Districts of the Territory of Papua and New Guinea.

³

"Non-Austronesian" and "Papuan" are taken to be synonymous. Hitherto these terms have been used in a non-classificatory way, but Wurm (1968) has lately suggested that they can now be used as classificatory terms for the majority of languages in New Guinea, implying genetic relationships between, and in many instances, a particular type of linguistic structure in the languages so labelled.

All non-AN languages belong to a large group of incompletely classified languages extending from "the Santa Cruz Islands in the east, across all New Guinea, as far as the islands of Halmahera, and Timor in the west" (C. and F. Voegelin, 1965:2). S.A. Wurm's forthcoming article (1968) gives a good description of the contemporary state of knowledge of these languages in Australian New Guinea.

common stock¹--Goilalan in the west,² Binanderean in the north,³ Yareban,⁴ Manubaran, and Kwalean⁵ to the east. There also used to be an apparently unrelated language isolate--Mulaha or Iaibu (Ray, 1929)--on the south coast near the Motu village of Gaile. This language was first reported by Ray (1907) but is now extinct.

This paper presents a preliminary account of the Kolarian Language Family⁶ and then discusses the historical implications of the linguistic relationship between the languages of this family and neighbouring languages, and of their present geographical distribution. The discussion is based on the preliminary linguistic analysis of the constituent languages of the Kolarian Family and such other linguistic and non-linguistic evidence as is available. This evidence is reviewed in section 2.0. Then the linguistic picture is sketched in section 3.0 with certain historical observations, and a possible centre of distribution for the Kolarian languages is discussed in the conclusion in section 4.0.

1

In giving names to language families I shall use the convention of ending them in -n or -an, even though, for example, the Binanderean Family is normally referred to as the Binandere Family.

2

The Goilalan Language Family consists of Fuyuge, Tauade, Kunimaipa, Weri (Upper Waria River), and Biangai (Wau area). See Pence (1966:66).

3

The Binanderean Language Family is being described by Mr. D.B. Wilson of the Summer Institute of Linguistics in *Papers in New Guinea Linguistics No. 9* (Canberra: *Pacific Linguistics Publications*, Series A - Occasional Papers, No.18). In press.

4

This is a new language family which I have tentatively established from word lists published in early *Annual Reports* and from other lists recently collected by H. Weimer and myself at Safia and Toma respectively. The Yareban Family consists of at least four languages (from west to east): Bariji, Yareba, Bauwaki and Binahari. Mr. and Mrs. H. Weimer of the Summer Institute of Linguistics are describing the Yareba language (Weimer, H., 1968; Weimer H. and N., 1968).

5

The Manubaran and Kwalean Language Families have been established by myself, details of which will be published later.

6

A grammatical sketch of Koiari, one of the member languages of this family, is to be presented as part of a dissertation for the Degree of Doctor of Philosophy at the Australian National University in 1968.

1.2 MATERIALS

Linguistic and other data were collected in over 100 villages in Central Papua between March 1966 and March 1967.¹ These data were gathered from native informants in their own villages, and where this was not possible, from visitors, travellers, and/or relatives in neighbouring villages, or on Government outstations. This information was elicited in Police Motu and/or English, and most of it was recorded on tape.

The linguistic data consist of word lists (mostly "basic" vocabulary) grammatical materials, and texts.² Some elementary intelligibility tests were also conducted. Wurm's modified TRIPP list was used to collect most of the lexical information. This list is a modification of the well-known Swadesh 100-word and 200-word lists to suit the particular features of New Guinea cultures and their geographical locations.³ Wurm's list contains 292 vocabulary items some of which are "cultural" (e.g., pig, sweetpotato) and not counted in determining cognate percentages. Six examples of these lists--one for each Koiarian language--are given in Appendix 5.7.

The non-linguistic data consist of any materials useful for historical interpretations, e.g., lists of old village sites, marriage and warfare patterns, distribution of kinsmen, folk tales about origins and movements,⁴ etc. Other non-linguistic information was subsequently obtained from Mission and Administration officers and records, unpublished patrol reports in the Commonwealth Archives (Canberra), and from other research workers.

1.3 METHODS

Communalects are classified into dialects, languages, language families, and stocks primarily on the basis of a lexicostatistical

1

Over 70% of these villages are Koiarian, and the rest are from neighbouring languages. The results of my survey of languages in the Rigo Sub-District are being prepared for publication.

2

See Appendix 5.2 for a complete listing of materials obtained.

3

For a description of the list and its compilation see Wurm (1960:16; 1960-61:125).

4

See Vansina (1965) on the use and abuse of folk tales and mythologies as historical evidence.

technique similar to the most widely known one of glottochronology.¹ This latter technique is based on the theory that the rate of "basic" vocabulary change in languages is constant² and that this rate can be used for sub-grouping and historical inference. Briefly, the application of the technique consists of comparing the vernacular equivalents of "basic" vocabulary of two or more communalects to determine percentages of shared cognates³ using one of several standardised lists for which retention rates have been worked out on control cases. Hence by applying the same retention rates to non-control cases one can make sub-groupings and historical inferences. Normally Swadesh's lists (already mentioned above) are used in the application of this technique. These have the advantage that Swadesh gives instructions on practical aspects of their use and has worked out retention rates to guide the investigator in his sub-grouping and historical interpretation.⁴

¹

For an exhaustive review of literature on glottochronology (including other lexicostatistic methods) to 1960 see Hymes (1960). For more recent literature see, for example, Dyen (1965, 1966), Grace (1962, 1966), Hewes et al. (1960), Hymes (1966), Olmsted (1961), Teeter (1963).

²

"Basic" vocabulary is presumed to be universal, non-cultural and easily matched with simple terms in other languages, e.g., certain pronouns, objects of natural phenomena, common adjectives, body parts, and simple action verbs.

³

Cognates are historically related words, or words which come from the same original source. Generally the form of one can be predicted from the form of the other by investigator-established "sound laws." In practice one works with "apparent cognates" arrived at by inspection, before sound laws or the etymologies of the words have been established by the comparative method.

⁴

Swadesh (1955) suggests that communalects may be classified into the following categories according to the degree of correspondence between their basic vocabularies:

<u>Category</u>	<u>Cognate %</u>
Phylum	0-12
Stock	12-28
Family	28-81
Dialect	81-99

In this study Wurm's modified TRIPP list was used. Although this is based on the Swadesh lists it contains many more "basic" lexical items--in this survey between 215 and 240 were generally compared--and has not been standardised from control cases. Consequently, for the purposes of this study Swadesh's percentages were taken as a guide only, and other factors and information were taken into account in assigning communalects to the same dialect, or to different dialects of languages, e.g., dialects related in chains are taken as belonging to the same language.¹ In the Managalasi area where the whole district was not surveyed informant opinions of speech differences were taken to suggest what are referred to as isolects. These may later be redefined as dialects, or parts of dialects, on the basis of more adequate linguistic information.

The classificatory technique used for this study was chosen as the most practical for the survey nature of this project. This technique provides a good general picture of the linguistic situation which in turn can then be used as a guide for making more detailed studies in traditional and/or other ways later. It should also be pointed out that, as a natural consequence of classification by this lexicostatistic method, the "family tree" concept of language relationship and divergence is used in the historical interpretation of the Koiarian linguistic picture.² Underlying this model is the belief that old languages "split" into new ones. This splitting off of new languages from old ones can be schematized as branches issuing from a tree trunk. In applying this model to actual languages one is often faced with dialect chains³ of the kind that are found in the Koiarian Family, which are probably just as much the result of diffusion of linguistic features as they are that of splitting (in some sense). Thus the existence of chains raises the practical problem of deciding on which dialect is to be taken as representative of the language for purposes of comparison and of constructing the "family tree." In this paper I have chosen those dialects which are most

1

See Wurm and Laycock (1961-62) for a discussion of the problems of defining language and dialect in New Guinea.

2

See Grace (1965), Pulgram (1953, 1965) and Swadesh (1959a, 1959b, 1967) on criticism of the "family tree" model, and also Pulgram's many articles, and Swadesh (1959b) on the problems of historical interpretation from linguistic evidence.

3

Lamb (1959:42) suspects that the lexicostatistical method such as is used in this study "unduly predisposes the results in the direction of chain relationships."

central to the languages concerned, except in the Koiari and Koita languages where I have taken those with which I am most familiar.

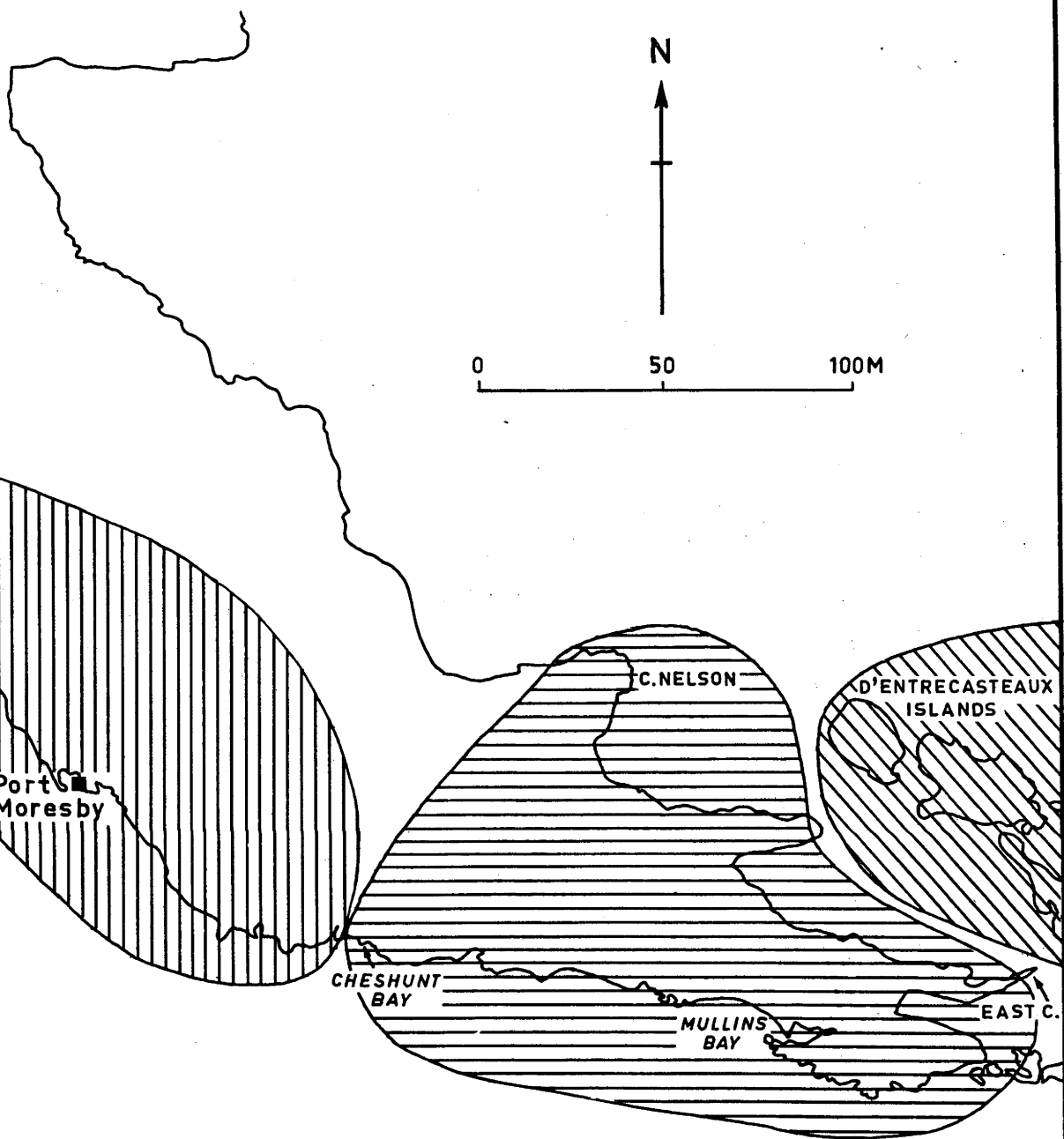
1.4 CONVENTIONS




Throughout this paper place names are spelt according to those suggested by the Administration of the Territory of Papua and New Guinea in its "Village Directory" (1960), although these spellings may sometimes be phonemically inaccurate. In some instances new villages have replaced those listed in this directory. These villages are spelled as they appear on maps compiled by field staff of the Department of District Administration.

Considerable fluctuation will also be noticed in the spelling of section, group, and language names, particularly between the symbols 'l' and 'r.' No attempt is made to standardize the spellings in this paper. Later, however, when the phonemes of each dialect/language have been worked out standardized spellings may be suggested.

Finally, the term "tribe" is used as an undefined term throughout this paper, although tribes are generally considered to be composed of "groups" (Williams, 1932:52-9), or "sections" (Seligmann, 1910:41) in the Koiarian area. Group and section are thus taken to be synonymous terms.

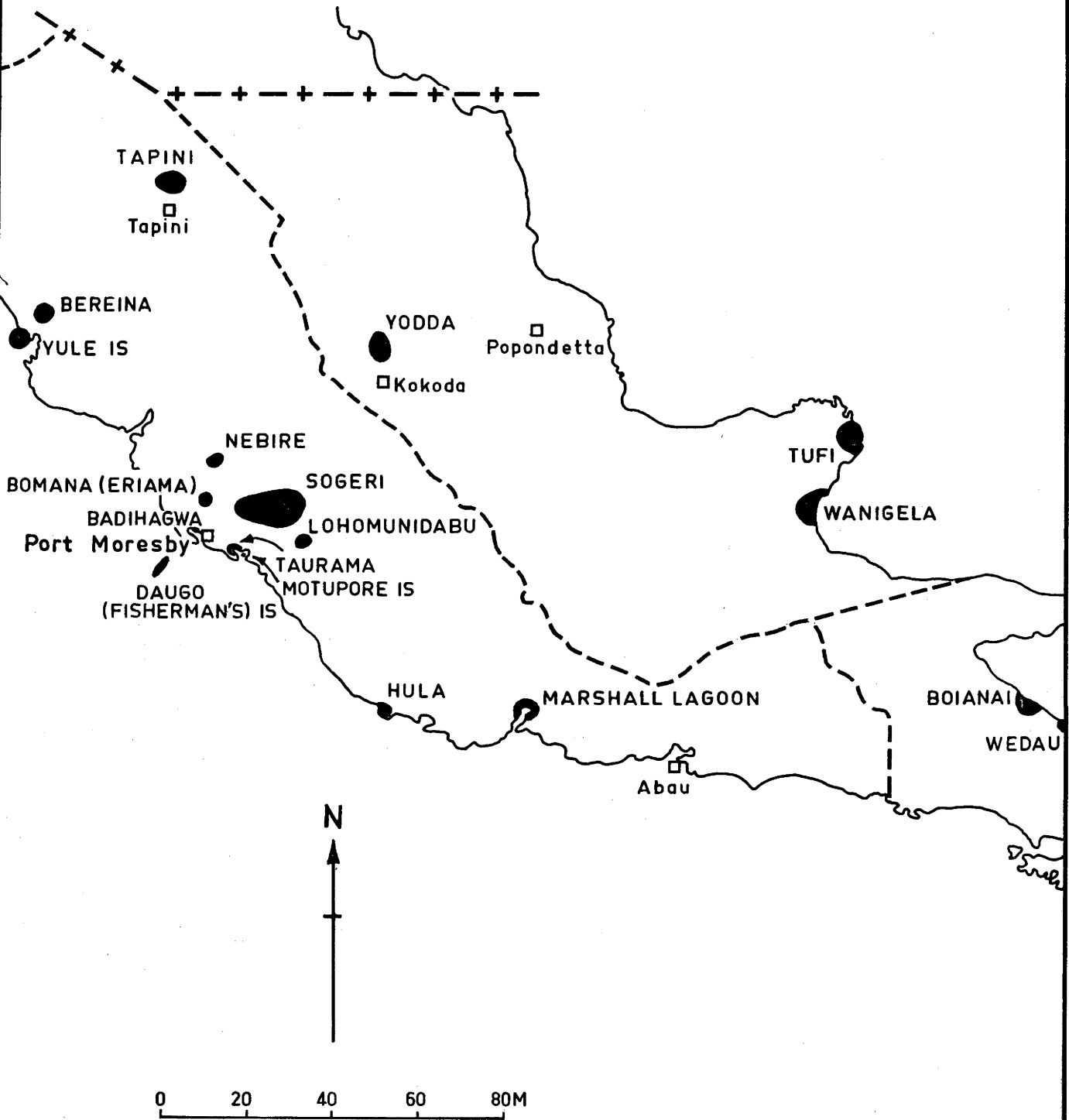
CAPELL'S REGIONAL LANGUAGES



-  CENTRAL REGIONAL LANGUAGE
-  NORTH-EAST COAST REGIONAL LANGUAGE
-  SOUTH-EASTERN REGIONAL LANGUAGE

MP

DISTRIBUTION OF ARCHAEOLOGICAL SITES IN CENTRAL PAPUA



MP

2.0 OVERVIEW OF STUDIES ON CENTRAL PAPUA

2.1 LINGUISTICS

2.11 In the past most research work in Central Papua has been linguistic: the recording of lists by Government officers of the Administration of British New Guinea, and by early missionaries; the classification of languages by Ray (1892, 1895, 1907, 1929) in the late nineteenth and early twentieth centuries, based generally on these lists; comparison of the AN languages of south-east Papua by Capell (1943), and subsequently, of most AN languages of the Pacific by Dyen (1965). The Summer Institute of Linguistics has had teams in the Managalasi and Aomie areas since July 1962 and February 1963, respectively. These teams have collected extensive linguistic and social information, although most of this is still in manuscript form. Recently, synopses of the present state of linguistic knowledge in this area have been published by Capell (1962a), and C. and F. Voegelin (1965).

In reviewing this material AN languages will be covered first.

2.12 In 1943 A. Capell made an important contribution to our knowledge of the peoples of south-eastern Papua, particularly as it concerns migration, with his oft cited *The Linguistic Position of South-Eastern Papua* (Sydney: Australasian Medical Publishing Co.). In this study Capell was primarily concerned with the AN languages around the coast of South-East Papua. As a result, particularly of his investigation of the vocabularies of these languages, and Indonesian, he arrived at an hypothesis for the peopling of this area. He postulated (p.269) that contemporary AN populations originated in various parts of the Indonesian archipelago and migrated into Melanesia in three main "movements": I (from Borneo); II (from Central Celebes); III (from Java, Sumatra, and the Malay Peninsula). Moreover, he also suggested that the AN's of the central coast around Port Moresby arrived at their present locations no later than the beginning of the thirteenth century (p.276). In these movements the Motu were probably late arrivals (p.20).¹

¹

Though this statement is somewhat contradicted by Capell's discussion of the syntax of the AN languages of south-eastern Papua (pp.264-5). In this discussion Capell cites Motu as an example of an AN language with typical non-AN syntactical features, viz. postpositions, and word order subject-object-verb. This evidence would seem to suggest then that Motu did not belong to Movement III, particularly when he later says, "It is not accidental that these languages which show the greatest departure from the typical Papuan syntax are also those in which most

(continued on page 12).

To account for the diversity in languages of south-eastern Papua today Capell postulated the existence of three prehistoric regional languages--North-East Coast, South-Eastern, and Central--prior to the arrival of the Indonesian peoples (see Map 3, p.9). He says that these languages "can be shown to have each been characterised by a certain type of grammar which has determined to a large extent what elements of Indonesian grammar should be taken over in each region and what forms both grammatical elements and words could take" (p.168). The regional languages are described by him on pp.169-97.

Capell's examination of the AN languages also led him to conclude that tribes in New Guinea have been in "constant movement south and east" so that "the South-Eastern Regional Language has been gradually displaced by the North-East Coast Regional Language, and that in turn has been pressed upon by others later coming" (p.191). This conclusion is largely based on an earlier postulation (unnamed by Capell but presumably Haddon's¹) that culture diffusion in New Guinea has generally been from north to south (p.168), and on a discussion (pp.189-91) of several non-AN languages around Mailu on the south-east coast. In the latter discussion Capell points out that Mailu, Bauwaki, Binahari and Lawa are sufficiently closely related languages "to let them be classed as branches of one family" (p.189). These are separate from Dimuga, which belongs to another family. The Mailu "family" also shows some correspondences in vocabulary with Binandere and even more with a "northern dialect" called Kororo. The vocabulary evidence is, however, insufficient to establish phonetic sound laws between the north and the south. Further, Binandere and Mailu show no grammatical similarity.² Some "sporadic agreements" between the Mailu "family" and Kokila (in my Manubaran Family) and Koita (in my Koiarian Family) were also observed.

¹ (continued from previous page)

of the very later material is found, and there is therefore good reason to see in this breakdown of Papuan syntax in these groups the effect of the latest movement, viz. M.III" (p.265).

I am indebted to Mr. A. Taylor of the Australian National University for pointing out this discrepancy in Capell's argument to me.

¹

Haddon's conclusion (based on the examination of the structure of initiation ceremonies in different parts of Papua and New Guinea) was as follows: "it thus appears that more elements of this theoretical cycle of events occur in the north than in the south, which points to the conclusion that this indicates the direction of the cultural migration" (1920:15).

²

Capell did not have grammatical evidence on other languages for consideration at that time.

Capell therefore reasoned that the agreements which he found between Binandere and the Mailu "family" were "probably to be put down very largely to movements of tribes, and the resulting contact, rather than to genetic relationship; it does, however, support the suggestion of a more or less constant movement from north to south in New Guinea, so that the Mailu, for instance, may probably have been an inland tribe at one time" (p.191).

There would seem to me to be very little support for a north-south movement of tribes in this evidence. Firstly, it depends on another hypothesis which is unquestioned. Secondly, supposing that we accept that hypothesis then the observed vocabulary similarities between north and south could just as easily be explained in terms of that hypothesis (i.e., as a result of cultural diffusion) and not necessarily as the result of the movement of tribes. Finally, part of the argument depends on the languages being genetically unrelated. It now appears that the Papuan languages in this area may in fact be genetically related, and if this is so then Capell's argument is seriously affected. However, until more evidence is available I shall accept Haddon's and Capell's hypotheses and refer to them jointly as the Haddon-Capell hypothesis.

As for the existence of prehistorical regional languages, on the other hand, one would expect to find some correlation between their structure as outlined by Capell, and the structure of present day languages, or common structural features of the languages of present day language families. However, there appears to be little structural similarity between the languages of the Koiarian Family and any of Capell's regional languages, particularly his Central one, which roughly corresponds geographically with the Koiarian Family. This is not to say, however, that Capell's regional language hypothesis has been negated. It could be that the regional languages may have been represented by languages unrelated to Koiarian ones, which are now extinct (e.g., Mulaha), or by languages which have not yet been studied in detail (e.g., Kwale).

2.13 Subsequently Chretien (1956) re-examined Capell's data using statistical methods. His results concur generally with Capell's, though they differ as to the point of origin of the Indonesian migrations. Capell saw these migrants as coming from various regions of Indonesia in several "movements" as already outlined. As I understand Chretien, he suggests that the Indonesian material in AN languages of south-east Papua came from a relatively homogeneous source

*This is 47 or
60*

?

(p.106). Chretien also found that Area 2 (Motu-Sinagoro-Ikoro-Hura-Keapara-Rubi-Aroma-Keakaro) has unique characteristics of association with the other ten areas considered in the south-east of Papua. He was forced to conclude therefore that "the hypothesis of more than one movement does not satisfy, and that some other explanation will serve us better" (p.108). The better explanation he suggests is that this area (i.e., his area 2) has been a kind of "central exchange point in an extensive system of south coast trade between the Papuan west, extending to the Fly River Delta and beyond, and the east" (p.108).

2.14 Later, in 1965, Dyen made a lexicostatistical analysis of over 350 AN languages of the Pacific. His conclusions about migrations in the Western Pacific are the reverse of Capell's. Thus Dyen maintains that the origin of the AN peoples was in the islands off South-East Papua with migrations away from this point, instead of vice versa.

2.15 These theories have lately been re-examined and challenged by Wurm (1967). However, the results of this controversy need not be pursued further, as they have no direct bearing on the Koiarian situation. They are only relevant in that all the authors agree that AN's are immigrants to this part of New Guinea.

2.16 S.H. Ray has made the only comprehensive study of the non-AN languages of the Koiarian area of Central Papua. In 1929 he published his final paper classifying all the languages of the Central Division of Papua into "groups" (= languages?) and "sub-groups" (= dialects?) from vocabularies collected from various sources. Most of these were from early Government Reports and missionaries' manuscripts already referred to. Sundry grammatical notes were also included.

2.17 Ray's work provided valuable background information for the present study. However, the results of this study show that Ray's ill-defined groups and sub-groups of communalects can be combined into a well defined family of languages and dialects, and that this family is much larger than had hitherto been suggested, although Strong (1911:770), MacDonnell (1914b:56), Beaver (1915:49), and English (1898:36) recognised relationships between various parts of it. In particular, this family includes the Barai (Ray's and Capell's Seramina group/language) and Managalasi languages, as well as Aomie, which has only recently been discovered (Tobitt, 1966).

2.18 Since Ray's work has been published Elkin (1953) and Capell (1954, 1962a) have both deplored our lack of knowledge of the non-AN peoples and their languages of this area. Capell had earlier (1947) set out to remedy this situation, but for personal reasons was unable to complete the task. He managed, however, to collect some grammatical and lexical material in Koita, Koiari, Naduri, Efogi, and Boridi communalects before departing. This material was kindly loaned to me, and has been checked and incorporated into the present study.

2.19 More recently studies have been made of the non-AN languages in the Kairuku and Gollala Sub-Districts, and texts have been prepared in some. These are listed by Steinkraus and Pence (1964). Results of these investigations have been used in making decisions about the larger groupings of languages in the present study.

2.2 ANTHROPOLOGY

2.21 Very little anthropological work has been published specifically on the Koiarian region, although much useful information is scattered in Government Reports, and the writings of early missionaries.

2.22 Lawes and Chalmers were the first London Missionary Society members to live and work in the Port Moresby area. They arrived in 1874 and 1877 respectively, and their writings contain the first accounts we have of the geographical position of the Koita and some of the related Koiari sections, their tribal fighting and recent history. The contribution of these two pioneers to the present study will be evident from the description in sections 3.22 and 3.23 of this paper.

2.23 Formal government was established in British New Guinea with the arrival of Sir Peter Scratchley in August 1885. Stations were quickly opened up at Rigo and other areas along the north and south coasts of the Protectorate, whence pacification and exploratory patrols were conducted into the surrounding areas.¹ Records of these early patrols and excursions often contain invaluable historical and ethnographic information. A short date chart history of the pacification of Koiarian peoples is included in Appendix 5.5.

¹

See Souter (1964) for a popular historical account, and Healy (1962) for a critical study of particular aspects of the establishment of law and order in Papua (or British New Guinea).

2.24 The first of the few anthropological studies that have been made on Koiarian peoples appeared in 1910, when Seligmann wrote his study of Koita customs and social organisation in *The Melanians of British New Guinea* (Cambridge: University Press). Seligmann's book also contains notes on the traditions of the Sinagoro and other "tribes" of the Rigo area. Belshaw (1957) reviews Seligmann's material in passing, as parts of it apply to Belshaw's study of the mixed Koita-Motu village of Hanuabada.

2.25 Williams followed this with an important short account of the social organisation of the Koiari of the Sogeri Plateau in 1932.¹ Indeed, this work must soon become the sole reference work to these people--and perhaps even of related groups--if nothing further is done in the very near future, as Koiari culture is rapidly succumbing to pressure of European contact.

2.26 Firth (1952) gives a very brief (three-page) account of social organisation in the Koita village of Kila Kila near Port Moresby.

2.27 In 1965 Morris examined the resettlement of Koiari peoples around the Sirinumu Dam on the Upper Laloki River in relation to traditional attitudes.

2.28 Other useful information was obtained from the records and maps of the Land Titles Commission in Port Moresby and from unpublished patrol reports from 1900 onwards in the Commonwealth Archives in Canberra. Bramell (1964) drew on some of the former material, and on his wide experience in the Port Moresby area for his "Notes on Native Land Custom--Port Moresby Region." This small study contains some very useful evidence of the recent coastward movement of Koiari and Koita sections.

2.29 Besides the foregoing material of immediate relevance to the Koiarian discussion other studies of neighbouring peoples have been consulted for any bearing they may have on the interpretative problem, e.g., Haddon (1894, 1900), Seligmann (1909), Williams (1923, 1930), Chinnery and Beaver (1915), Oram (1968). Oram has also contributed

¹

According to Kailakinumu informants Williams spent several months among them at Uguwanitana village, and a shorter period at a smaller village collecting material.

substantial oral information on traditions and movements of groups of Motu and Koita from his extensive experience and field notes.

2.3 GENETICS

2.31 Only two genetic surveys have been conducted in Central Papua--one concerned with the Koita directly, and the other indirectly.

2.32 The Koita study was made by Groves et al. (1957-58). This study showed that the Motu and Koita cannot be distinguished genetically, and that their blood groups "suggests that the two peoples had freely cohabited before Europeans first made contact with them in the 1870's" (p.236).

The study also revealed distinctive differences between the Motu-Koita and other New Guinea peoples previously examined. It also suggested that "a genetic relationship between the Motu, the Koita and some peoples of Micronesia is possible" (p.237). This suggested relationship has not yet been examined. The article also contains a good summary of contemporary knowledge of the history of the Motu, and to a much lesser extent, the Koita.

2.33 A second genetic study was carried out by Price and Macintosh (1957-58). The authors describe their analysis of dermatoglyphs from the coastal villages of Hula (sixty miles east of Port Moresby) and Tataná (in Fairfax Harbour). The results of this analysis showed that these two groups of people are of similar ethnic classification. Moreover, the data collected by Price from Hula suggested that the genetic relationship between the Hula and "people of the hinterland is similar in many ways to that concerning the Motu and Koita people" as seen by Groves et al.

2.34 The results of these two studies emphasise the fact that the Koita have been living near the coast for a considerable time. This corroborates evidence obtained by other means.

2.4 ARCHAEOLOGY

2.41 Sketchy archaeological studies have been made by Haddon (1900), Etheridge (1908), Strong (1922, 1923, 1924), Williams (1931), McCarthy (1949), P. and C. White (1964) and P. White (1967). This work has not been very productive to our knowledge of the prehistory of this region. According to White (1967:5) part of the reason for this is the relative absence of suitable stratified sites "of a pre-pottery, pre-horticultural stone-using type which would presumably

be left by the earliest inhabitants." So far all that has been suggested from the examination of mortars, pestles, clay-stone figures and petroglyphs¹ was that some sort of prehistoric population lived in some of the areas presently occupied by Koiarian peoples.² No dates were posited. Etheridge's and Williams' work are the most important.

2.42 In 1908 Etheridge described ancient stone implements and clay fragments from the Yodda Valley (near Kokoda) and other areas of Northern Papua. He reasoned that:

1. these works "are the productions of one and same people" (p.28);
- ii. "it may now fairly be conceded there is ample evidence of the existence of an extinct, or at any rate former population in Eastern New Guinea, of a highly interesting nature" (p.28).

2.43 Later Williams (1931) investigated rock-paintings and rock-carvings at three widely separated areas in Central and Eastern Papua: Sogeri, Lohomunidabu, and Boianai-D'Entrecasteaux. Williams' conclusions are rather similar to Etheridge's in terms of racial prehistory. Williams does not think it necessary to postulate a vanished race of petrographers, but thinks we can "attribute these primitive works to the direct forefathers of a section of the present population" (p.139).

Oddly enough he does not mention the Yodda material, although he examined a site at Boianai which Etheridge had earlier described. Williams noticed that the Boianai petroglyphs had certain similarities with those of the very distant site at Lohomunidabu, though he did not want to go so far as to say that Lohomunidabu represented the western limits of the Boianai-D'Entrecasteaux stone culture (p.140). When some natives of the Sogeri area were asked about the 'meaning' of the Lohomunidabu petroglyphs they gave me the following explanation:

Long, long ago the Maiva people [ANs of the Kairuku area west of Port Moresby] passed through this area.³
They made these drawings of dancers as their 'marks.'
This was before the Koiari arrived. The Koiari came

¹ "Petrograph" is Williams' (1932) term for "rock engraving/inscription," though a more correct term is probably "petroglyph" (P. White, pers. com.).

² The distribution of sites is shown on Map 4, p.10.

³ Rev. P. Chatterton advises me (pers. com., 13.10.67) that as far as he can remember from his missionary experience in Delena, the Roro and Waina peoples have traditions of having come from the west, not from the east.

later from the Rigo side and took over the land. We have no stories about these paintings or about the Maiva. Some paintings are by Koiari. These are hands and okari nuts.

Though one has to be very careful of such interpretations (as Williams (1932:141-51) emphasises) could it not be, however, as Capell (1943:20) had suggested (after having observed a closer linguistic relationship between Keapara and Mekeo languages than between Motu and either of these) that some movement has taken place "inland from Keapara district westwards towards the St. Joseph River," or that peoples landed "about Hood Point and...(worked) westwards?" It seems at least a possibility worth considering for future investigations.

2.44 The Sogeri area was revisited in 1964 by P. and C. White, but although many new petroglyphs similar to those described by Williams (and earlier Strong) were discovered, the authors have nothing new to add to the prehistory already suggested. They did suggest, however, that the Sogeri petroglyphs need not be older than three generations since the indigenous inhabitants of the area have no long historical memory, and since some of the paintings seem to have faded since first seen by Europeans.

2.45 Lampert (1968) surveys some archaeological sites in the Port Moresby area, including an important recent one, Motupore Island.

2.5 GEOLOGY

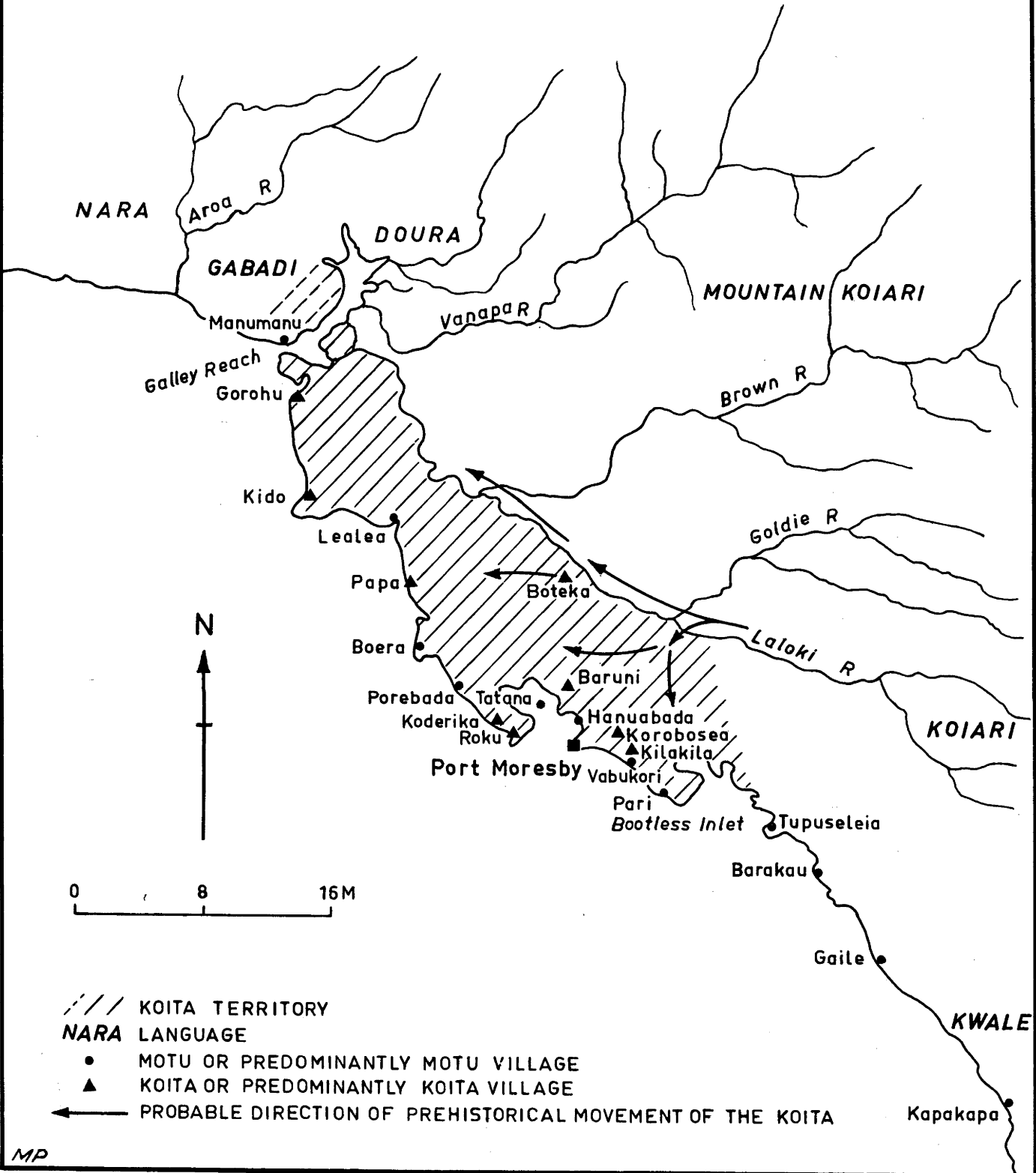
2.51 No reconstruction can be properly based if it does not take into account the geological and geographical history of the area being considered. It is important to know, for example, how long the present land forms and climate have existed, since these have important ramifications for population movement routes, reasons for moving, ecological adaptation of the population etc. McCarthy (1966) shows the relevance of this rather well in his consideration of radio carbon dates of recent archaeological material from various parts of Australia. He says, "From this evidence it is beginning to appear that man migrated across the gentle plains of the interior prior to the withdrawal of the rain belts in the north and south which created the desert and arid steppe region of the central Australian region as we know it today" (p.27). This challenges the conventional hypothesis about the movement of Aborigines into Australia "from the North down the fertile coastal areas where food abounded."

2.52 According to recent land studies by CSIRO (1964, 1966, 1967) New Guinea has probably been in its present general form since the late Tertiary period,¹ and consequently has no bearing on the relatively recent (geologically speaking) prehistorical movement of the Koiarians.

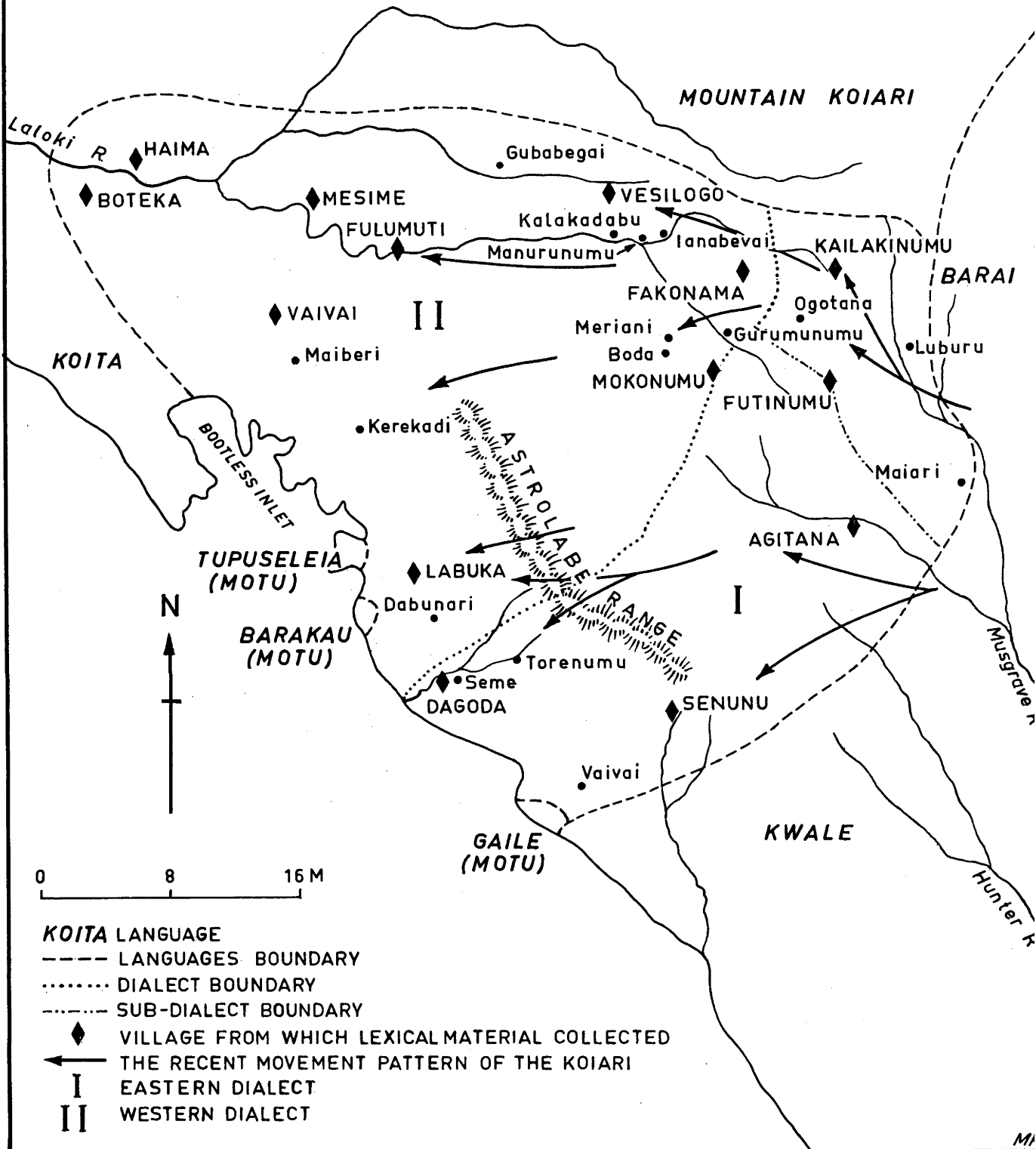
¹

See also Stanley (1918:76). Ruxton (1966) also says that some parts of the Koiarian area, e.g., the Managalasi area south of the Hydrographer's Range and Mt. Lamington, have recently (geologically speaking) been volcanically active (90,000 ± 10,000 years).

DISTRIBUTION OF KOITA AND MOTU VILLAGES



DISTRIBUTION OF KOIARI VILLAGES



3.0 THE KOIARIAN LANGUAGE FAMILY

3.1 INTRODUCTION

The Koiarian language family consists of six non-AN languages-- Koita, Koiari, Mountain Koiari, Barai, Managalasi and Aomie¹--whose speakers number over 15,000. The distribution of these languages is shown on Map 2, p.2.

Percentages of lexical correspondence in basic vocabulary between these languages at geographically widely separated points is shown on the following chart:²

	Koita	Koiari	Mtn.Koiari	Aomie	Barai	Managalasi
Koita		60-65	45-54	18-23	15-25	8-20
Koiari	60-65		50-57	15-24	21-31	10-20
Mtn.Koiari	45-54	50-57		22-28	20-28	13-20
Aomie	18-23	15-24	22-28		37-44	31-37
Barai	15-25	21-31	20-28	37-44		46-53
Managalasi	8-20	10-20	13-20	31-37	46-53	

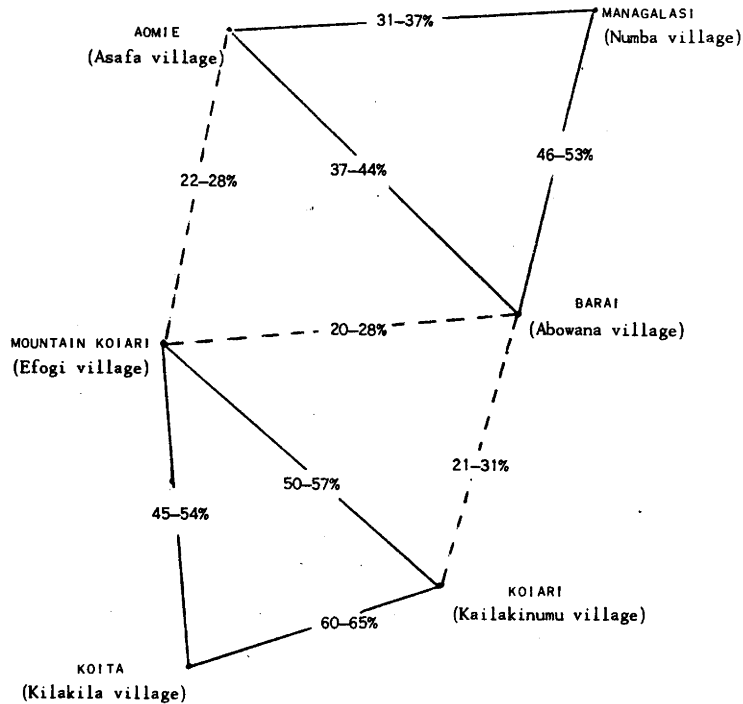
Some of these correspondences may be more meaningfully displayed as follows, where villages are shown in their approximate geographic positions relative to each other:

¹

The names for these languages are chosen from names of popular usage which generally refer to areas or "tribes" (undefined). Koita are often referred to by the Motu term Koitapu.

²

Where two percentages are shown on this chart the higher one represents the maximal correspondence (obtained by counting all probable, and possible cognates) and the lower one the minimal correspondence (obtained by counting only probable cognates). This method of charting allows for variation in investigator-biased interpretations before sound correspondences between the languages have been established.



From these charts, it is apparent that Koita, Koiari, and Mountain Koiari are more closely related lexically to one another than any one is to the remaining three--Barai, Aomie, and Managalasi, and that these three latter are in turn more closely related to each other than to any of the former three. Both groups share approximately 25% (average) basic vocabulary with each other. This figure is below the 28% which is the normally accepted one for including languages in the same family. However, it must be remembered that these percentages are based on Wurm's modified TRIPP lists and express a relationship between geographically distant communalects. Higher percentages result if geographically closer communalects are considered, e.g., Awoma (Mountain Koiari) and Emo River (Barai) share approximately 44% basic vocabulary. Further these languages share much higher basic vocabulary with each other than any of them does with any of the neighbouring non-AN languages, e.g., Koiarian languages generally share an average of about 15% with neighbouring non-AN languages. The lexical evidence then (together with phonological and grammatical

evidence presented below¹) suggests that the Koiarian Language Family consists of two sub-families:

- (a) Koiaric (Koita, Koiari, Mountain Koiari); and
- (b) Baraic (Barai, Managalasi, Aomie).

The linguistic relationship between the two sub-families suggests that they separated a long time ago (perhaps several thousand years). During this period many independent changes have occurred in the two branches, with lesser changes in the ensuing period. Further, the languages of each of the sub-families would seem to have diverged in a similar manner. Thus in the Baraic Sub-Family Aomie seems to have had a longer separate history than either Managalasi or Barai, both of which have had a common history for some time before diverging as separate languages. A similar pattern is evident amongst the Koiaric languages. Here Koita and Koiari are the most similar and seem to have had a long period of common history in contrast to Mountain Koiari which diverged earlier and has had an independent history.

The language family will now be described in more detail starting with the languages of the Koiaric Sub-Family. In these descriptions linguistic and non-linguistic information is presented, and historical observations and conclusions discussed for each language. Later a more general discussion of the prehistory of the Koiarian peoples is presented in section 4.0.

3.2 THE KOIARIC SUB-FAMILY

3.21 *General*

The greater part of this sub-family is located in the Central District stretching east and west from Port Moresby along the coast and inland to the Owen Stanley Ranges along the valleys of the Laloki, Goldie, Brown and Vanapa River systems. A much smaller section is located in the Northern District in a thin strip between the Yodda River (Upper Mambare) and the Dividing Range and in three villages in the headwaters of the Kumusi River. The area is sparsely populated by speakers of the three languages: Koita (between the Laloki River and the coast), Koiari (on the Sogeri Plateau and the foothills of the Astrolabe Ranges), and Mountain Koiari (elsewhere).

¹

See Appendices 5.8 and 5.9.

3.22 Koita

3.22.1 The Koita¹ inhabit the Papuan coastal area around Port Moresby between Galley Reach and Bootless Bay--a distance of about forty miles (see Map 5, p.21). Most live in maritime villages either separately or as minority sections of large Motu villages. The remainder live a short distance inland on the outskirts of Port Moresby.²

For the most part Koita villagers cannot be distinguished from Motu, except linguistically. In former times the Koita maintained their identity in dress (particularly with the chignon hairstyle), language, and occupation. By tradition they are the hunters and gardeners who owned the land, but now those who live near the sea fish and sail.³ The Koita have also intermarried extensively with the Motu, and most are fluent in that language. Where they inhabit the same villages as the Motu, the Koita have practically forgotten their own language. Yet the Koita as a whole are still very keen to preserve their identity, especially as expressed through language.

Koita territory stretches inland from the coast to the region

¹

These ethnological notes are compiled from accounts by Stone (1876, 1880), Turner (1878), Chalmers (1885, 1887), Lawes (1879), Seligmann (1910), Williams (1939), Groves (1954), Groves et al. (1957-58), and BelsHaw (1957).

²

The following chart shows the distribution of Koita villages:

<u>Separate Maritime</u>	<u>Motu-Koita Maritime</u>	<u>Inland</u>
Gorohu	Lealea	Baruni
Kido	Boera	Korobosea
Papa	Porebada	Kila Kila No.1 and
Koderika	Tatana	No.2 (Mahuru)
Roku	Hanuabada (Kuriu and	Boteka (mixed
	Hohodae)	Koita-Koiari)
	Vabukori	
	Pari	
	Tupuseleia	

³

According to Seligmann (1910:45) Koita participated "freely in the hiri (the Motu trading voyages to the Gulf)" sometimes even captaining the lakatois in which these voyages were made, although he says, "few Koita take part in turtle and dugong fishing; and even in the immediate vicinity of Port Moresby, where perhaps fusion has been most complete, no Koita possesses the strong large meshed net with which these animals are caught."

of the Laloki River, and west to Galley Reach.¹ Throughout this area the Koita are divided into what Seligmann calls "sections" (undefined). Some of these bear the names of the villages which their members inhabit, as can be seen from Seligmann's list of names of sections and their villages (working geographically from east to west):

SECTION		VILLAGE
Gorobe	inhabiting	Pari
Badili	" "	Kilakila
Yarogaha	" "	Akorogo
Yawai	" "	Korabada
Hohodai	" "	Hohodai ²
Guriu	" "	Guriu
Baruni	" "	Guegarara, Iboko, Bogemunime
Huhunamo	" "	Porebada
Roko	" "	Dobi, Eholasi
Idu	" "	Aimakara
Gevana	" "	Papa (= Vead), Konekaru
Arauwa	" "	Lealea
Rokurokuna	" "	Kido, Roauna

Namura section is not included in this listing as it was, Seligmann says, "exterminated shortly before the annexation of the country, by the repeated attacks of the eastern sections, sometimes by the whole seven acting together, but more often by a combination of from two to four sections. The Namura village stood between Boera and Lealea in the bush, a short distance from the coast" (p.41).

For the time being we may accept Seligmann's listing, except to note that:

i. since he wrote his account Akorogo and Korabada villages have disappeared and Yarogaha and Yawai sections are now to be found

¹

According to Seligmann (1910:41) Koita territory "extends to the border of Nara, west of Cape Suckling." This is discussed a little further in his footnote 1 on p.44, part of which is reproduced here in the following pages.

²

Alternative spellings for Hohodai and Guriu are Hohodae and Kuriu/Kuliu.

in Korobosea village above Kaugere.¹ Similarly, Baruni section now occupies Baruni village, the Roko section Koderika (?) and Roku (?), and the Idu (or Isu) section has moved to Boera village. Konekaru and Roauna villages have also been deserted and Gorohu presumably established in place of Roauna;²

ii. Tatana village was omitted from the listing. This is a predominantly Motu village in Fairfax Harbour, having ties with the Nara (an AN, non-Motu group) to the west of Galley Reach, and containing descendants of a former Koita section, the Nenehi;

iii. the listing disguises complications. Koita sections are not easily identified and reconstructed. Part of the problem is that segmentation, merging, migration, adoption, and intermarriage have complicated the relationships within and without villages. Thus Kilakila village is said to consist solely of Badili section. Yet according to recorded stories at least two Koiari sections have been absorbed into this village--Beholi, and Gorogaha.³ Beholi are reputed to have come from the Sapphire Creek area (Yumaduna), and the Gorogaha from near Sogeru. A second part of the problem is that the social structure of present day villages is organised on the basis of the

¹ Rev..P. Chatterton, M.H.A. advised me (pers. com., 13.10.67) that when he arrived in 1924 "the original Akorogo village was in the middle of the present golf course where there is still a clump of coconut and mango trees marking the old village site....In 1925 the people shifted their village (I think due to a run of deaths) to a site on the opposite side of what is now called Scratchley Road, where the Kaugere clinic/pre-school now is. The village took the name of Korobosea, which was the place-name of the area on which they built their new village. It was this village which was destroyed by fire in 1930, but it was re-built on the same site. The village was finally evacuated, along with all the other Motu and Koita villages between Pari and Boera, in Jan/Feb 1942, when the whole Port Moresby area became a military area....When the Korobosea people returned to the area after the war they built their new village at the top of three-mile hill, and for some odd reason kept the name Korobosea instead of following the normal Papuan practice of using the place-name of the site as the name of the village."

Korabada, or Kourabada, used to be situated where the P.M.F. Joinery is today. It appears to have consisted of about eight houses (Oram 1962-3: "Interview with Atahanasius, 18.3.63.") and was still in that position in 1930 (Erua, 1930:7).

²

These statements need to be checked.

³

Dutton (1966), and Oram (1962-3: "Stories by Kori Taboro, Collected by G.A.V. Stanley, 1949").

Iduhu, the Motu term for patrilineal descent groups,¹ and not on sections. There is no direct correspondence between iduhu membership and section membership, for the reasons already listed. Thus, while some iduhu names may suggest former sections (as, say, Badili Vamaga and Badili Vaga iduhu of Kilakila village are the direct descendants of Badili section) others do not (for example, Tanomotu, Makaraha, Venehako iduhu of Koderika village). The reconstruction of Koita sections, and of their movements requires the collection and detailed analysis of large and numerous genealogies, which was well beyond the scope of the present research work. Some of this recording has, however, been made by Land Titles Commissioners in their investigation of land disputes around Port Moresby.² Their results seem to agree in some details with Seligmann's Eastern Koita moiety movement (excluding Baruni section) from the Laloki River (about 14 miles inland from Port Moresby), coastward.³ This movement is suggested on the basis of folk tale accounts given to Seligmann by informants from Hohodae, Yarogaha, and Gorobe sections. In this description Seligmann also refers to an association between the Nara⁴ (Austronesians

¹

See Belshaw (1957: esp. pp.12-30, 260-6 for definition and description of iduhu (in terms of residence, kinship, land etc.) for the large Motu village of Hanuabada, and Firth (1952) for that of the Koita village of Kilakila.

The Koita do not have their own terms for "section" and iduhu, or at least they could not remember any. This may mean that their social organisation has always been much the same, or that they have forgotten their own terms following Motu and European contact. In either case an interesting point arises. If it is true (as linguistic evidence suggests) that the Koita and Kolari are so closely related then why is it that their land systems (cf., Williams (1932) and Bramell (1964) and Sebeo (1941)), and possibly their social organisation are so different?

²

These results are unpublished genealogies of, and stories by, disputants to claims. They are filed in the Land Titles Commission headquarters in Port Moresby under claim numbers. Copies are also given to village headmen.

³

Seligmann divided the Koita sections into two moieties--Eastern and Western--based on his observation of the enmity and amity between the various sections. His eastern moiety included Gorobe, Badili, Yarogaha, Yawai, Hohodai, Guriu, and Baruni sections, while the western moiety included Huhunamo, Roko, Idu, Gevana, Arauwa, and Rokurokuna sections, together with the now extinct Namura section.

⁴

Since Seligmann wrote his account Ahuia Ova has outlined how his paternal ancestors originated in Babaka village (near Hula) and his maternal ones from Nara (Williams, 1939:15-7). In footnotes Williams adds that "the Nara people have apparently been much reduced, and the district is now very sparsely populated" (fn.14), and that a number

(continued on page 30)

west of Galley Reach) and Koita, which he suggests is of very long standing. He bases this again on Koita tradition which says, in effect, "that the whole of the Nara district once belonged to the Koita, and in support of this there is a perfectly definite record that Nagu Kawea, the great-great grandfather of Ova Abau, and the founder of the chieftainship in the Dubara section of Hohodal, lived on Vauria, a hill in the Nara district" (p.41).¹

Bramell (1964:3) agrees that the Koita seem to have come from the general direction of the Laloki River, but he suggests that there were three groups of Koita involved: "Those now living in the Kilakila-Vabukori area inhabited areas inland from Tupuselei village, the Hanuabada element came from central Laloki while those located at the villages of Baruni and those westward originated from the lower Laloki." These retained "their individual groups in movement." Bramell also maintains that these groups had little contact with each other "yet they had one thing in common, that being, their fear of the Koiari."² Bramell might have mentioned, however, that the Gorohu-Kido villagers may not fit this schema. They have close ties with the Mountain Koiari up the Brown River, and were reputed to have originated at Manumu (see story in Appendix 5.32).

According to my investigations, however, the Western Koita (using Seligmann's classification) trace the origins of all Koita back to two brothers who lived in a cave called Goubavaga, or Udurumava, supposedly in the Astrolabe Range.³ Some informants placed this site near Rouna Falls, others behind Tupuseleia. Actually, it is in the Rigo Sub-District near the headwaters of the Hunter River. Albeit,

1(continued from previous page)

of Nara families are "scattered from Manumanu to Poreporena [= Hanuabada]" (fn.18). I am indebted to N.D. Oram for drawing my attention to this point.

Oram's (1962-3) field notes also contain stories of Nara, Doura, and Gabadi feuds and movements. Two stories in particular (26.9.63, 29.6.63) relate how the Nara and Doura originally lived together, but split up after an absurd argument over the manner in which a particular kind of bird sings. The Doura moved to Rabora, but were attacked by the Gabadi, and moved to Veiya on the Veimauri River. Again the Gabadi attacked and the Doura finally settled at Douramoko on the Vanapa River, where they are today.

1

Oram (1962-3) records the name of this Koita group as Kerina.

2

This judgement is based on Bramell's intimate knowledge of the traditions of these people and their recent history obtained while collecting evidence in land disputes for the Land Titles Commission.

3

Informant: Damena GOASA (m.), mid-fifties (estimated), of Papa village.

the two brothers travelled together for some distance westwards to Togosala¹ and Idabemu villages, where they later parted. One continued west to people a large area of land known as Gatamata, and the other turned south-east to people the Beholimata (see story in Appendix 5.34). The dividing line between these two tracts of land is about the end of Fairfax Harbour between Roku and Baruni. Curiously enough, this corresponds to Seligmann's moietai divisions already outlined. Later, according to a different legend the Koita were allegedly joined by the Motu.² Chalmers (1887:3, 78-106) notes that the two groups have lived amicably together, each helping the other in resisting or assaulting their neighbours.

3.22.2 Linguistic Picture

Lexically and grammatically Koita is a close-knit language with little variation from east to west. The following chart shows the lexical relationship between communalects from which "basic" vocabulary lists were obtained.³

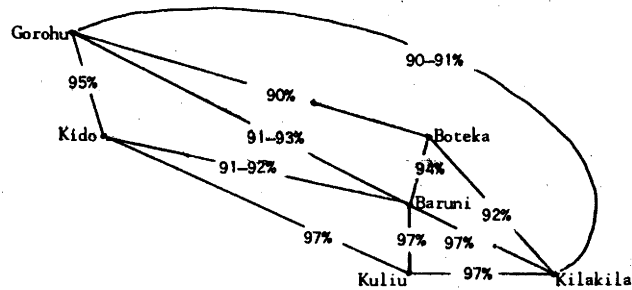
¹ On the Sogeri Plateau. See Appendix 5.33.

² Groves et al. (1957-58) report that the Port Moresby Koita have a legend recalling a day when Motu canoes first appeared outside the harbour. This legend tells how the Motu put ashore with fish when they saw smoke rising from a Koita village. The Koita, hungry for fish, suggested that the new arrivals remain permanently at Port Moresby and trade their fish for Koita yams and bananas.

This legend is probably the same one which Belshaw (1957:11) refers to when he says that the Motu "were in process of migration from the south-east to the north-west...noticed smoke from Ranuguri, a Koita village. The Motu party established contact and founded a village at Badihagua, a valley behind the present village site."

On the other hand N.D. Oram (oral com) suggests that the origins of the Western Motu and Hula may be similar. Thus available evidence suggests that the Hula, who like the Motu were a fishing people, and who, until recently, held no land, are descended from an AN-speaking group already settled in the vicinity of Marshall Lagoon. Hula oral tradition speaks of a hill on which the original village was situated. The Western Motu say that they once lived on an island called Motu Hanua in Bootless Inlet and Murray (1912:153), in repeating this story, adds that part of the Motu then lived on a hill called Gwamo, which is near the present village of Galle. Oram suggests that the Motu, like the Hula, might therefore be descended from a group which was already settled in the area and were not necessarily part of a separate and later migration.

³ No word lists were collected from Korobosea, Koderika, Vabukori, Boera, Lealea, Porebada, Pari and Tatana though socio-linguistic materials were. In all except the first two villages Koita is seldom spoken, and then only to visiting Koita, by a handful of older residents of former Koita sections. These residents did not feel confident about my taking down language material from them. Koderika was not visited because Roku informants said it was an offshoot from Roku. Korobosea speak similarly to Kilakila though with slightly slower tempo of articulation.



The lexical picture is such that none of the "basic" words can be regarded as diagnostic of dialect boundaries. The lexical differences between villages are not consistent. This suggests that either the Koita have maintained close contact with each other, or that the language was not sufficiently long established to diversify lexically. There has been some diversification, however, in phonology between the two western villages of Gorohu and Kido (its recent offshoot) and the rest of the Koita. These two villages have /f/ and sometimes /s/ corresponding to /h/, and sometimes /v/ (voiced velar fricative) corresponding to /v/ in the eastern villages.

Linguistically, the Koita are most closely related to the Koiari. Both have very similar grammars and phonologies, though Koita shares only 65% basic vocabulary with Koiari (Eastern Dialect). The nature of this relationship suggests that the Koita are the southern or coastal extremity of the Koiari. Yet despite the closeness of this relationship the two groups show little affection for each other, even though, as Seligmann (1910:48, 94) points out, they carried on a desultory trade, co-operated in some hunting ventures, and made reciprocated visits to tabu feasts.¹

3.22.3 Historical Interpretation

The linguistic evidence would seem to give weight to the tradition that the Koita have moved towards the coast in relatively recent pre-historical times from an area around the Laloki River somewhere east or north-east of their present position. Further, if the phonological

¹

Mr. K. Franklin of the Australian National University suggests that this is not surprising since in his experience of Highlands peoples neighbouring clans have the most disputes.

picture means anything it probably means that the westernmost Koita have been more isolated than the rest of the Koita, or that they have come under different linguistic influences, for example, closer contact with Doura, Gabadi and/or Mountain Koiari in their area. There is not much linguistic evidence to support Seligmann's moietal divisions.

An important though unexpressed reason for coastal movements of the Koita would probably have been expansionist pressures of the Koiari and Mountain Koiari (see sections 3.23 and 3.24 below). But the main reason which the Koita villager gives for the movement of his ancestors towards the coast was fear of death at the hands of the Koiari, either by sorcery, or relatedly, by water poisoning. According to most informants there was a period when the Koita population was much larger than it is today,¹ until watering places suddenly became poisoned.² So many were reputed to have died that the remainder fled in fear coastwards, this being the only unoccupied land available. While water poisoning cannot be discounted as a probability, it is more likely that this is the native explanation of some unexplained endemic or epidemic disease, which swept the area. Many authors have referred to such events.³ Oram (oral com.) reports that one epidemic is recorded in native stories right along the coast as far as Milne Bay. This could be the same one as Chalmers (1895:187) described which had drastic effects on the population. Certainly, after Europeans arrived many new diseases were introduced and the Government Reports are full of descriptions of epidemics of measles,⁴ smallpox,⁵ and

¹ For example, Kilakila village was once supposed to have been a quarter of a mile long. The ground name Saroa-muni-bouvanu (= Saroa-stones-collected together or heaped up) is testimony to its former eminence. The story goes that an advance party of attacking Saroa warriors from Rigo (in the east) marked out the length of the village with piles of stones for the following warriors to see. The supposed size of the village so impressed these warriors that they thought better of their venture and promptly returned to Saroa. See Chalmers (1895: 204-6) for descriptions of the marauding habits of the Saroa.

² Rev. P. Chatterton M.H.A. advises (pers. com. 13.10.67) me that at pre-War II Galle "drought sometimes forced the people to dig water-holes in the dry creek bed a mile or so inland from the village. It was their practice to fill in the holes each afternoon and dig them out again the next morning, and they explained that they did this for fear that the Koiari would come in the night and poison them."

³ For example, Lawes (1876), Turner (1878), Stone (1880), and Chalmers (1895).

⁴ Barton (1904); Monckton (1904).

⁵ Stone (1880); Chalmers (1895).

ague,¹ dysentery,² and whooping cough.³ Indeed, depopulation (of which ill health was but one cause) was of serious concern to the early administrators of Papua, or British New Guinea, as it was then known.⁴

Another reason was probably contact with the Motu, whose origin is unknown, though it is generally held that they are immigrants. Chalmers (1887:13) was the first to point this out, and suggested that the Motu are of western origin. Other investigators, however, have found no substance in this suggestion. Groves et al. (1957-58: 222) could find no evidence of movement from anywhere in the traditions or remembered history of this group. Capell (1943:20), as has already been pointed out in section 2.12 above, suggests that the Motu are later arrivals than other AN groups in Central Papua, and that they came from the east in the last of three main movements from the Indonesian archipelago. Chretien (1956) disagrees with this (see also section 2.13 above) and suggests instead that the Central Papuan coast has been a kind of "central exchange point in an extensive system of South coast trade between the Papuan west, extending to the Fly River and beyond, and the east" (p.108).

And there the matter will have to rest until further studies can be made. What is certain, however, is that when the first Europeans arrived the Koita were "for the most part to be found living at one end of the Motu villages...(and) also...in little groups of a few houses a little way inland, or on a hill overlooking the sea, all through the Motu district" (Lawes, 1878:371). Yet as Seligmann (1910: 47) points out "it by no means follows that the Motu colonies invariably settled down in the close vicinity of the Koita villages, where they are now found. In some instances...the reverse occurred, and it was the Koita who settled near or in continuity with Motu colonies. Probably both events happened in the case of Poreporena villages." But Seligmann tends to overstate the case here.

¹ Monckton (1904).

² Blayney (1897, 1899); English (1898a).

³ English (1901); Le Hunte (1901); Murray (1909); Haddon (1900b).

⁴ See Reports by Barton (1904), Murray (1915), and O'Malley (1915).

Poreporena (or Hanuabada, as it is now known),¹ is the only instance in which Motu appear to have settled near Koita. In all other instances (excluding the independent Koita 'separate maritime' and 'inland' villages--see chart in fn.2, p.26 above) Koita moved to established Motu villages, viz. Porebada, Tatana, Pari, Boera, Lealea, Vabukori, Tupuseleia. This suggests that the presence of the Motu may have been an important factor in the final movement of the Koita to the coast proper. The establishment of Motu-Koita settlements close to one another certainly would have had such benefits for both sides as:

i. protection--from the Hula in the east (Chalmers (1887:3), Belshaw (1957:11)), Doura and Gabadi in the west (Chalmers, 1887:78ff.), and Koiari in the north, and northeast;

ii. trade--The Motu would probably be keen to find new food sources because of the small size and poor quality of their soils, the annual mid-year drought (which often lasted much longer),² and the insecurity of their position as it depended on the safe return of the sago-bearing hiri canoes.³ The Motu had pottery, coconuts, fish, salt, shell, coral ornaments, and pani (specially woven rope for carrying firewood) to exchange for Koita fresh meat (birds, reptiles, small marsupials, pig, kangaroo/wallaby), feathers for headdress, breast shells, stone implements, matting, netting fibre, bark cloth, and garden produce. This relationship also probably extended into the Koiari country, where such additional things as

¹ See Belshaw (1957:11-2) for a discussion of the village cluster that Seligmann called Poreporena, and Belshaw Hanuabada. Rev. P. Chatterton, M.H.A. advises me (pers. com., 13.10.67) that before World War II the Motu referred to the whole village cluster as Poreporena, comprising Hohodae, Hanuabada, Tanobada, Kuliu (or Kuriu) and Elevala. Following their return from wartime evacuation to Manumanu the names were reversed: Hanuabada was used for the whole cluster, and Poreporena for that part of it which was formerly called Hanuabada.

For an earlier description of the Hanuabada complex see Seligmann (1910:45).

² See, for example, descriptions of the severity of these droughts and the privations they caused by early Government officers Barton (1904), Blayney (1897), and F.E. Lawes (1890).

³ For descriptions of the hiri trading expeditions to the Gulf of Papua see Barton (1910), Williams (1932-33), and Groves (1960).

tobacco, betelnut, ginger, lime,¹ and bark cloth were available.²

Certainly the relationship between the Koita and Motu must have been of an unusual kind, since the Motu have nowhere penetrated inland.³ All except Badihagwa,⁴ which was established in a valley behind the present Hanuabada site several hundred yards from the beach (Belshaw, 1957:11), and later removed to the shore, were maritime villages built on piles in the sea between high and low water marks. Turner (1878:486) suggests that the principal reason why the Motu built their houses over the sea and remained there, was for protection against "the inland people," which now generally means the Koiari, though it could have been meant to include the Koita, whom the Motu are known to have feared also. This could well have been the initial reason, and that once the reciprocal trade arrangements and mutual defence alliances were established between the Koita and Motu (as outlined above) the Motu had little need to expand inland. Other reasons could well have been that there are no large waterways along the Motu coastline similar to those east (Kemp Welsh River) and west (Angabunga or St. Joseph's River, Aroa-Kubua River) which seem to have afforded the Sinagoro in the east, and Doura, Gabadi, Pokau, Roro, Kuni, and Mekeo in the west, inland penetration routes; or that being late arrivals the Motu had not yet had time to expand before Europeans arrived and froze the situation; or that they simply preferred to; or that they were just perpetuating a previous living pattern. All, and perhaps other factors may, of course, have been involved simultaneously.

1

This is interesting because one would naturally expect the trade to be in the reverse direction. Turner (1878:493) says, "It [= lime] is made by the Koiari, or inland tribe, who come down from the interior to Port Moresby, gather shells on the beach, carry them twenty miles, inland, burn them and make lime, then carry the lime down to the coast, and sell it to the Port Moresby people. The latter will not make it for themselves, because their forefathers did not do it, and it is done by the Koiari."

2

This information was obtained from the following sources: Lawes (1878:372-6), Chalmers (1885:249), and Turner (1878:492-3).

3

The Motu own very little land apart from the small tracts immediately behind their villages. These tracts are usually limited to the littoral area between the beach and the tops of the hills overlooking the village.

4

Rev. P. Chatterton M.H.A. advises me (pers. com., 13.10.67) that Badihagwa (spelled by Belshaw (1957) "Badihagua," but in fact derived from Motu hagwa 'mangrove') was "rather further from the beach than Belshaw suggests, being in fact where the cemetery now is. I think that there is no doubt that the Hanuabada (and perhaps the Lealea peoples too) lived here before moving to their present beach sites."

3.23 Koiari¹

3.23.1 The Koiari inhabit the Sogeri Plateau around the headwaters of the Laloki, Hunter and Musgrave Rivers. Some live on the spurs of the Astrolabe Range and the hilly hinterland behind the Motu villages of Tupuseleia, Barakau, and Gaile,² while others dwell along the Laloki valley immediately behind Port Moresby³ (see Map 6, p.22).

These people are often referred to as the Grass Koiari, or Grasslanders, which is a translation of one of the native classificatory terms applied to part of them, *isu-bia*. Some are actually Forest-men or *idutu-bia*, as distinct from *mavota* or Mountain-men. But these are general environmental distinctions which have only limited correlation with linguistic⁴ and cultural features.⁵

The Koiari have a mixed reputation though most writers seem to agree that they were feared as sorcerers, especially by the coastal Motu. They lived in small villages of usually no more than eight houses, generally stockaded, and perched on spurs or ridgetops. Each village featured a tree-house as a retreat for besieged villagers. Williams (1932:52) saw them as "definitely gardeners" who practised shifting agriculture, though they are keen hunters. Williams also thought they were racially mixed with Austronesians.

Socially the Koiari are organised in sections⁶ seldom larger than one village with names of local origin, derived generally from

¹

Williams (1932:51) records that the name Koiari "belongs properly to one of the local groups of grasslanders. It has been applied loosely to all who speak similar dialects right up to and beyond the central range." See also a similar statement by MacGregor (1891).

²

In the following villages: Dagoda, Seme, Vaivai, Maiberi, Kerekadi, Labuka, Dabunari.

³

In the following villages: Boteka (mixed Koita-Koiari), Haima, Mesime, and Fulumuti.

⁴

The linguistic features are to be described fully at a later stage.

⁵

Williams (1932:54).

⁶

Williams (1932:55) prefers the word "group" principally because he could find no suitable equivalent technical term in Koiari, and "clan" did not seem to be applicable.

prominent hills in the area, e.g., Haveri, from Havenumu near Iawarere (or Jawarere).¹ Village names are usually ground names, and villages are regularly shifted.² A kind of bilateral descent system is practised, which is the main subject of Williams' paper.

Under Administrative (Government and Mission) and economic pressures, small, one-hamlet-dwelling groups have united to form new and larger settlements in more accessible places. Thus Kailakinumu is now a composite village of three formerly independent, though interrelated groups--the Hogeri (or Sogeri), Haveli (or Favele), and Yaritari--who have combined to form a larger village on the main road linking Sogeri and the Upper Musgrave River plantations.

Hitherto the Koiari had been "incorrigible" (Wyatt-Gill, 1885: 307) wanderers, sorcerers, and war mongers, living for the most part on the Sogeri Plateau. They have a tradition of coming from the east, which is expressed in the Salayoli story of the Hogeri section (see Appendix 5.33),³ and in stories about the origin of large rocks in the area.⁴ Thus the eastern Koiari believe that they are descended from the marriage of a local, red-birdman, and a woman from Wudurumava village (and mountain)⁵ on the Upper Hunter River in the Rigo Sub-District. Descendants peopled the Sogeri Plateau and some built a large canoe and escaped to the beach. These were supposedly the ancestors of the Koita.

3.23.2 Linguistic Picture

Comparison of the lexical material obtained from the principal Koiari villages shows that there are two dialects of Koiari. The line

¹

Williams (1932:57) lists many examples. It is apparent from the comparative work I have done so far that the -ri or -re suffixes in these group names are old location or direction markers, probably meaning 'at, from (a place),' which have only "survived" in Koiari in these instances. It is interesting to note that similar markers appear on group, section, or tribal names in other parts of the Koiarian area, and outside it, though more work needs to be done on this aspect of naming in Central Papua.

²

This explains why it is difficult to find locations for references in early writings about the area.

³

Also discussed by Williams (1932:57) though he did not give a specific story.

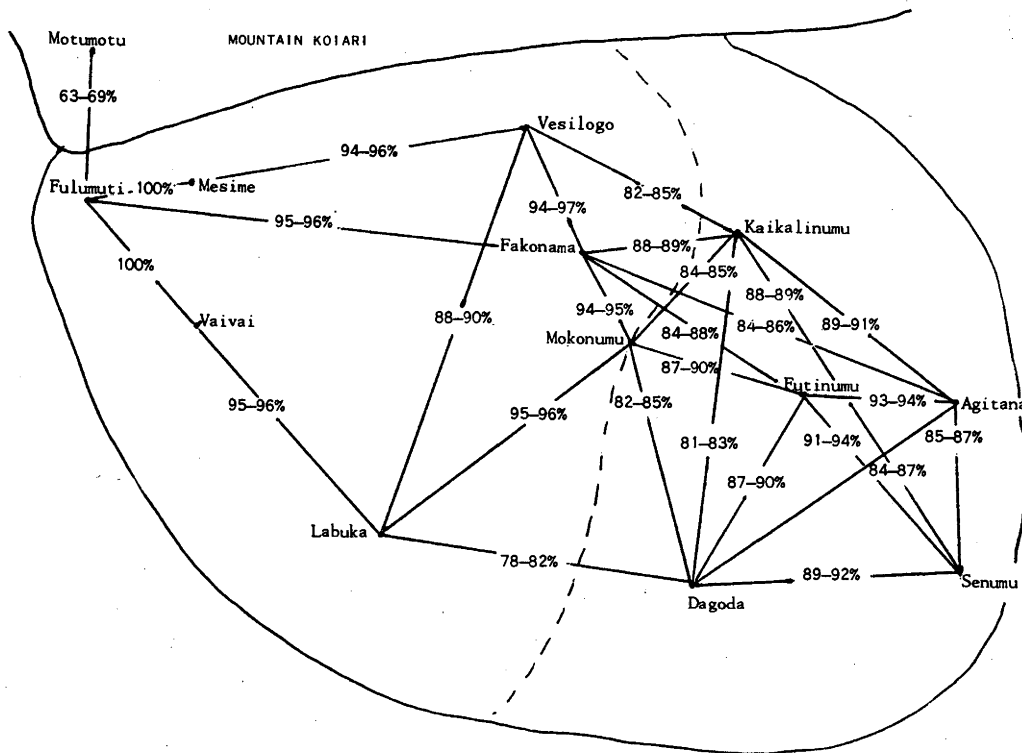
⁴

For example, stories about Vetula (the rock that moved from Jawarere to Warirata) and Fufuri (the rock that came from Hulunumu, near Boreberi, to Kailakinumu).

⁵

Wudurumava is south of Lonidairi and east of Lagume villages. See Appendix 5.34 fn.2 for connection between Koita and Koiari terms.

of demarcation between the two corresponds to the line of maximum difference between village communalects shown on the following chart. Geographically the north-south boundary line runs from the coast northwards just west of Dagoda up the Vailala Creek across the Astrolabe Range along the traditional land boundary between Orari and Maneri-Korohi sections,¹ approximately to Sogeri Plantation on the Elologo tributary of the Laloki River.

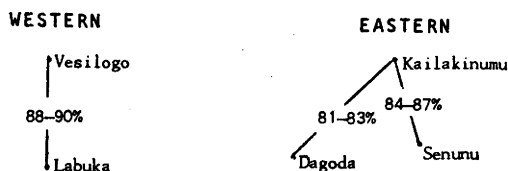


These dialects are hereafter referred to as the Eastern and Western. The chart also shows that the Eastern Dialect is more diverse

¹

Details of traditional land boundaries in the Sirinumu Dam area are shown on the Department of Lands survey map "Sirinumu Dam" No.M/49/16 of 7.11.61, Territory of Papua and New Guinea. See also Morris (1965) for a general description of this area.

than the Western. This may be simply illustrated by taking percentages between north and south villages in each:



3.23.21 Eastern Dialect

The Eastern Dialect extends in an arc around the eastern end of the Sogeri Plateau. It consists of over 600 speakers living in the following villages:¹

Village	Speakers (Based on 1966 Census)	Sections Represented (tentative)
Kailakinumu ²	133	Haveri, Nidori, Hogeri, Yaritari, Korohi, Baruari
Luburu	30? (Estimated. Part village Moroka (Mtn. Koiari) speakers)	Haveri, Moroka, Baruari
+Maiari	35	Yaritari, Maiari, Bareri
+Boreberi	23	Boreberi
Ogotana } Boredabu }	149	Korohi, Nidori, Hogeri
Futinumu	20? (Estimated. All Sirinumu villages censused at Wahonadada)	Togo-Korohi, Wanowari, Veburi
+Agitana	31	Wagiragiri, Mohiri, Umudori
+Senunu	52	Senari, Taburi, Vaberi, Veburi
Vaivai	62	Senari, Taburi, Vaberi, Veburi
Torenumu } Seme }	51 }	Dagoda, Bareri, Maneri-Korohi, Veburi, Semeri
Dagoda	57 }	
TOTAL	643?	

¹

Starred villages are situated in the Rigo Sub-District; the remainder are in the Port Moresby Sub-District.

²

According to Kailakinumu informants they were referred to collectively as Munegapira (= stone strikes fire) because of their fiery fighting.

As has already been stated above this dialect is more diversified than the Western. Lexical evidence suggests that there are two sub-dialects:

(a) North-Eastern, including Kailakinumu, and its socially related villages of Ogotana, Luburu, Maiari, and Boreberi;

(b) South-Eastern, including the principle villages of Futinumu,¹ Agitana, Senunu, and Dagoda.

There is some correlation too with other linguistic features. Thus phonologically the South-Eastern Sub-dialect tends to 'drop' fricatives, which then produces a change in vowel quality, particularly where fricatives are omitted between /a/ and /e/. Here there is an assimilation of these vowels into one single one /ə/, phonetically [ə]. For example, Kailakinumu (North-Eastern Sub-dialect) speakers say *da nitə* for 'my eye' while Futinumu and Dagoda speakers (South-Eastern Sub-dialect) say *di nitə*.

Grammatically there is little variation, except that individual villages have different sets of possessive case suffixes:

English	Kailakinumu	Futinumu	Agitana	Senunu	Dagoda
'my navel'	<i>da demodi-ne</i>	<i>di namodi-ke</i>	<i>di nemo-de</i>	<i>di nemodi-ka</i>	<i>di nemotə</i>
'my breast'	<i>da amu-re</i>	<i>di amu-ne</i>	<i>di amu-ne</i>	<i>di amu-ne</i>	<i>di amu-ne</i>

3.23.22 *Western Dialect*

The Western Dialect is the largest of the two Koiari dialects in area and population. It consists of over 1100 speakers living on the central and western parts of the Sogeri Plateau around the Sirinumu Dam and along the main courses of the Laloki River, on the lowlands (grasslands) along the middle reaches of the Laloki and on the coastal plains between the Astrolabe Range and the south coast. The following chart lists the Western dialect villages in sub-divisions, corresponding to the above geographical ones:

¹ Futinumu is a small mixed village with closer social ties with the Western Dialect.

Sub-division	Village	Speakers (based on 1966 Census)	Sections Represented (Tentative)
Plateau	Boda	39	Orari?
	Gurumunumu	61	Bemori, Magibiri
	Wahonadada	218? (includes Mokonumu)	(Many hamlets unnamed)
	Fakonama	85	Agoberi, Waiakari, Bemori, Yoriwari, Magibiri
Upper Laloki	Vesilogo	139	Eikiri, Dauri?
	Kalakadabu	49	?
	Ianabevai	42	Taburi, Yanari
	Manurunumu	89	Nadeka
	Gubabegai ¹	83	Wasiri, Navirari?
Lower Laloki	Fulumuti	53	Omani, Korohi, Koiari?
	Mesime	38	Omani, Yanari, Korohi, Wakari, Taburi
	Haima } Boteka }	68? (Estimated)	Beumuri, Orari, Momiri, Gubini, Ogoni-Dabunari
Coastal Plains	Vaivai } Maiberi }	46	Magibiri?
	Kerekadi } Labuka }	27 } 37 }	Tugia, Kerekadi
	Dabunari	59	Korohi, Veburi, Gorari, Dabunari
TOTAL		1133?	

The Western dialect is quite homogeneous, although there is slight variation in vocabulary and pronunciation (especially fricatives) within it.

¹

At the time of the survey Gubabegai was being moved up on to the plateau near Vesilogo.

3.23.3 Historical Interpretation

Present linguistic evidence suggests that historically the geographical dispersion of Koiari speakers has been relatively recent--more recent in the west than in the east. This is in accord with other evidence of the recent movement of the Koiari. Thus those now living in the lowlands and coastal plains in the west and south-west all trace their origins back to the Sogeri Plateau. For example, those now living at:

- (a) Mesime¹ are supposed to have moved down to their present position from Ianabeval just prior to European contact;
- (b) Fulumuti are a mixture of the original Koiari (who lived near Rouna Falls), Omani and Korohi sections--the latter still a strong section in Ogotana;
- (c) Vaivai and Maiberi are offshoots of Nadeka and Magiberi sections on the Sogeri Plateau;
- (d) Labuka, Dabunari, and Kerekadi have moved down from the south-west rim of the Sogeri Plateau. They have close ties with Tugla, Orari, Veburi and Korohi sections still on the Plateau.
- (e) Haima have only been in their present position for about thirty years. According to my informants they are a small settlement of Bemuri people from Berebe village near the Sirinumu Dam. An old man named Korohi Kidu (who died about eight years ago) made friends with a Hohodae land controller who gave Korohi a small tract of land around the present location of Haima.² These villagers still maintain close ties with their relatives on the Sogeri Plateau.

¹
The Mesime have a story relating themselves to the Koita. This story (noticeably similar in structure to the Salayoli story of the Eastern Koiari) says that a man named Omani Maraga once lived in a bush village near Rouna Falls by himself. He hunted pigs and wallaby over Omani territory. One day he made a feast platform and garden beside the Laloki River where he planted a kind of apple tree (moiteka). The fruit of this tree fell into the river and floated down to a place behind Papa, a Koita village, where girls from the Veadu section used to draw water. Two girls--one big, one small--saw them. They followed the river up and found the tree and the old man's village. But the old man was hunting so they cleaned the village and hid in an upturned waterpot. The old man returned and noticed the fire burning and the clean village. He knew there must have been women there but he could not find them. Later the two girls came out. He married the young one and the old one returned to her section at Papa. Now the Omani have descendants at Papa.

²
These details are a little puzzling since as far as I know the Hohodae own land around Hohola and Burns Peak only. The land where the Haima villagers are settled would seem to have belonged more likely to Momiri, or Ogoni-Gubini people.

In the south-east the Dagoda-Seme-Torenumu villagers also have close ties with Koiari sections on the Sogeri Plateau. These villagers can also still trace their movement down over the south-east rim of the Plateau. At the time of first contact Chalmers (1885:173) noted that the Koiari behind the Motu village of Galle¹ "belong to the Koiari tribe who generations ago were driven over the Astrolabe by their friends and settled down here." According to my informants their *sene taudia* (Police Motu for ancestors whose names are not known) came from the direction of Rigo. At that time there was only one section--Senari--which is the principal section of Senunu village² today. This section split up, and some moved west on to the Sogeri Plateau and later down to Dagoda, while others moved south-west to the Senunu area. Unfortunately, I could not corroborate this evidence from Senunu informants, nor did I obtain any information about the relationship of these sections to Agitana, nor of Agitana to Futinumu and the North-Eastern Sub-dialect villages.

In the east, however, the movement has been in the opposite direction. Thus the Haveri, Yaritari, and Hogeri sections have moved up on to the Plateau from former positions in the headwaters of the Musgrave and Hunter Rivers. To do this they maintain they had to struggle against other sections now further west along the Plateau. Indeed the Hogeri is still quite proud of its prowess in (as they say) "knocking the Taburi, Eikiri, and Magiberi sections over the edge" and they boast that this would have been more complete had Europeans not arrived to interrupt them. Their story seems to have some basis since when Chalmers first visited the area in the later 1870's he was very much disturbed by the state of fear of the Magiberi as he writes in his journal:³

I am sorry for the Magipili people; they are so afraid of the Sogeri that they have left their houses and are living in the bush, and under the shelter of rocks. Sogeri, Makipili says, will listen to no conditions of peace.

And similarly, on the other side of the Plateau he had earlier noted

¹ Chalmers was referring to the Koiari village of Veipuri (Veburi) on the banks of the Vailala River which he said later (1895:36) was "about seven miles through bush....(on) one of the spurs of the Astrolabe."

² Woodward (1926) spells Senunu "Senumu", which is more in keeping with the spelling of other Koiari place names which usually end in -numu meaning 'hill, mountain.'

³ Chalmers (1885:125).

that "the women and children slept in the bush at night...(because their village is) at enmity with natives on the flat across the ravine."¹

Thus from this evidence, and that already mentioned of sections being generally west of locations after which they are named, it would seem that the present linguistic picture has developed out of a general east-west movement which is in keeping with traditional accounts. Map 6 (p.22) shows the general picture.

¹
Ibid. p.91.

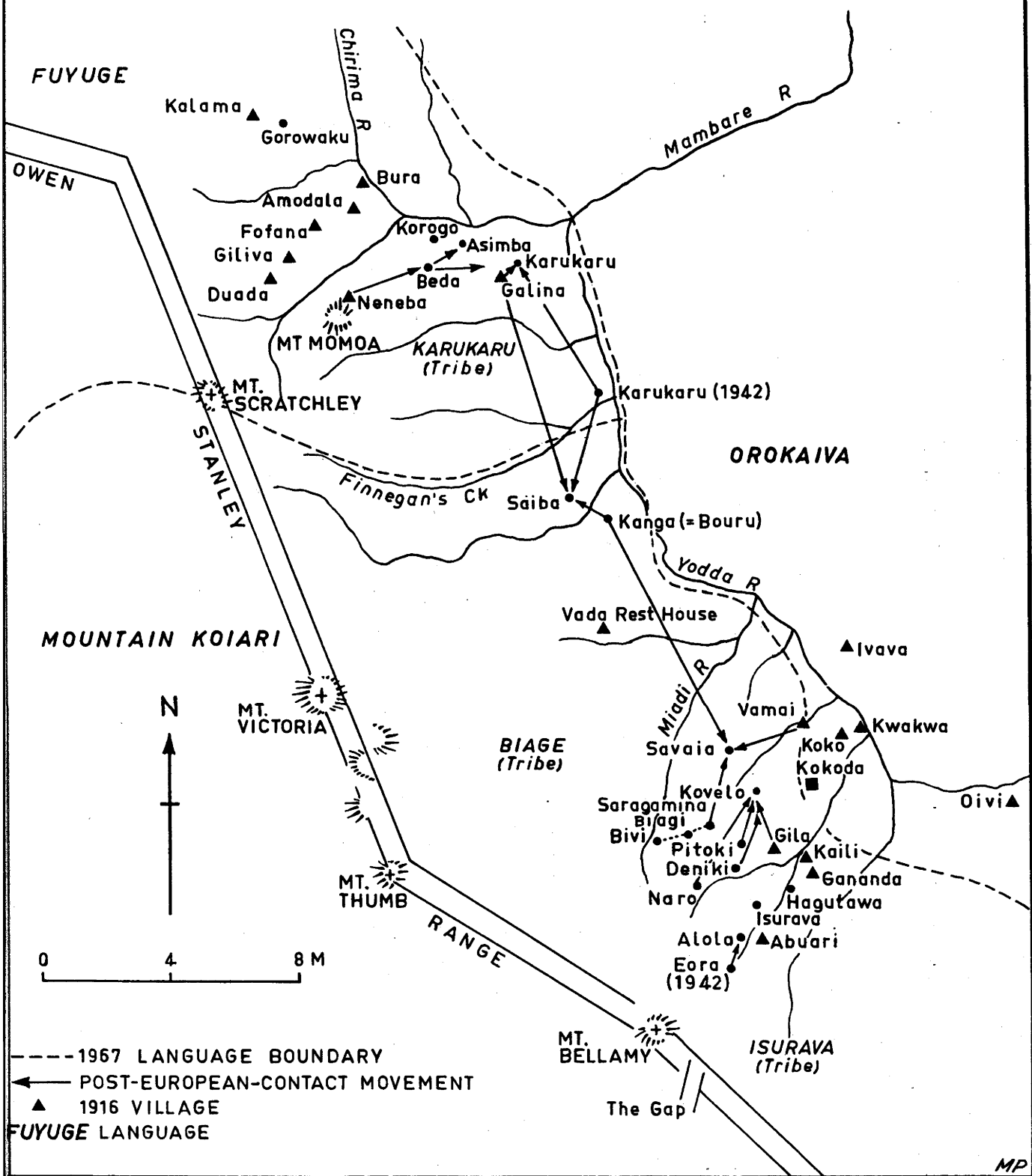
DISTRIBUTION OF MOUNTAIN KOIARI VILLAGES

- MOTU LANGUAGE**
- LANGUAGE BOUNDARY
 - - - DIALECT BOUNDARY
 - UNCERTAIN DIALECT BDY
 - I SOUTHERN
 - II CENTRAL
 - III WESTERN
 - IV NORTHERN
 - V EASTERN
 - VI LESSER-EASTERN



MOVEMENT OF VILLAGES IN THE KOKODA AREA

(MAP AFTER O'MALLEY AND STANLEY (1916))



----- 1967 LANGUAGE BOUNDARY
 ← POST-EUROPEAN-CONTACT MOVEMENT
 ▲ 1916 VILLAGE
 FUYUGE LANGUAGE

3.24 *Mountain Koiari*

3.24.1 These are probably the most renowned fighters and sorcerers of the Port Moresby hinterland. They are a very widely scattered people inhabiting the rough mountainous region on both sides of the Owen Stanley Range, around the headwaters and tributaries of the Vanapa, Brown, Yodda (or Mambare), and Kumusi Rivers (see Map 7, p.46).

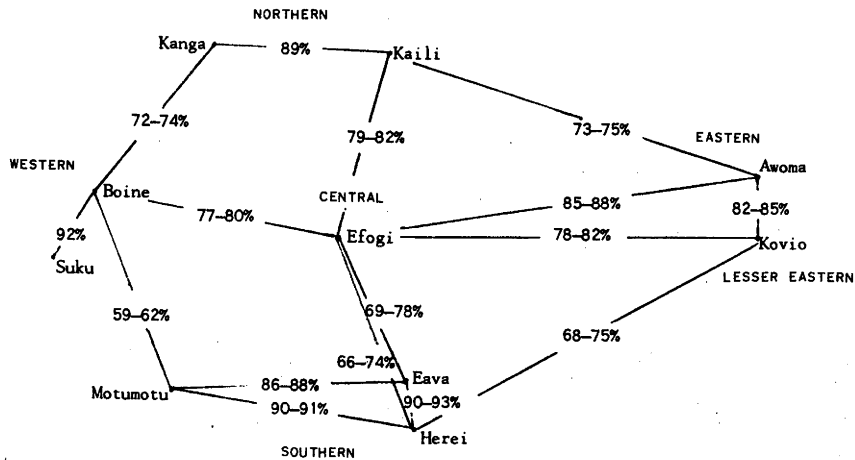
Most writers having the opportunity to observe the Mountain Koiari in their pre-contact state comment on their fine physique, and their friendly, though independent nature.

3.24.2 *Linguistic Picture*

Mountain Koiari occupies the largest area of all the Koiarian languages. It consists of the following six dialects:

Dialect	Villages	Population (Based on 1966 Census)
1. Southern	Naoro, Vioribaiwa, Uberi, Luburu, Edebu, Motumotu	347
2. Central	Efogi, Kagi, Bodinumu, Nadunumu, Boridi, Dubi, Manumu, Manari, Enivilogo, Launumu, Hailogo, Madilogo, Elologo, Biniga	1585?
3. Western	Boine, Gosisi, Horigi, Enage, Kerea, Badiloho, Fodu, Kanobada	543?
4. Northern	Kanga, Seiba, Savaia, Kovelu, Kaili, Hagutawa, Abuari, Alola, Isurava, Pelai, Usikari, Kenandara	769?
5. Eastern	Awoma, Tetebede, Ujib	368?
6. Lesser-Eastern	Kovio, Gida	122
TOTAL		3734?

The cognate percentage between these is shown on the following chart:



These dialects will now be described in turn.

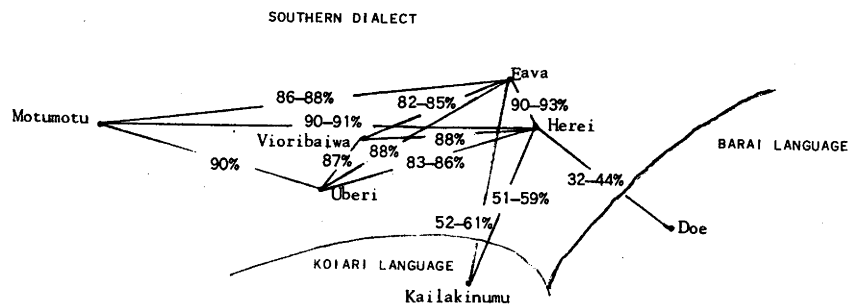
3.24.21 Southern

This is a small dialect stretching across from the headwaters of the Goldie River in the east to the lower reaches of the Brown River in the west. It is markedly different from its northern and western counterparts sharing only an average of 68-76% basic vocabulary with its nearest neighbour, the Central Dialect. Normally this degree of lexical relationship would be considered too low for a dialect level relationship. However, since the grammatical structure of the Southern Dialect is very much akin to the rest of Mountain Koiari it is here regarded as merely a divergent dialect of this language rather than a separate, though very closely related, language. Part of the reason for its low lexical relationship with the Central Dialect probably lies in the fact that it is in close contact with Koiari and Barai to the south and east.

Lexically and phonologically the Southern Dialect is also divergent within itself. Thus, at Naoro, villagers living on opposite sides of the village 'street' speak quite differently from one another. Here there are two sections--the Eava and the Herei. Herei speech has a

glottal stop corresponding to some 't' and 'k' in Eava speech.

There is now a tendency for Southern Dialect speakers to learn the Central Dialect because it has gained prestige since the Seventh Day Adventists formerly had a European missionary stationed at Efogi, and since Efogi was the first Mountain Koiari village to have an airstrip. Central Dialect speakers also find the Southern Dialect difficult to understand. The lexical relationship between Southern Dialect villages is shown on the following chart:



The common sections of the Southern Mountain Koiari are Moroka or Meroka (at Uberi and Luburu), Herei or Here¹ (at Naoro and Vioribaiwa), Eava or Eaha (at Naoro), Uberi or Kupele (at Uberi and Vioribaiwa), and formerly Itu and Ebe.²

The Herei used to live in the villages of Herebenumu (Berebenumu, Borebenumu, Berevilogo), Maritana and Gagabitana, and the Eava at Biogovaga, all in the watershed of the westward flowing Goldie River and the eastward flowing Laba River. According to Vivian (1928a) the Herei used to live in what was then (i.e., 1928) Demori territory around Mt. Deakin, at the village of Wabiamava. This would be approximately 10-12 miles east of their position at Berebenumu (as shown by O'Malley and Stanley, 1916). These sections, along with those Barai ones of Iawarere and Nigubaiba, were feared by the Pitoni and Tabu to the east who called them the Imatu (Bramell, 1905; Henry, 1915). The Herei and Eava moved to Naoro on the river of the same name about

¹

Baifana is apparently an alternative name for the Herei.

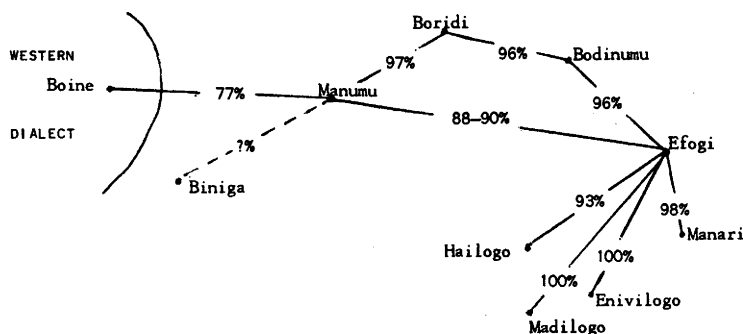
²

Ray (1929:71) says that the Itu (or Iutu) section was located on the Naoro River and was "allied to Eaha" and that the Ebe lived north of Uberi.

1953 under Seventh Day Adventist encouragement (so informants said). Both have relatives in Barai village, especially in the nearest one, Doe (see Nigubaiba Dialect in section 3.33.32 (g) below).

3.24.22 Central Dialect

This is the largest of the Mountain Koiari dialects, occupying the tributary valleys of the headwaters of the Brown River. The Central Dialect is also the most prestigious and most dominant. The following chart shows the "basic" vocabulary relationship between its major villages:



For present purposes Biniga is included in the Central Dialect although no linguistic material was collected from this village. It is included for the following reasons:

(a) because the consensus of opinion of Central Dialect informants was that the Biniga communalect was more closely related to the Central Dialect than to the Western;

(b) because Biniga is geographically within the Brown River system.

It may also be true that Enage, the closest village to Biniga, may also belong to the Central Dialect, since some Central Dialect speakers are known to be married into it. But as no linguistic material was collected at Enage or Biniga the boundary between the Central and the Western Dialects remains uncertain (if indeed there is a boundary).

The principal sections of the Central Dialect are Boxura (Boura), Kagi (Agi), Seregina (Serigina), Wamai, Efogi, Hagari, Wabari and Manari. These resisted early European exploration of the area and seem to have been generally aggressive towards one another and neighbouring

sections. Their exploits are fairly well documented in the Annual Reports of British New Guinea.¹

In 1964 Bramell summarised some of this information. He tells how the Hagari have driven the Kone from their traditional land further down the Brown River, and how they terrorised other groups in the headwaters of the same stream, often with the assistance of the Agi (or Kagi). Eventually they killed off the Kone, Ebe, Uruvi, Varagadi, Bereka, Mokuri, Ere1, and Airi.

Some Kone escaped to join up with the Varagadi remnants, who sheltered in the "swampy lowlands between the Brown and Vanapa Rivers and today are found intermarried with the Naori, Kotoi, and Vabari groups of the Upper Vanapa....The Varagadi took out their wrath on the Ogoni-Gubini, another Koitabu group who dwelt on the central Laloki. The remnants of this group fled to the Baruni area. Prior to the cause of this upheaval an offshoot of the Ogoni-Gubini intermarried with the Koiari taking up residence as an independent community in the grasslands areas of Oruapara. These people were in turn driven out by the Hagari towards the mouth of the Vanapa only to be ravaged by the coastal villagers. The advent of the European and the establishment of law and order has permitted these people to return to the land of their forefathers."²

The northern sections of Efogi and Kagi have close social ties with sections in the Northern and Eastern Dialects, and most villagers in the Central Dialect know the Haganumu Story (see Appendix 5.31) which is their explanation of how the land was settled and why they are related to peoples in the Kumusi valley some 20 miles away to the east across the uninhabited ranges.

3.24.23 *Western Dialect*

This is a small dialect in the valley of the Vanapa River. Today it is concentrated in several villages on the lower reaches of this river several miles upstream from the Port Moresby roadhead. These villagers have only recently been encouraged by the Administration to move to these sites from more distant and inaccessible areas in the mountains at the headwaters of the same stream. Many of the more traditional members of these villages, however, still have houses in their former locations.

¹ MacGregor (1898) gives a good history of European contact with various Mountain Koiari sections, including Ebe, Wamal, Boxura (Boura), and Hagari, together with some ethnological information.

² Bramell (1964:4).

The Western Dialect is most closely related to the Central Dialect. The high Owen Stanley Range between Mounts Victoria and Scratchley seem to have been very effective barriers against contact between these Western Dialect speakers and their Northern Dialect compatriots in the Yodda Valley. When MacGregor crossed this range from the northern side into the Vanapa valley he noted that very few of these Western Dialect speakers had visited peoples on the other side.

The principal sections of the Western Dialect are Suku, Boine, Horigi. These have a story which suggests that they were originally settled in the lower reaches of the Vanapa and then moved upstream (see Appendix 5.35). This story would seem to contain some truth considering that the linguistic picture suggests that the Western Dialect is most closely related to the Central Dialect, rather than to the Northern and Southern Dialects. Along their north-west frontier Western Dialect speakers have a common boundary with Fuyuge-speaking peoples of the Gailalan Language Family. It is reputed that these latter have gradually forced the Mountain Koiari out of the upper reaches of the Vetapu River, the major west-bank tributary of the Vanapa.

3.24.24 *Northern Dialect*

This is the second largest of the Mountain Koiari dialects and includes all non-Orokaiva villages between the Yodda (or Mambare) River and the Owen Stanley Range, around the Government station of Kokoda. This area is occupied by small groups of related peoples referred to in the literature as Biage, Hugu, Isurava, and Iworo. In 1929 S.H. Ray included Karukaru and Neneba in his Koiari (new Mountain Koiari) "sub-groups" (see Appendix 5.6), with a distinction between Neneba and the rest. Today it is apparent that both Neneba and Karukaru belong to the Chirima River Dialect of Fuyuge,¹ and show only a 17 per cent (approximately) vocabulary cognatic relationship with Mountain Koiari. Formerly, according to Beaver (1915), the Neneba and Karukaru lived much farther east (approximately 20 miles) in the Yodda Valley on the Kokoda Plateau,² where the present Government

¹ This language is defined by Steinkraus and Pence (1964:1-3).

² Though some Kanga (= Bouru) informants maintained that their ancestors had lived as far east as Oivi village on the Yodda-Kumusi watershed.

station is situated. But they were gradually forced westward into contact with the Fuyuge inhabitants of the Chirima Valley, who were themselves migrating south-east,¹ by the more numerous, and more aggressive Koko tribe,² who have, according to legend, advanced inland from towards the coast near Popondetta (see section 3.34 below). Beaver gives (inexplicably) 1806 as the date of the last movement of the Karukaru-Neneba from the western end of the Ajulakajula Range to a village site at Beda high up on the slopes of Mt. Momoa.³ In 1942 Karukaru village was shown on army maps to be near Finnegan's Creek. Since then this group has dispersed and integrated with Fuyuge villagers in the Chirima Valley, and with Mountain Koiari villagers in the Yodda, as shown on Map 8 (p.47). The linguistic border between these two groups of speakers is now more clearly defined than it used to be, and may be taken to be approximately between Mt. Scratchley and the junction of the Chirima and Yodda Rivers.

It is customary also to distinguish the Biage from the Isurava though this term, has broadened in reference, until today it may be used to denote any non-Orokaiva non-Chirima River inhabitant of the

⁻¹

"There appears to have been a south-easterly migration among the high valleys of the Mount Scratchley, Wharton Range, and Mount Albert Edward chains, a view supported by the legend of their origin (the story of the stone Igui), and, secondly, it is known that there has been no connection or intercourse with the tribes of the Mamba and Gira low country." (Chinnery and Beaver, 1915:161).

Williams (1923:0.177) observed, however, that the Aiga (an Orokaiva group) traded with some Goilala in axes, knives (European), and large Eruric shells (?) for feathers, and Teti boys (?), but only "under the wing of Gora," as the Aiga were, at that time, still frightened to visit the Goilala.

²

Williams (1923:0.96) lists Koko among the Hunjara Orokaiva.

³

MacGregor's evidence (1897a:6) suggests perhaps a later date:

At one spot only, on a spur of Ajuakujula [sic] immediately below the junction [of the Chirima and Yodda], was any trace of even old cultivation discernible during the whole journey from Tamata to the junction. At that place the chief of the Neneba had a garden some years ago, but he was driven away from it by the people living in the Yodda Valley [= Hunjara Orokaiva].

MacGregor's report also contains interesting ethnological information on the Neneba, well illustrated with drawings.

The Ajulakajula Range has been variously spelt. In particular, the 'Kajula' part appears as 'Kajale' in a 1954 Commonwealth of Australia map (No.NM0/55/029). This spelling corresponds closely to variant pronunciations of 'Koiari.' The historical consequences of this may or may not be significant. I have not investigated them, but my thanks are due to Mr. M. Rimoldi for raising this interesting question.

Kokoda Sub-District. As far as can be ascertained (though this needs to be checked further), Biage was the name of a village up above Saragabila or Saragamina (see Map 8 above), when Europeans first made contact with them. Some of the present villagers at Kovelu denied that Biage ever existed as a section name before the arrival of Europeans, and actually claimed that they were all xumi people. During the war they said they retreated to Bivi, an older village than Biage, up in the mountains at the head of the Miadi River. This was supposed to have been the chief ancestral stronghold during their pre-contact struggles with the Koko tribes in the Yodda Valley. Since European contact, villages have been regularly shifted and sections mixed. Descendants of the so-called Biage now populate the area in the immediate vicinity of Kokoda--Savaia and Kovelu villages, though some are to be found at Kanga in the west. According to early reports (Griffin, 1908) the Biage were for a long time shy and very suspicious of their old enemies, the Koko and Ausembo (= Orokaiva) tribes, even after the Government station was established at Kokoda. By the early twenties, however, Liston-Blyth (1922:68) found it "quite interesting to note that inter-marriage is now quite frequent between tribes that until lately were bitter foes, such as the Koko and the Biagis. References to whose fights are to be found in the station journals filed here [= Kokoda]." The Biage are most closely related linguistically to the Isurava, who inhabit the valley of the Yora (or Eora, Iura) River--a tributary of the Yodda (or Mambare) River--which drains The Gap area of the Main Range. This valley contains the villages of Kaile, Hagutawa, Abuari, and Isurava.¹ According to informants at Kaili and Isurava, everyone in this valley belongs to the Isurava section. All trace their ancestors back to a common village at Mamuve--a fortress on a rocky knoll in the mouth of the Yora Valley. But about a century ago Orokaiva tribesmen succeeded in scattering them. Most retreated high up the Yora Valley to the region of their present locations near The Gap. Their principal village was Okoari. Others crossed the valley on to a high spur overlooking the Yodda Valley, and established hamlets around Kaili. Others fled westward into Biage territory where the villages of Deniki, Pitoki, and Naro used to be.

¹ Usikari is also shown on some maps, but this village is now deserted.

According to Stuart-Russell (1899:42) distance and inaccessibility of the Isurava did not deter the Orokaiva. He reports that about a month or two before his arrival at "Iuoro (or Iworo)--the principal village of the Neneba...about seven miles beyond The Gap (this village) had sustained an attack from their enemies in the Yodda Valley--the Koriri tribe--and had lost half-a-dozen men. Their remains were pointed out to me, deposited in open-air tombs, like those of the Goromani tribe."¹

This is apparently the same village as Ray (1929:70) classifies as a member of the Wowonga sub-group of the Koiari group of non-AN languages. Ray placed Iworo "on the slopes of the Main Range near The Gap." Clearly this was a village in the Yora Valley and despite Stuart-Russell's claim that they were Neneba--a claim which I do not think can be substantiated in the light of later evidence of the exact location of the Neneba in the Chirima Valley--they were probably Isurava. The geographical position of Hugu is unknown.

Isurava peoples are most closely related (linguistically and genetically) to the Hagari, Uabari (or Vabari), and Kagi at the head of the Brown River (Manumu, Boridi, and Kagi villages), where they have intermarried. They also took refuge there during the Kokoda Campaign of the Second World War.² The Seregina were their most troublesome enemies after the Hunjara Orokaiva of the Yodda and Kumusi Valleys.

The Biage and Isurava share a similar tradition with other Mountain Koiari of having originated from the headwaters of the Kumusi River. They also share this tradition with more distantly (geographically and linguistically) related groups of Aomie, Barai, and Managalasi. Beaver (1915:48-9) first recorded this in the following terms:

It is most important...to make clear that all these tribes
[= Akisi, Niguri, Logali, Efogi, Misai, Ihuade] together
with Isurava of the Main Range, as well as all the Koiari-
speaking people of the Central Division side--certainly as far

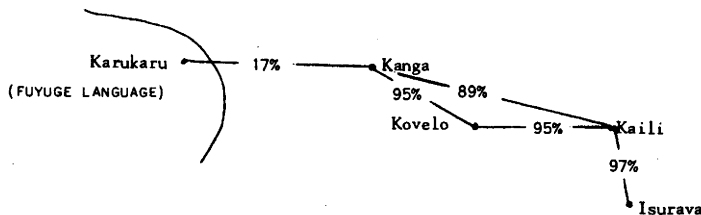
¹ Stuart-Russell's report also contains ethnological notes on the Iworo.

² The 'Kokoda Trail' passed through these villages. Some of the fiercest fighting of this campaign took place in The Gap area. For a complete description of the fighting in this sector of the war see McCarthy (1959).

down as Wamai--fully recognise the connection and trace back their common origin to a certain spot on the Upper Kumusi known as Tuagila (Tuaila), to this day guarded and preserved from desecration by one particular family selected from the Akisi people (popularly known as Wawonga).¹ The Koiari language is recognised as the true language of the Upper Kumusi people, but the migration of the Kagi and other Central Division Koiaris from the Kumusi is thoroughly understood and admitted on all sides. The Koiari continually visit the Kumusi people, and in olden days sent reinforcements to assist in their battles. To this day they bring back from Tuagila a certain weed to plant in their gardens to strengthen the crop.

I have quoted this in full because of the close correspondence between this information and that I obtained independently on my field visit, when I was unacquainted with Beaver's article. The story of the common origin of these peoples is recorded in Appendix 5.31, where the speaker from Efogi on the south side of the Owen Stanleys refers to the spot as Haganumu.

The lexical relationship between Northern Dialect villages is shown on the following chart:



3.24.25 Eastern and Lesser Eastern Dialects

These two dialects occupy the four southernmost villages of Awoma, and Tetebede, Kovio and Gida in the headwaters of the Kumusi River (see Map 7 above and Map 11, p.77). The 'basic' vocabulary correspondences between these dialects is shown on the chart at the

¹

Beaver is slightly wrong here. The Akisi are actually Barai, and Tuagila is really their name of the original male ancestor who, in petrified form, still remains close to the supposed emergence point. See Appendix 5.31 for more details.

beginning of this section. The Eastern Dialect is most closely related to the Central Dialect with which it has close social ties.

The two dialects are in the Wawonga Census Division of the Kokoda Sub-District, Northern District. In the past Wawonga (Wowonga, Wawanga, Wavanga) was the term customarily applied to all peoples living in the headwaters of the Kumusi River. My survey shows, however, (as Beaver (1915:48-9) had much earlier suggested) that this valley is occupied by speakers of three¹ separate, though related, mutually unintelligible languages of Aomie, Barai, and Mountain Koiari.² It is also apparent that "Wawonga" is the Orokaiva pronunciation of "Favaga," one of the Mountain Koiari sections in the Eastern Dialect. Thus the term "Wawonga" is better avoided for descriptive purposes. If it is to be used at all it should be limited in reference to only one section of the Mountain Koiari in this area, viz. Favaga. Other sections are Efogi, Misai, Niguli and Ihuade. The Efogi section also has members in the Central Dialect of Mountain Koiari especially in the village of Efogi which takes its name from this section. Inter-marriage occurs between the Eastern Dialect speakers and Barai speakers downriver at Ujilio, and across the Owalama Range at Iaure and Suwari, as well as with other Mountain Koiari to the west across the Owen Stanley Range.

When first contacted the Mountain Koiari in the Kumusi Valley were a shy lot, though they did attack a party of prospectors in 1908. Murray (1909:18) interprets the causes of this attack in the following quaint psychological terms:

The Wawonga are a small remnant of a tribe who appear in the past to have been hunted from pillar to post by their more powerful neighbours, and they seem by some strange process of reasoning to have persuaded themselves that the prospecting party had come to drive them away from the small piece of land that remained to them.

Some of this is partially true. Limiting the term Wawonga to the Favaga section, we may firstly observe that there is little evidence to support the statement that these are "a small remnant" of a former larger tribe (excluding that is, the remainder of the Mountain Koiari). That they had enemies and were involved in tribal wars is true, but they do not seem to have been hunted from "pillar to post" as suggested. They seem, on the contrary, to have been very stationary. This is

1

Excluding the Orokaiva village of Sirorata further downstream.

2

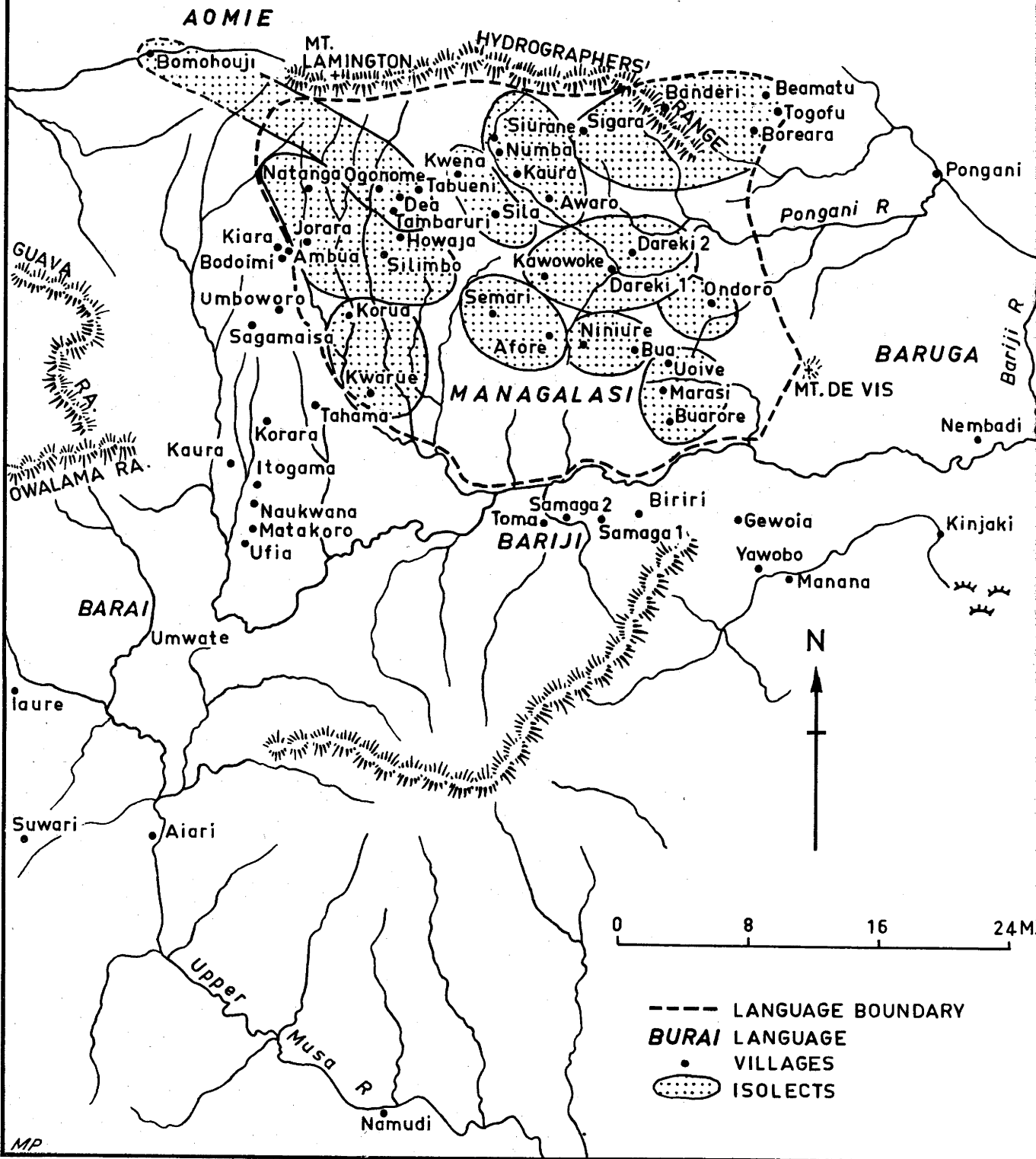
See sections 3.33 and 3.34 below for descriptions of the Barai and Aomie languages.

testified to by the list of their old village sites. Finally, Murray's analysis seeks to exonerate the miners, but the history of their collisions with natives in every other area they entered rather throws doubt on the accuracy of this analysis.

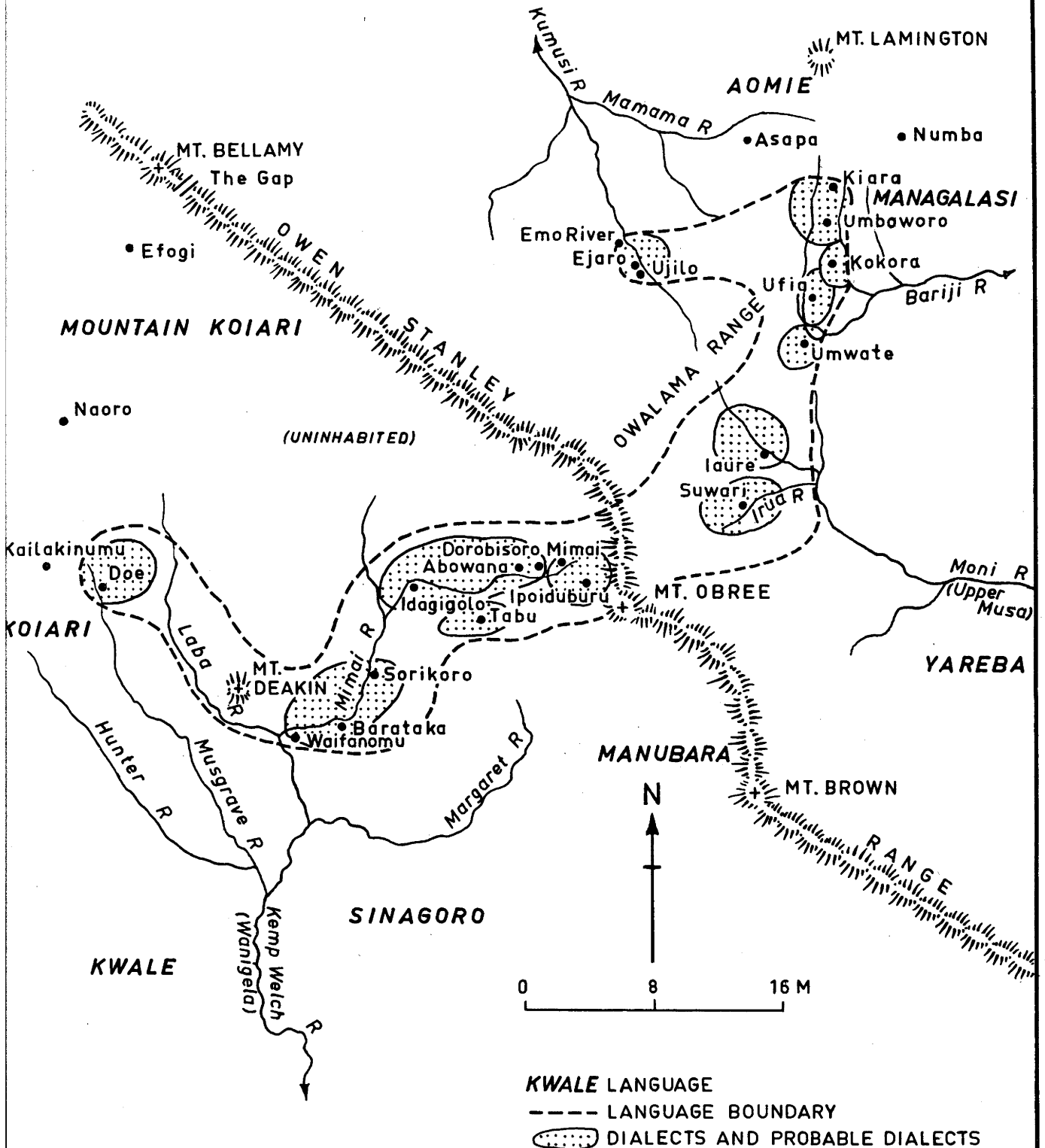
3.24.3 *Historical Interpretation*

Recapitulating the evidence just presented on the Mountain Koiari it is apparent that all substantive movements of these people have been away from the Yodda and Kumusi Valleys. The Karukaru-Neneba have moved a substantial distance westward along the Yodda Valley from near Kokoda, while the Biage and Isurava have moved back into the mountains along tributary valleys of this same river away from a similar point near Kokoda. The Eastern and Lesser-Eastern dialects, on the other hand, have remained almost static. Moreover, all these northern sections (except the Neneba) have close linguistic and kinship ties with other Mountain Koiari on the southern side of the Owen Stanley Range, who inhabit the headwaters of southward flowing rivers. These, in turn, are related southwards linguistically to other Mountain Koiari who have recently been forced further southwards by intertribal warfare.

DISTRIBUTION OF MANAGALASI VILLAGES



DISTRIBUTION OF BARAI VILLAGES



MP

3.3 THE BARAIC SUB-FAMILY

3.31 General

The information on these areas is less detailed and not nearly as extensive because I did not spend the same amount of time in the Managalasi and Aomie areas as I had done in the others.¹ The information collected is however, supplemented by material obtained from early patrol reports on the area, and by information kindly given by members of the Summer Institute of Linguistics working in these latter two areas.²

3.32 Managalasi

3.32.1 Compared with other Koiarian areas the Managalasi is a densely populated area on the southern slopes of the Hydrographers' Ranges in the Northern District of Papua (see Map 9, p.60). Approximately 4000 Managalasi speakers occupy the major portion of a large basin-shaped area rimmed by the Hydrographers' Ranges, Mount DeVis, Tobunuma, Siru-um and Guava Ranges. This area is very fertile volcanic ash deposit³ drained by the Upper Pongani and Bariji Rivers. Managalasi territory is bounded on the south by the Bariji River and on the east by a line running roughly between Mount De Vis and the eastern foothills of the Hydrographers' Ranges. In the west Managalasi territory extends into the headwaters of the Bariji some 8-10 miles south of the Hydrographers'.

3.32.2 Dick (1922:72) has described the people as being of good physique though with a disposition to being nervous and timid, "suspicious and very 'touchy', and easily upset." Groups of them resisted the Government, or pretended to (Strong, 1909:72). They used to live in scattered hamlets, which they shifted regularly with their gardens (MacDonnell, 1915), wore tapa cloth and were distinctly tattooed.⁴ The men wore long pigtails bound with tapa cloth. Unlike

¹ The Administration census division names for these areas are Bariji-Managalase and Managalase, or Upper Managalase, respectively. "Managalasi" is the spelling preferred by Parlier (1964). "Aomie" was first suggested by Tobitt (1966).

² Mr. J. Parlier in Managalasi, and Mr. J. Austing in Aomie.

³ See *Lands of the Safia-Pongani Area, Papua-New Guinea*, Land Research Series No.17 (Melbourne: CSIRO, 1967).

⁴ See *Papuan villager* Vol.9, No.3, p.18 (March 1958) for an article on Managalasi art. This also refers to another article by Williams.

most other Koiarian peoples, they did not build tree houses but lived in long houses. They say they used to stay indoors to whiten their skins for tatoeing.

3.32.3 According to early Government reports the Managalasi consist of a large number of "tribes" (undefined)¹ most of which appear to have been friendly towards each other, except in the West, where at first contact (MacDonnell, 1915) some west-south-west ones (e.g., Namino) were at enmity with central ones (e.g., Averi, Minjori). The Managalasi as a whole, however, were ill-disposed towards the neighbouring unrelated Bariji (around Biriri) and Upper Musa River "tribes" (MacDonnell, 1915).² Along the eastern boundary the Managalasi are in contact with the Binanderean speaking peoples of Notu, Pongani, and Baruga. According to early written sources the Managalasi were on friendly terms with these Binanderean speaking peoples. In the Pongani area (around the mouth of the river of the same name) there were some who could communicate with Managalasi from the Ondoro area. This contact undoubtedly produces skewing of lexical items recorded in the Ondoro word lists obtained.

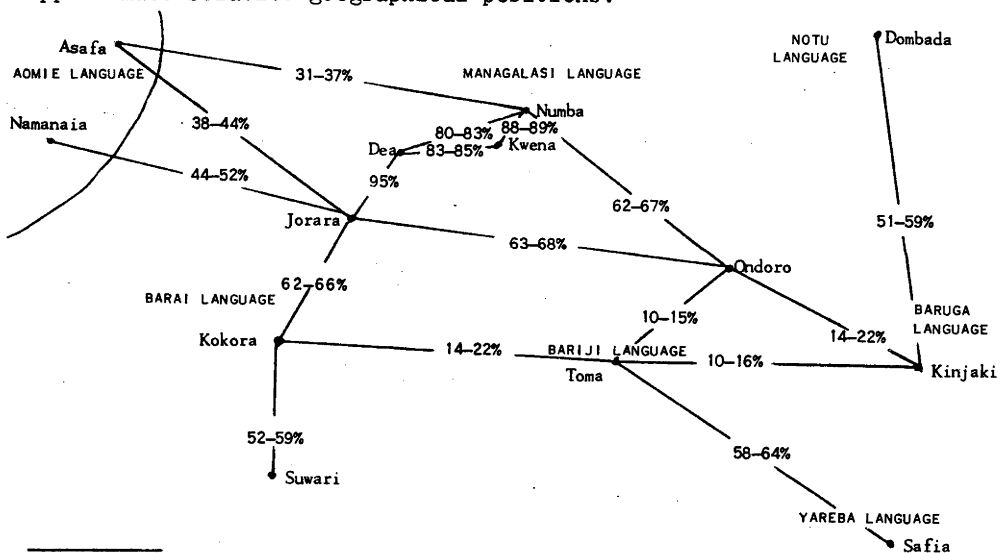
¹ "Tribes" in this description are evidently similar to groups or sections in other Koiarian areas.

² Bariji is my term for the language spoken by a group of villages in the middle Bariji River area: Toma, Samaga 1, Samaga 2, Biriri, Yawobo, Gewoia and Manana. This group shares 58-64% vocabulary with Yareba (around Safia, Central Musa River) which is being described by H. Weimer of the Summer Institute of Linguistics. The Upper Musa tribes (around the Danawa River and Namudi) are also known to be related to Yareba. Thus what may be tentatively called the Yareban Language Family fills an arc around the curve of the Musa River and across to the south side of the Middle Bariji River. All other villages on the coastward side of this are Baruga (Binanderean)--see Wilson (1968). It is not possible at this stage to suggest where the Yareba may have originated except that H. Weimer (oral com.) has said that the Yareba around Safia have mythological associations with Mt. Suckling, some 20 miles to the south-east. However, the present geographical distribution of Barai, Managalasi, Baruga and the Yareban family languages suggests that the Baruga moved inland up the main streams (Musa and Bariji) occupying the lowland areas (as seems to have been their practice also further west around the Kumusi and Mambare Rivers) until they contacted other groups, viz. Managalasi and Yareba. The Yareba would seem to be originally settled in the Musa Valley and its immediate vicinity. At the time of contact with Europeans the Yareba were under attack in the top of the Musa and middle Bariji by Barai and Managalasi from proximate areas. At the same time the Bariji were friendly with the Bariji River Baruga (around Nembadi and Kinjaki), and it seems conceivable that they would have succumbed either to Baruga (by absorption) or Managalasi (by conquest) in time, since they only number about 300 and are well separated from other Yareba groups on the Musa.

3.32.4 The Managalasi do not have a single origin tradition. Some (the westernmost villagers) seem to know the Haganumu story, though I could not ascertain whether they held to this as their own or as a borrowed tale. The eastern villagers have two stories. Some (around Numba) believe they are descended from the blood of an old woman who cut her finger and wrapped it in taro leaves and placed it inside a pot.¹ Others (around Afore) have a story about the earth being created by a kind of super-spirit very much as in Genesis of Christian tradition. My Numba informant also said that the Managalasi used to live on the northern side of the Hydrographers' Ranges around Embi Lakes but were driven back by the Notu (Orokaiva) so that now all Managalasi live on the southern side of these ranges.²

3.32.5 Linguistic Picture

3.32.51 The following chart establishes the identity of the Managalasi language--a language which shows a greater "basic" lexical affinity with Barai than any of the other neighbouring languages--Bariji, Baruga, Aomie. In this chart Managalasi villages are in their approximate relative geographical positions.



1

This story is similar to the more elaborate Orokaiva "Tale of Totoima" recorded by Williams (1923:0.411). Language differences among the Orokaiva are associated in origin in this tale (and another--"The Tale of "Korevaga" (Williams, 1923:0.259)) with bubbles.

2

Mr. J. Parlier (oral com.) said he has collected similar information. My thanks are also due to him for correcting my western boundary of the Managalasi language.

3.32.52 Because I was only able to sample the speech of five Managalasi villages (Numba, Kwena, Dea, Jorara, and Ondoro) I cannot give a detailed account of the dialects of Managalasi. From the material I collected, however, it would appear that Managalasi villages are linked in a series of chains similar to those of other Koiarian languages. According to the informants used in the collection of the linguistic material pretty well each of the numerous "tribes" of the Managalasi has its own distinctive speech, which, for the purposes of this paper I shall refer to as isolects. Accordingly I suggest that there may be anything up to eleven dialects in this area corresponding to the following isolects. It is probable, however, that many of the isolects can be combined into dialects, depending, of course, on how one defines dialect.¹ The following are my eleven isolects:

Isolect	Representative village	Population (Based on 1966 Census)
1. Akabara	Banderi	397
2. Numba	Numba	633
3. Minjori	Kwena	360
4. Averi	Dea	537?
5. Mesari	Jorara	486
6. Nami	Kwarue	230?
7. Afore	Afore	200
8. Wakue	Dareki	255
9. Oko	Ninjure	265
10. Karira	Ondoro	131
11. Jimuni	Marasi	187
TOTAL		3681?

3.32.53 From the cognate percentage chart above it appears that the Ondoro area is quite different from the rest of the Managalasi. This is principally because 13% of the basic vocabulary tested² are evidently

¹ Mr. J. Parlier has recently suggested to me (oral com.) that there are probably four dialect areas--Western, Central, Eastern and Southern. This is his early estimate based on a superficial examination of linguistic material obtained from nearly every village in the area.

² Only 94 items were tested of which 74 were counted for comparative purposes.

borrowings from neighbouring Baruga. The items borrowed are: head, hair, jaw, throat, arm, leg, skin, moon, rain, mountain. If this 13% were added to the 62-67% already given then this would give a normal dialectal picture of around 80%.

3.32.6 *Historical Interpretation*

Only two points of historical interest emerge from the foregoing description:

(a) that the Managalasi appear to have once occupied a larger area than they do today, especially to the north of the Hydrographers' Ranges;

(b) that Managalasi is more closely related to the Barai than to the Aomie.

It is also interesting to note that many Managalasi "tribal" names are akin to Koiari section ones in that they end in -ri. This may provide a useful clue to population drift in this area as it does in the Koiari.

3.33 *Barai*

3.33.1 The Barai language is represented in three Sub-Districts of the Central and Northern Districts of Papua. This language stretches in a large arc across very mountainous terrain from the headwaters of the Kumusi River in the Kokoda Sub-District (Northern District) across the Owalama Range into the headwaters of the Musa River of the Tufi Sub-District (Northern District), and thence across the Owen Stanley Range down the Mimai (Mimani) and up the Laba (Adai)¹ tributaries of the Kemp Welch (Wanigela) River of the Rigo Sub-District (Central District). The Barai are separated from the Mountain Koiari to the west by large tracts of uninhabited very mountainous terrain (see Map 10, p.61).

3.33.2 Culturally the Barai are akin to their linguistically closely and distantly related neighbours of Managalasi and Manubara. They cook on open fires or in stone ovens, hunt with spears, nets and a variety of traps, and the men wear their hair in plaits interwoven with tapa cloth. They are of good physique and have abundant supplies of yams, taro, sugarcane, sweetpotato, bush fruits, and wild game.

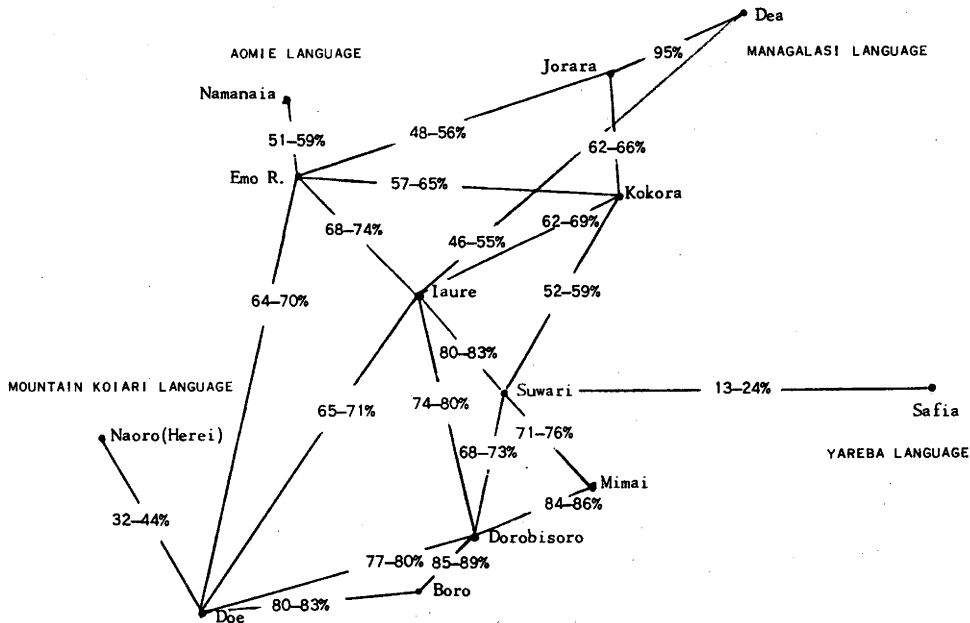
¹

This river has been spelled variously as: Laba, Iaba, Iarawo, Iarhwe, Iyala and Adai.

In former times they lived in scattered hamlets, or garden settlements, of usually no more than a dozen houses. In central and northern Barai the villages often consisted of one large "long house." According to Henry (1915) these were "houses... joined together under long roofs covering from ten to twelve rooms each, so that though a village appears to have only two houses, it has in reality from twenty to twenty-four dwellings." Occasionally these long houses were not partitioned off inside, and therefore consisted of but one long room.¹ Distances between villages varied from two to ten miles. Villages were regularly shifted as new gardens were made, but today the population is more sedentary since the people have been encouraged to erect permanent villages in more accessible places along recognised patrol tracks. Their former geographical isolation undoubtedly produced the diverse dialectal situation.

3.33.3 Linguistic Picture

The following chart identifies the language and shows the vocabulary cognatic relationship between sampled present day villages (shown in their approximate relative geographical positions):



¹

Muscutt (1915) remarked that these houses are similar in style to others he had seen in the Mt. Yule (Kairuku Sub-District, Central District) and Kumusi River valley (Kokoda Sub-District, Northern District) areas.

From the lexical material collected it appears that there are at least nine dialects of Barai:

DIALECT	REPRESENTATIVE VILLAGE
1. Emo River	Emo River (Kumusi River)
2. Kokora	Kokora (Upper Bariji River)
3. Mogoni	Iaure (Upper Musa River)
4. Manoa	Suwari (Upper Musa River)
5. Laroni	Mimai (Upper Mimai River)
6. Pitoni	Dorobisoro (Upper Mimai River)
7. Tabu	Boro (Middle Mimai River)
8. Barai	Sorikoro (Middle Mimai River)
9. Nigubaiba	Doe (Upper Laba River)

Other evidence, however, suggests that there are possibly several more, and that at least two have disappeared since the Barai were first contacted. These will be discussed further below.

This picture is more inclusive than any previously suggested, though Ray (1929) had recognised a connection between village communalects on the south side of the Owen Stanley Range (dialects 7 and 9) and Mogoni (dialect 3) on the north side. He grouped Seramina, Barai, Nigubaiba, and Mogoni as the "Seramina group" (= language?). Of these Seramina is now extinct and the Nigubaiba Dialect was a little inaccurate.

The dialects will now be discussed in more detail in the following sections:

- 3.33.31 Dialects North of the Owen Stanley Range;
- 3.33.32 Dialects South of the Owen Stanley Range.

3.33.31 *Dialects North of the Owen Stanley Range*

These show more diverse lexical relationships with each other than those on the south side do.

(a) *Emo River*

This is a small dialect of three villages (Emo River, Ejaro, Ujilo) in the Upper Kumusi River. This dialect separates the Mountain Koiari villages of Awoma, Tetebe, and Kovio from the Aomie speaking ones of Managubi and Namanai (Namandja) (see Map 11, p.77). This distribution is discussed further in section 4.0 below in relation to the prehistorical spread and diversification of the Koiarian languages.

Mythologically and socially the Emo River Dialect villagers have strong ties with other Barai dialect villagers about one day's walk to the east in the Upper Musa River (MacDonnell, 1914a; Hooper 1916). All believe that their mythological home is at Haganumu (see section 2.23.25 above)¹ in Emo River Dialect territory, and all are inter-related through marriage.

Lexical evidence suggests that the Emo River Dialect is most closely related to the Mogoni (around Iaure), and through this to the Manoa (around Suwari on the Irua River).

(b) *Kokora*

According to the lexical evidence Kokora is the most divergent of the Barai dialects. This can probably be explained by two factors. Firstly this dialect is in contact with the Managalasi language, which, it is reported (MacDonnell 1914a), the Kokora understand, including even the dialect spoken as far east as Numba. Secondly, there are other groups of closely related villages between Kokora and the nearest other Musa River Barai villages sampled (viz. Iaure and Suwari) from which no linguistic material was collected. MacDonnell (1914a) visited these and noted that "the Wawonga [= Emo] and Mandoho [= Tahama] tribes speak similar languages" and that "the Kufia [= Ufia] tribe...speak almost the same as that spoken by the Mua-Mandoho [= Umwate] Tribe." Later he suggested "the Wowonga, Mongoni and Mua-Mandoho, also other tribes of the Upper Bariji, appear to be of the one clan."

It is therefore likely that another three dialects could be added to the list already given above, viz.

- 1) Pirimi 2) Ufia 3) Umwate

As has already been said these have strong mythological and social ties with the other dialects on the north side of the Owen Stanley Range. They never seem to have been at war with one another, but were the common enemies of the Loi-i and other "tribes" on the eastern side of the Musa River, which was their common boundary. MacDonnell (1914a) noted a marked difference in language, culture, and physique between the Barai and Musa River tribes in this area. These latter are related to the Yareba of Central Musa and to the Bariji of the middle Bariji River (see fn.2 p.63).

¹

MacDonnell (1915) also recorded a variant of the Haganumu story in the Kokora area.

(c) *Mongoni*

This is a small dialect around Iaure on the Mongoni tributary of the Upper Musa. This river drains from the Owalama Range and forms a natural route to Upper Kumusi River villages.

(d) *Manoa*

This small dialect is centred around Suwari on the Irua River (west branch of the Musa River). It is distinct phonologically in having velar stops corresponding to alveolar stops in other Barai dialects.

3.33.32 *Dialects South of the Owen Stanley Range*

These are all closely related.

(a) *Laroni*

This is a very small dialect covering the villages of Mimai, Ipooiduburu, and Odoibi in the Owen Stanley Ranges at the head of the Mimai tributary of the Kemp Welch River. Laroni speakers are reported to be very traditional with some villagers still living in tree houses (Sharp, 1967--oral com.). The Laroni are intermarried with the Manoa from across the Range, and often attend feasts there.

(b) *Pitoni*

This has always been the largest dialect of Barai. The Pitoni occupy the headwaters of the Mimai, and its north bank tributary, Ve Creek, in the present day villages of Dodi (Dobi), Abaro, Idagigolo, Huavolo, Somoru, Dorobisoro, and Abowana. They were friendly with the Manoa also, though not always at peace with the Laroni. The Pitoni believe they are descended from people who first came from Ivaru in the direction of the Kumusi River.

(c) *Tabu*

This is a small dialect around Boro, Ibaradoku, and Imidiru villages. Early reporters classified it with the Barai "tribe" to the south.

(d) *Barai*

This dialect is centred around the present day village of Sori or Sorikoro, though at time of contact they lived in scattered villages on either side of the Mimai River (e.g., Sorilor, Ornebe, Bagorolo (later Barai), Imatoru, Ebidohai, Ibaradoho). Their nearest neighbours and traditional enemies are the Kokila (Manubara language) who lived approximately six hours' walk away to the south. Occasionally the Barai and Tabu were attacked by the Imatu (see

section 3.23.21 above and sub-section (e) below) from the headwaters of the Laba River to the west. Some have married women from this area.

On present day maps there is a large tract of unoccupied territory between the last Barai dialect village of Sori and the Nigubaiba dialect village of Doe on the upper Musgrave River. By all early accounts this area was once inhabited by speakers of probably two dialects--the Uala and the Seramina--which have since disappeared.

(e) *Uala*

In the late 19th and early 20th centuries five other villages of Barai speakers were reported to be living north of the Mimai River around Mt. Potter: Wadiri (Vadili) Uwalla (Huwala, Owalla), Honearu, Musia, Bodoa. These were apparently small villages which were constantly harrassed by the Kokila across the river to the east. English (1896) associated the Musia with the Demore to the west, and Honearu and Badoa with Vadili. This latter group gradually moved eastward across the Mimai River, and by 1918 they had dispersed into Koriko (Manubara language) territory further east (Cawley, 1918). Uala have since apparently been absorbed by the Barai to the north-east but this needs checking. No evidence is available on the fate of the others.

(f) *Seramina*

The Seramina (Seremino, Seraminoho) occupied the territory around Mt. Deakin north of the Laba River, which was probably the south boundary of their territory.¹ Beaver (1908) notes that "these villages are small and to my mind dying out." Although he did not give figures, later ones supplied by Woodward (1926) give the populations of Seramina and Demori as 38 and 18 respectively. The Seramina figure includes approximately thirteen villagers from nearby Lusidabuna village.

Ray (1929) classified the Seramina and Demori together as the Seramina Dialect. Before then, however, Vivian (1927) had reported that the Demori had dispersed after the death of the village constable,

¹ Despite the fact that O'Malley and Stanley (1916) have Demori and Seramina villages south of the Laba. This does not agree with any accounts of the locations of these villages before 1916. All accounts place them on the north bank of this river on the eastern and northern slopes of Mt. Deakin (English, 1898b; Beaver, 1908; Stewertt, 1912). They had certainly shifted around a great deal and the Seramina had once lived down next to the river just to the south-west of Mt. Deakin, where the old road from Sogeri to Rigo reached the river (Stewertt, 1912). In 1917 they were at least six miles from the nearest Kwale village of Iovi or Ihovi (Muscutt, 1917).

and the Seramina have long since scattered. One descendant of the latter is living at Doe, but he has, he says, forgotten his dialect, since he has been living with the Nigubaiba people for many years.

(g) *Nigubaiba*

This is a small dialect spoken in Doe village in the headwaters of the Musgrave River near Iawarere plantation. These people are the remnants of a number of small groups who used to occupy the territory around the headwaters of the Musgrave and Laba tributaries of the Kemp Welch, e.g., Iawareri, Boguari, and Nigubaiba (Nigobaifa). The Koiari used to refer to these collectively as Deduri (Beaver, 1908), though they now refer to the Doe people as Nanigo. I could not establish whether Nanigo was/is a section there.

3.33.4 *Historical Conclusion*

As has already been outlined above tradition has it that the Barai moved southwards from Haganumu in the Upper Kumusi River, and from Ivaru, a mythological point in the mountains somewhere to the north-west of Pitoni. The present geographical distribution of the Barai peoples and the linguistic picture already outlined could certainly be explained by such a general movement. Such a movement would also explain the southward movement of the Kwaleans, who inhabit the hilly country immediately south of the Barai, around the lower reaches of the Musgrave and Hunter tributaries of the Kemp Welch.

Linguistically, Kwaleans are unrelated closely to any other group, though they would probably belong to the Central Papuan Stock (?) suggested in section 1.1 above. A.C. Haddon (1900a:286) first described the southward movement of one of the Kwalean "tribes," the Garia, in the following terms:¹

They went southward, and on striking the Musgrave and Hunter rivers they travelled down their valleys, then crossing other affluents of the Vanigele (Kemp Welch River), they stopped at the hills behind the Government station of Rigo. The Garia have thus migrated across the path of the Sinaugoro, and in many cases they occupy the sites of old Sinaugoro [sic] villages.

¹
Haddon obtained this information from Seligmann (who later published it (1910:18)), who in turn obtained it from A.C. English, the Resident Magistrate of Rigo at the time. Similar information also appears in Seligmann (1912-3).

The movement of these latter AN peoples has been mapped (unpublished) by Sharp, who has been Resident Assistant District Officer in this area for ten years.¹ This map shows two broad main movements with subsidiary side 'eddyings';

(a) A general pushing south and west from a point in the Henty Range south of the Margaret tributary of the Kemp Welch;

(b) A westward movement from a point lower down the Kemp Welch.

Thus the prehistory of peoples of the Rigo Sub-District appears to entail considerable manoeuvring with the AN's winning over (that is, if it were ever occupied) the drier lowland areas while the Kwaleans and other groups now extinct (e.g., Mulaha/Iaibu) were forced in a south-west direction out of their territories against the Koiari and the Motu.² The AN appear to have used the Kemp Welch River (or Vanigela) as their main entry route³ and have spread out on either side of it until they completely occupied all the territory between this river and the Ormond, and beyond, to the east. It is an interesting feature of their present distribution that they occupy little mountainous country (except in the north-west in the Boku, Wiga, Ikega areas). Indeed their territory is practically limited to all land south of the rain forest line. This distribution may simply be a reflection of time of possession, or it could be dependent on a number of other factors (e.g., defence, religion). However, further development was arrested when Europeans arrived, though some coastal groups (e.g., the Motu at Kapakapa) took advantage of Government protection to encroach on the territories of inland peoples (English, 1899).

1

A previous patrol officer had endeavoured to trace local movements in the Rigo area but did not leave any results of his investigation. He (Vivian, 1927a:2) remarked, however, that "by all accounts the districts hereabouts, not long before Government occupation, were very unsettled, the "drives" sometimes being of consequence."

2

Indeed this is probably the underlying reason for the movement of the Koiari westward also.

3

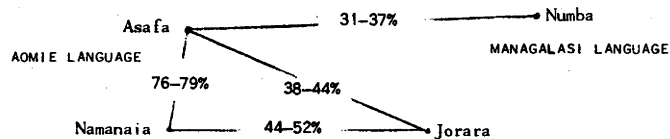
An hypothesis which was also considered by Haddon (1900b:416, fn.): "Perhaps the Sinaugolo originally migrated up the Vanigela from the coast, and then returned towards the coast in a westerly direction." This suggestion is given added strength by the fact that this kind of movement seems to be characteristic of AN occupation in the Central District. Note the position of such groups in relation to large rivers in the Kairuku, Port Moresby, and Rigo Sub-Districts.

3.34 Aomie

3.34.1 The Aomie occupy the south-western slopes of Mount Lamington along the Mamama River, and a small area in the Upper Kumusi Valley (see Map 11, p.77). And like many others of the Kolarian peoples their traditional homeland is Haganumu.¹

3.34.2 Linguistic Picture

The following chart identifies the Aomie language.



That is, it consists of at least two dialects--one centred around Namaanai, which I shall call Zuwadza after the peoples' name for themselves, and one around Asafa, which I shall call by the same name. Informants said that the Gora villagers speak slightly differently also, so that a third dialect may be represented there. The two recorded dialects share approximately the same percentage cognates with Managalasi dialects closest to each.

The Aomie language is small and only numbers about 1,000.

3.34.3 Historical Interpretation

Historically the Aomie are reputed to have once occupied territory around the present day villages of Ajeka and Wairope (Wire Rope), the Kumusi crossing point. According to their most immediate Orokaiva (Binanderean) neighbours--Sairope and Sirorata--the Aomie were forced back into the Mamama and Kumusi Valleys by the Orokaiva who were moving inland.

Sairope informants maintained that they originally came from a locality down the Kumusi River near Ombisusu (see Map 11, p.77),

¹

Mr. J. Austing--a member of the Summer Institute of Linguistics who has been living amongst the Aomie at Asafa since mid-1965--has recorded the Aomie version of the Haganumu story. He suggested (oral com.) that this story might be a loan from Orokaiva, but I found no evidence of this.

having been evicted by the Koropata, an apparently hostile group of Orokaiva further downstream.¹ The remnants wandered about the area between the Kumusi and the base of Mount Lamington in response to hostilities by the Wasida, and probably the Aomie, who eventually retreated to their present position. Sairope have only lived in their present area since just before the arrival of Europeans in the first decade of the twentieth century.

Sirorata informants likewise claim to have formerly lived at Tarora, downstream near the Kumusi crossing of Wire Rope. They moved to their present site through a long list of old villages (whose positions I was unable to determine at the time), apparently in a general upriver direction, in response to similar pressure from the Koropata/Wasida. In so doing they came into collision with the relatives and ancestors of the present day Namanai (Namandza or Wora) people of the Upper Kumusi, who are closely related linguistically to the Aomie.²

These two Orokaiva villages also have a strong tradition of having come from towards the coast. Sairope informants expressed this in a story about three light-skinned men--Eiboro, Poru, and Jona--who came inland from near Popondetta, and met a dark-skinned nude girl--Dapero Sipa--at the base of a tree near the Embala River. Two of the men cohabited with this young woman after making her a bark skirt. These tried unsuccessfully to have light-skinned children from the dark-skinned woman, but only dark-skinned ones ever resulted. The third companion died of some serious illness, and turned to stone. The other two men were blessed with six children each, and these spread out in different directions to populate the Northern District.

1

Williams (1923:0.96) classified Koropata in Wasida linguistic group, and Sairope, Wire Rope, Papangi, Sauni, Hunjiri, Autembo and Kokoda in the Hunjara group. He does not have any information to offer about the tribal relationship between the Koropata/Wasida and Sairope/Sirorata, except to say (0.514) that the Koropata were kitoho (outsiders, aliens, enemies) with Papaki, who are inland from Wire Rope. Reay (1953-54:118) classifies Koropata with Wasida, and relates how the Koropata helped their allies at Isivita (a Wasida group) in wars against "their traditional enemies - the Togaho, the Managalasi, and the Orokaiva of Sairope." Managalasi in this context refers to the Aomie, or Upper Managalasi, as they used to be called (Reay: oral com.).

2

MacDonnell (1914a:23): "When I was in this district (SONGE-Sirorata) five years ago the SONGE tribe lived further up the Kumusi, and high up on the hill sides."

The Sirorata tradition is slightly different: the original ancestors had different names--Biblical ones--Paul, Abriel, and Jona; the woman lived in a cave and was not immediately discovered until one of the men dared to enter; six children were born to Paul and Abriel.¹ Colour of skin was not an important feature of the Sirorata story.

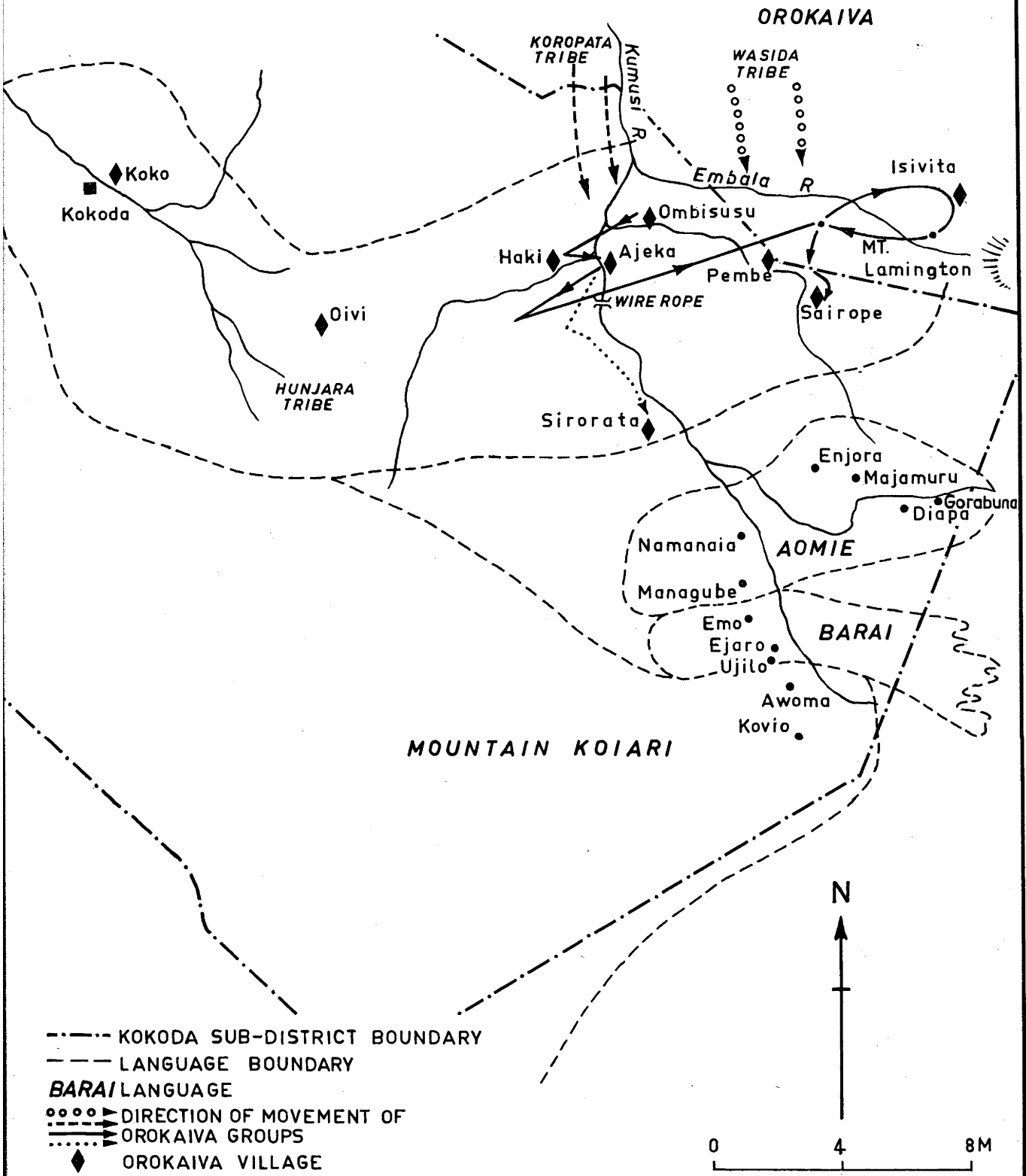
Present day land disputes between the Sirorata-Sairope and the various Aomie groups is a legacy of pre-contact (European) movement of these two peoples.

Thus the pattern of movement of the Aomie seems to have been down the Kumusi River valley initially, with a later, forced return to their present position in this, and the Mamama Valleys.

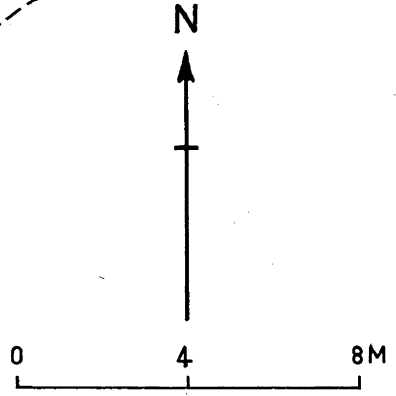
1

The names of these were recorded by David Lekembo in an English version of the story--Paul's children: Havurete, Sasa, Peki, Kuei, Ombota, Huruko; Abriel's children: Upupu, Ohuraembo, Ehirari, Jaja, Timumu, Gasi.

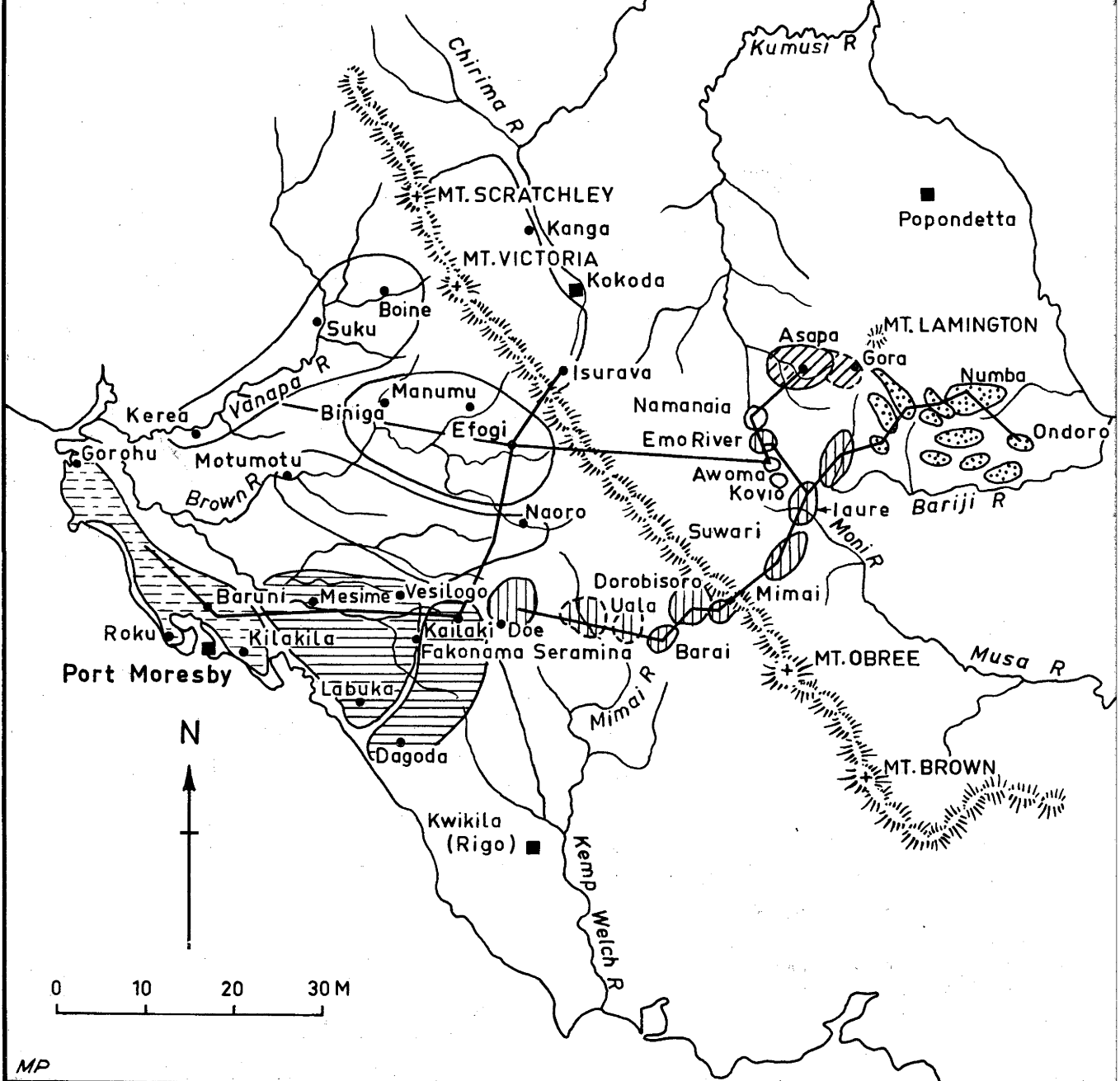
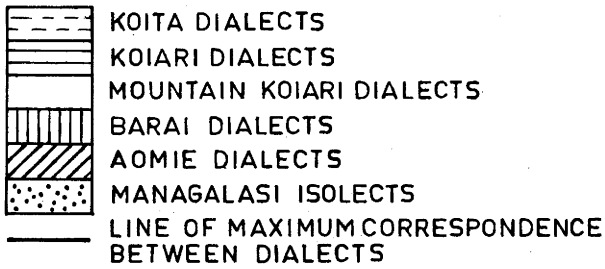
DISTRIBUTION OF AOMIE VILLAGES



- KOKODA SUB-DISTRICT BOUNDARY
- - - LANGUAGE BOUNDARY
- BARAI** LANGUAGE
-> DIRECTION OF MOVEMENT OF AOMIE GROUPS
- > DIRECTION OF MOVEMENT OF OROKAIVA GROUPS
- ◆ OROKAIVA VILLAGE



KOIARIAN DIALECT CHAINS

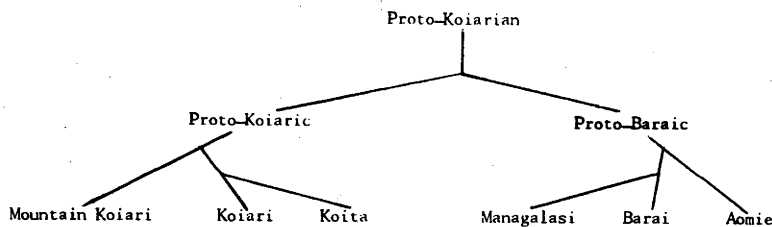


MP

4.0 CONCLUSION

In the foregoing sections I have given a general account of the linguistic picture of the Koiarian Family and discussed some conclusions that can be drawn from the historical information available on various parts of it in association with linguistic evidence. Reviewing this it appears that in recent pre-contact times the Koiarians on the southern side of the Owen Stanley Range have generally been moving in a north-south direction coastwards. On the northern side, however, they have been forced to retreat from territories north of their present locations back towards the Main Range.

Of the more remote prehistorical movements of the Koiarians we have, at the moment, little information. Yet given the above linguistic and historical pictures we may attempt some tentative reconstruction of these movements. Thus if we take the "family tree" view of linguistic relationship and diversification (and, as has already been said, this is implied in the lexico-statistic technique used in this survey) as a model for reconstructing the diversification history of the Family we can schematise Koiarian linguistic history as follows:



Interpreted, this reads as follows: The Koiarian languages have descended from a common ancestor (conventionally known as a proto-language) by a series of divergent splits. Thus Proto-Koiarian is seen to have initially split into Proto-Koiaric and Proto-Baraic. These in turn have each subsequently split into their constituent languages in a similar way. In Proto-Koiaric Mountain Koiari diverged from Koita-Koiari before these split into two languages, and in Proto-Baraic Aomie split off from Managalasi-Barai before these later split into two languages. For historical purposes the implication behind such a schema is that the present Koiarian languages dispersed from some centre originally occupied by the parent language, Proto-Koiarian. Dyen (1965:15) has proposed that the centre of distribution of

languages may be ascribed to "the area in which the genetically most diverse members of the family are to be found."¹ If this criteria can be accepted and applied to the Koiarian Family² it would appear that the centre of distribution of the Koiarian languages is somewhere in the Mountain Koiari-Aomie region, since these two languages appear to be the most divergent members of the Family. Dialect evidence further suggests that we may be able to localize this centre somewhere around the headwaters of the Upper Kumusi, Musa and Bariji Rivers, since this area is the "hub" of four of the six languages of the Family--Aomie, Mountain Koiari, Managalasi and Barai (see Map 12, p.78).

Such an hypothesis is, of course, an hypothesis about languages, and not necessarily about peoples speaking those languages. Supposing, however, that there is a close connection between the movement of peoples and the diversification of languages for the Koiarian area then there appears to be a more-than-coincidental correlation between the proposed centre of distribution (with a subsequent general north-south movement for many of the Koiarians) and such other "evidence" as:

- (a) the Haddon-Capell hypothesis of a north-south movement of "culture" in south-east Papua;
- (b) the widespread belief amongst the Koiarians that they came from the Upper Kumusi; and
- (c) the recent movement pattern of the Koiarians and others as already outlined.

This latter point also explains the lexical dialect situation as having arisen from the hiving off of small groups of speakers from established points rather than as the wavelike spreading of linguistic features (although some of this has undoubtedly occurred) across static populations.

If we cannot accept, however, that the diversification of the Koiarian languages and the movement of peoples are closely connected then we are left with a much less convincing correlation, viz. the one between the proposed dispersal pattern of the languages of the Koiarian Family and the diffusion of culture (Haddon-Capell). We have

1

This is a restatement of a principle worked out earlier by Isidore Dyen in "Language Distribution and Migration Theory," *Language*, 32(1956), 611-26, though it has precedents in Sapir's work on the Athapaskan Family of Indian languages in North America.

2

There is a theoretical problem involved here, viz. What is the least number of languages, dialects etc. to which Dyen's principle can be applied?

also the question of relating the recent movement pattern and beliefs of the peoples to the diversification of the languages and the dialect situation.

The question remains open, with many associated questions which still have to be answered before any "complete" account of the pre-history of this area can be given. Thus, for example, I have not discussed here the possibility of the existence of earlier populations, as seems to be suggested by some archaeological evidence (e.g., stone implements, mortars and pestles),¹ and by Capell's regional languages. Nor have I attempted to rationalise the present geographical distribution of non-Austronesian languages in Central Papua with the distribution of similar languages in other parts of New Guinea. In answering these and/or other questions linguistics has undoubtedly much more to contribute, e.g., by a study of the history of the individual languages, and of the distribution of particular vocabulary items which may be associated with cultural drift, trade routes, etc., though the best use can only be made of its results when more detailed work has been carried out in the same geographical area in as many other disciplines as possible.

¹ See, for example, Ethridge (1908), E. Bramell (1939), and McCarthy (1949).

5.0 APPENDIXES

5.1 Population Figures for Languages of the Koiarian Family

(A) KOIARIC Sub-Family

Koita	2260?
Koiari	1776?
Mountain Koiari	3734?
TOTAL	<u>7770?</u>

(B) BARAIC Sub-Family

Barai	3008?
Managalasi	3681?
Aomie	995
TOTAL	<u>7684?</u>

FAMILY TOTAL 15454?

Details of each language are now set out below.

5.11 Population Figures for Koita

VILLAGE	POPULATION	NO. OF SPEAKERS	REMARKS
Gorohu	245	245	
Kido	312	312	
Lealea	749	0?	Motu-Koita village.
Papa	290	290	
Boera	444	5?	Motu-Koita village.
Porebada	1459	3?	Motu-Koita village.
Koderika	122	122	
Roku	266	266	
Tatana	675	0?	Motu-Koita village.
Baruni	452	452	
Boteka	98	30?	Estimated 1/3 village Koita.
Kurlu	50	8?	Motu-Koita village.
Hohodae	130	15?	Motu-Koita village.
Korqbosea	153	153	
Kilakila	354	354	
Vabukori	534	2?	Motu-Koita village.
Pari	800	3?	Motu-Koita village.
Tupuseleia	1478	0?	Motu-Koita village.
TOTAL		2260?	

5.12 Population Figures for Koiari

DIALECT	VILLAGE	POPULATION	NO. OF SPEAKERS	REMARKS
Eastern	Kailakinumu	133	133	
	Ogotana	149	149	Includes Boredabu.
	Maiari	35	35	
	Boreberi	23	23	
	Luburu	43	30?	Village part Moroka.
	Agitana	31	31	
	Dagoda	57	57	
	Seme	51	51	Censused with Torenumu.
	Vaivai	62	62	
	Senunu	52	52	
	Futinumu	20?	20?	Estimated. Censused at Wahonadada.

Western	Kerekadi	27	27	
	Labuka	37	37	
	Dabunari	59	59	
	Vesilogo	139	139	
	Gubabegai	83	83	
	Manurunumu	89	89	
	Ianabevai	42	42	
	Kalakadabu	49	49	
	Boda	39	39	
	Fakonama	85	85	
	Gurumunumu	61	61	
	Boteka, Haima }	98	98	Estimated 1/3 Boteka Koita
	Mesime	38	38	
	Fulumuti	53	53	
	Vaivai } Maiberi }	46	46	
	Wahonadada	218?	218?	All Sirinumu Dam villages censused at this point.
TOTAL			1776?	

5.13 Population Figures for Mountain Koiari

DIALECT	VILLAGE	POPULATION	NO. OF SPEAKERS	REMARKS
Southern	Naoro	177	177	Eava-Herei speakers mixed.
	Vioribaiwa	49	49	Includes Bisiatana village.
	Uberi	40	40	
	Luburu	43	13	Also part Koiari speakers.
	Edebu	33	33	
	Motumotu	35	35	
Central	Efogi	145	145	Censused under 'Bagianumu'.
	Enivilogo	85	85	
	Elologo	47	47	
	Madilogo	57	57	
	Manari	245	245	Censused under 'Vadulogo' and 'Emoia'.
	Manumu	71	71	
	Dubi	67	67	
	Biniga	43	43	
	Boridi	79	79	
	Bodinumumu	179	179	
	Nadunumu	86	86	
	Kagi	243	243	Censused under 'Eguri' and 'Samoli'.
	Launumu	137	137	
Hailogo	101	101		
Western	Badiloho	53	53	
	Fodu Kanobada }	41	41	
	Boine	139	139	
	Gosisi	38	38	
	Horigi	71	71	
	Enage	77	77	
	Kerea	124	124	
Northern	Isurava	52	52	
	Alola	51	51	
	Abuari	84	84	
	Hagutawa	42	42	

Mountain Koiari - *continued*

	Pelai Usikari }	116	116	
	Kenandara	114	30?	Estimated 3/4 village Orokaiva (or Hunjara).
	Kovelo	159	159	1964 Census.
	Savaia	185	185	1964 Census.
	Seiba	24	24	Includes some Karukaru speakers. 1964 Census.
	Kanga	26	26	1964 Census.

Eastern	Ujilo	80	40?	Estimated 1/2 Barai.
	Awoma	252	252	
	Tedebede	76	76	Old villages of Konibes, Tetubes, Birai, Munedabu, Evagi, Gaglber.

Lesser Eastern	Kovilo, Gida }	122	122	
TOTAL			3734?	

5.14 Population Figures for Managalasi

ISOLECT	VILLAGE	POPULATION (CENSUS 1966)	REMARKS
Akabara	Beamatu	62	
	Togofu	88	
	Boreara Sigara	62	
	Banderi	185	

Numba	Siurane	161	
	Numba	131	
	Kaura	184	
	Awaro	157	

Minjori	Kwena	268	
	Sila	92	

Managalasi - *continued*

Averi	Tabueni	230	
	Dea Tambaruri, Ogonome	277	
	Bomohouji	30?	Estimated. Censused at Gora (Aomie).
Mesari	Natanga, Jorara	281	
	Howaja, Silimbo	205	
Nami	Kwarue	216	
	Korua	14?	Estimated.
Afore	Afore	183	
	Semari	17	
Wakue	Dareki 1, Dareki 2	89	
	Kawowoike	166	
Oko	Niniure Bua	265	
Karira	Ondoro	131	
Jimuni	Uolve Marasi	142	
	Buarore	45	
TOTAL		3681?	

5.15 Population Figures for Barai

DIALECT	VILLAGE	POPULATION	NO. OF SPEAKERS	REMARKS
Emo	Emo (River	176	176	Old villages of Uruabe, Ava, Velilo.
	Ejaro	132	132	
	Ujilo	80	40	Half village Mtn. Koiari.
Kokora	Tahama	172	172	Old villages of Tama, Gunuri.
	Kokora	166	166	
Mogoni	Iaure	101	101	Old villages of Isuru, Bubosa, Unia, Balatana, Agema, Malulubes, Dai-eki.
Manoa	Suwari	115	115	Old villages of Manoa, Lilimube, Auri, Iwerabe-e.
Laroni	Mimai	26	26	Includes Manubara speakers.
	Ipoïduburu	35	35	
	Oldobi	65	65	
Pitoni	Abaro	56	56	Old villages of Dobi (later Pitoni), Laha (later Durebe), Gobairi, Mimai, Dorobisora, Gobere, Nonu, Abowana.
	Idagigolo	18	18	
	Huavolo	39	39	
	Somore	47	47	
	Dorobisoro	112	112	
	Abowana	107	107	
Dodi (Dobi)	27	27		
Tabu	Tabu	98	98	
	Imidiru	40	40	
	Ibaradoku	11	11	
	Boro	9	9	
Barai	Sorikoro	26	26	Old village of Bagorolo.
	Guranoumu	51	51	
	Meiadobu	11	11	
	Waifanomu	33	33	

Barai - *continued*

Nigubaiba	Doe	122	122	Includes descendants of Seramina.
Umwate	Umwate	89	89	
Ufia	Itogama	153	153	Old villages of Iu-ai, Kufia, Kandoro, Samaniho, Mikero(?).
	Ufia	150	150	
	Matakoro			
	Naukwana			
	Kaura	119	119	
Pirimi	Segamaisa	161	161	Bodoima and Arahora censused at Umboworo.
	Umboworo	301	301	
	Kiara } Ambia }	200	200	
	Bodoimi } Arahora }	100?	100?	Estimated. Censused at Umboworo.
TOTAL			3008?	

5.16 *Population Figures for Aomie*

DIALECT	VILLAGE	POPULATION	NO. OF SPEAKERS	REMARKS
Zuwadza	Namanaia	171	171	Old villages of Managula, Guwara, Borumaila, Wora.
	Managube	73	73	
Asafa	Enjora	74	74	Enjora, Majamuru, and Diapa now a composite village at Asafa.
	Majamuru	150	150	
	Diapa	79	79	
	Gorabuna	115	115	
Gora?	Gora Kero Kanoja	333	333	Censused together. Includes some Managalasi speakers from Bomohouji.
TOTAL			995	

5.2 Listing of Linguistic Materials Collected

DATE	VILLAGE	LANGUAGE	TYPE OF MATERIAL ¹	TAPE NO.
1966				
March	Dombada	NOTU	L	P1
	Kailakinumu	KOIARI	T	
	Kemabolo	SINAGORO	LT	M3
	Gomoredobu	" "	LG	M4
April	Barakau	MOTU	L	M2
May	Kailakinumu	KOIARI	LMWTS	P2,3,4,5,7,8,9
June	Ogotana	" "	C	Unrecorded
July	Senunu	" "	L	Unrecorded
	Efogi	MOUNTAIN KOIARI	LGWTSQ	P9,10,11
August	Menari	" " " "	LGS	P11
	Naoro	" " " "	LGTS	P9,12
	Manumu	" " " "	LTSQ	P9,11,13
	Boridi	" " " "	LS	P11,13
	Bodinumu	" " " "	LS	P11,13
September	Efogi	" " " "	M	P14
	Enivilogo	" " " "	LST	P11,13,15
	Hailogo	" " " "	LST	P11,15
	Madilogo	" " " "	LS	P11,15,16
	Elologo	" " " "	L	P15,16
	Vioribaiwa	" " " "	LST	P15,16
	Uberi	" " " "	LST	P15,16
	Naoro	" " " "(Eava)	LMST	P9,12,17
October	Gorohu	KOITA	LQ	P18
	Kido	" "	LQWTS	P8,18,19
	Papa	" "	L(unre- corded)GS	P19
	Kuriu	" "	SL	P18

¹

The following abbreviations are used:

L = Lexicostatistical List	C = Conversation Material
M = Grammar Manual	W = Word List (other than L)
G = Some Grammar	T = Text
S = Socio-linguistic Material (folktales, genealogies)	Q = Intelligibility Test

Materials collected - *continued*

	Kilakila	KOITA	LMSTC	P9,19,21,22,23
	Hohodae	" "	WS	Unrecorded
	Labuka	KOIARI	LTQ	P9,20
	Dabunari	" "	S	
	Haima	" "	L1/4	P20
	Boteka	KOITA-KOIARI	LS	P20
November	Mesime	KOIARI	L1/2	P20
	Fulumuti	" "	L3/4	P20
	Vaivai	" "	L1/2	P24
	Boera, Lealea, Porebada, Vabukori, Pari, Tatana	KOITA-MOTU	S	
	Kerea	MOUNTAIN KOIARI	LST	P9,19,25
	Badiloho	" " " "	LST	P9,19,25
	Motumotu	" " " "	L	P24
	Douramoko	GABADI/DOURA	L	P25
	Vekabu	DOURA	L	P25
	Kilakila	KOITA	WR	P24
	Roku	" "	WS	P24
	Korobosea	" "	S	
December	Kilakila	KOITA	W	P23,26
	Kailakinumu	KOIARI	QTW	P4,23,26
	Vesilogo	" "	LTS	P16
	Fakonama	" "	LGS	P5
	Futinumu	" "	LS	P5
	Agitana	" "	L3/4S	P5
	Boro	BARAI	LS	P27
	Dorobisoro	" "	LSTGC	P9,27,28
1967				
January	Badaika	MANUBARA (Kokila)	LS	P27
	Lofaika	" " " (Koriko)	LS	P30
	Alamaika	" " " (Doromu)	LSG	P30
	Mararoum No.1	" " "	LS	P33
	Iaure	BARAI	LS	P30
	Mimai	" "	L1/2	P30
	Doe	" "	LS	P31
	Abowana	" "	MSCWTQ	P28,29,34

Materials collected - *continued*

	Kalekodobu	SINAGORO	LS	P31
	Kubuirubu	" "	L	P33
	Ikega	" "	LS	P31
	Bokukomana	" "	LS	P32
	Memekakomana	" "	LS	P33
	Bobokomana	" " (Wiga)	LS	P33
	Maria	MANUBARA (Maria)	LS	P33
	Kwale	KWALE	LS	P31
February	Lagume	" "	LS	Unrecorded
	Lonidairi	" "	LS	Unrecorded
	Gea (Garihe)	" "	LS	Unrecorded
	Sairope	OROKAIVA (Hunjara)	S	P35
	Kanga	MOUNTAIN KOIARI	SQLG	P36
	Karukaru	FUYUGE	SLG	P36
	Sirorata	OROKAIVA (Hunjara)	S	P35
	Putemo	" " " " " "	S	P35
	Namanaia (Vora)	AOMIE	SLG	P36
	Managube	" "	S	
	Diapa (Asapa)	" "	LGTS	P9,38
	Emo (Emo River)	BARAI	SLGTQ	P37,36
	Ejaro	" "	S	
	Ujilo	" "	SL	Unrecorded
	Awoma	MOUNTAIN KOIARI	SL	P37
	Kovio	" " " "	L	P37
	Kaili	" " " "	LS	P35
	Domara	MAILU	LG	P37
	Gorowaku	FUYUGE	L1/2	P35
March	Avuari	MOUNTAIN KOIARI	L1/2S	P35
	Alola	" " " "	LS	P35
	Kovelo	" " " "	LS	P35
	Hamara	OROKAIVA (Hunjara)	L	P34
	Numba	MANAGALASI	LGTSQ	P9,39
	Kwena	" " "	LS	P34
	Kokora	" " "	LS	P39
	Ondoro	" " "	L1/2S	P39
	Lilimube	" " "	LS	P34
	Afore	" " "	S	

Materials collected - *continued*

Jorara	MANAGALASI	L1/2	P40
Dea	" " "	LS	P40
Kindjaki No.1	BARUGA	LS	P40
Toma	BARIJI	L	P39
Mokonumu	KOIARI	L1/2	P40

5.3 KOIARIAN ORIGIN STORIES

5.31 Haganumu

5.31.1 Preamble: 'Haganumu' was the name of the story which I first heard describing a common origin for the Koiarian peoples. This story was told by Efogi informants. It was later found to be common to a large area of the Mountain Koiari, Barai, Aomie, and western Managalasi. Each of these groups have different names for the site and principal actors.

The site, which will hereafter be referred to as Haganumu is located about 1000 feet up on top of a steep ridge which runs westward from the Kumusi River valley, between Ujilo village and Emo River Anglican Mission station. These villages are situated close to the Ziguai and Umlesiri tributaries of the Kumusi, which tumble down the steep valleys along either side of the ridge (see map, section 5.31.3 below). The site is concealed in a clump of tall pine trees (Klinki?),¹ which may clearly be seen from near Ujilo village. The track up the ridge passes through abandoned village sites before reaching Ava hamlet, where the owner of the land and guardian of the site lives. It takes about an hour and a half to reach Haganumu from Emo River, where there is a small mission airstrip suitable for light aircraft in good weather.

According to the story Haganumu is supposed to be a large cave, but this is only mythical. It is, instead, a number of small caverns

¹

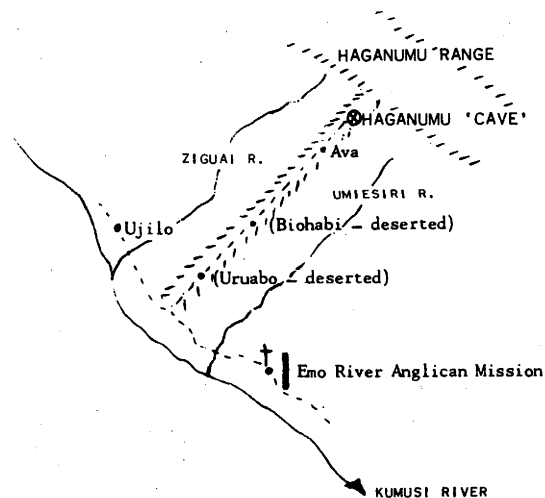
These trees were called eidiri by informants from Emo River, who speak a dialect of the Barai language. Californian Pine (diru) and Norfolk Pine (eno) are reported by Vivian (1928b) to be growing near L. Aro, south-east of Mt. Brown. The similarity between eidiri and diru may be significant either as evidence of cultural borrowing or of genetic relationship.

and shelters under large folded boulders (about 20 feet by 15 feet) of granite-like material,¹ from which surrounding topsoil has been partly eroded. Emo River informants call this 'cave' e-iri, which means 'man-hole.' Haganumu is actually the name of a principal range running parallel to the Kumusi, to which the ridge containing the site is a spur.

Up and around one side of the 'cave' runs a graded incline, which informants called the Ancestral Way (sene dala in Police Motu)--the putative path of the ancestors coming up out of the ground. At the top of this path is a small flat area about a chain long, and ten yards wide, which is reputed to be the dancing ground on which the ancestors made their first cooking fires. Informants assured me that charcoal can still be dug up from below the surface as evidence of this. Nearby are two large rectangular boulders of the same granite-like material. These are reputed to be the petrified forms of the original male and female progenitors--named Tuagila and Anetama, respectively by the Emo River (= Barai) informants; Nihula and Vezamo by Awoma (= Mountain Koiari) informants.

Coloured photographs of various parts of the site were taken.

5.31.3 Map Showing Location of Haganumu 'Cave'



¹ Government Geologist Stanley (1918:76) writes in a survey: Traces of the granitic outcrops have been noticed about Mt. Obree, Namudi, and the headwaters of the Kumusi, and I am inclined to believe that the denudation of the overlying soft schists and sericite slates has only occurred in this area within late tertiary times.

5.31.2 'Haganumu' by Ubui BABILA, Launumu village, via Efogi.

Edited version. (Tape P10)

This story tells of how we were born and how our ancestors settled in the mountains behind Port Moresby.

Long, long ago our ancestors came from a place called Haganumu. This is on the other side of the Owen Stanley Range in the mountains at the head of the Kumusi River. There our ancestors lived in the ground. You may think we came from some other place--no, we came from out of the ground.

There was a man and a woman. Their names were Lemambu and Fesambu.¹ One day they were dancing with Hornbill beaks on their heads, when they saw a small hole in the earth above.² A very small beam of light was coming through. They saw this and dug with their Hornbill beaks to make the hole larger. When they had made it large enough all the people came forth into the world.

The dog was first to come out. He brought fire with him. As he came out of the hole in the ground he grabbed a fire stick from the mumu which the people had made to cook their food. He ran through the kunai grass and set it alight.

Then came the pig. It dug up the ground as it went so that now there are mountains down to the sea.

Next came the people. These spread out in different directions and settled in different places all over the land. The Motu came out and settled along the coast. Europeans and Mixed-Race (habokasi) people were put in a coconut log and sent down the Brown River. This took them down to the sea where the Mixed-Race people go out. The Europeans continued on to Australia. Now some have returned to the land and settled in different parts.³

¹ These names are interesting. They are not typical Mountain Koiari ones, and they are the only observed instances in the language in which prenasalised stops occur, e.g., -mb-. This might suggest that either the names are very old, or that they, and the story, are cultural loans.

² Some versions of the story say that the dancers accidentally pricked the hole in the roof of the cave with their Hornbill beaks while they were dancing.

³ While this rationalisation of the current racial situation cannot be reconciled with the narrator's closing affirmation, it is interesting to see how their stories are adapted to include new knowledge.

As our ancestors came out the Favaga (or Wawanga/Wawonga in other, European literature) people sat near the exit, and hid the best yams and sugarcane. But our ancestors stole the sugarcane and brought it with them. The Favaga people were angry and chased them until they caught them at a mountain named Molonama. There they grabbed one end of the sugarcane and our ancestors the other. They pulled and pulled until at last the sugarcane broke in halves. The Favaga people got the top and our ancestors got the bottom. Then the Favaga people returned and we came and planted our sugarcane near a tree named Goloba. Our ancestors climbed this tree and slept. Next morning the sugarcane had grown up very high. They got bush rope and tied it up. It was also from this place that they could hear neighbouring peoples cutting down trees to build gardens. They knew then that all the land was taken, and so they settled there. They made a feast and everybody got a share of sugarcane. But now if you see this cane it is not as big as the sugarcane grown by the Favaga people; nor are our yams, because they hid the best ones for themselves.

Well this is the story of how we were born from the earth at Haganumu, and how the land was peopled. This is how my fathers told it to me in the time before the Mission came. Goodbye.

5.32 *'How Manumu People Came to Live at Gorohu,'* by Eseve Hade,
Manumu Village, Port Moresby

Edited version. (Tape P10)

A long time ago Bisolobiagini and Keisigobeli and some of their kin went looking for birds eating berries. They took tree sap with them, and climbed up and put it on the fruit. In this manner they caught many birds.

But a man came to their house. He destroyed their fireplace and possessions. The bird hunters returned and found their house in a shambles. They said, "Wait! What say our small brother waits here till these house wreckers come back. He can climb up a tree and sit there and observe the house."

So it was that this small fellow sat up in a tree. Then while he was watching, along came an old man named Koli to wreck the house. The small boy sat and watched--but he was very frightened.

When Koli had finished wrecking the place he raced off into the bush. Later our small friend descended from the tree and sat in the house. Then the birdhunters came back. "Well," he said, "while I was in the tree just now Koli came and wrecked the house. It's in a mess."

So they were very angry with that old man. They came to Totola [place where Koli lived]. When they arrived they killed one of Koli's big pigs. They cut it up and made a feast. Afterwards they gave some of the stomach fat to Koli's wife. Then they took the pig and climbed up a Gogilu tree whose limbs were riddled with holes. They entered the tree and stayed there. Keisigobeli stayed at the base and Bisolobiagini stayed at the top. They closed up the holes with charcoal. All the boys stayed inside the trunk and inside the limbs.

When Koli returned he could not find hide nor hair of his pig around the house. He realised the pig was missing and became very angry. So he went along the track seeking the scent of his pig but he could not locate it. About half way along he found it and followed it to the base of the Gogilu tree. When he saw it he was angry. He wanted to cut this Gogilu tree down. But he was not good enough. He cut all right but ants, snakes and wasps came out of the bole of the tree, so that when he went to cut it, these things went to bite him, and he jumped around to the other side of the tree and fell down. But they followed, and he fell down the other side--he was not up to it. He was not able to cut it. Then when he wanted to cut it again, his axe--not a modern (steel) one, but an old style one--a stone axe--was not sharp. The handle broke, and he brought it back to his house and gave it to his wife. He said, "My axe handle broke. You fix it up and sharpen the edge. I'll get another and go back and continue cutting." And he took one and went. He cut--no edge! The handle broke too. So he got it and brought it back and gave it to his wife. His wife fixed it. She fixed up the handle and sharpened the edge. He got another one and went back to cut. But it broke too. But the tree was about to fall and he heard it make a noise (preparatory to falling).

Well, Koli raced up Kibia River side and then down. When he arrived and turned to look, alas, the Gogilu had fallen a different direction--on Gabilumu River side, and it dug a huge hole. Koli followed this Gogilu tree but he could not catch it. The tree slid down and dug a water course. Koli chased it, but was stopped by the river bank. He stretched out his hands but could not grasp it. And the tree crossed over and dug the water course. And he (Koli) went too but only arrived at the bank. He tried to grab it but could not. And it turned around and went digging the water course. It arrived at a river. And Koli still could not get it. And so it went on

until this Gogilu had dug this large river called Brown. Now Koli raced to the side of the Brown River but still could not get it. He tried to grasp it but stood on a Magoia thorn. It speared into his foot. He tried to run but could not. So he returned home.

But the Gogilu kept going until it bumped into the beach at Manumanu. When it stuck fast Keisigobeli knocked out the charcoal bungler. He saw light through the small hole. He thought, "Gosh, I think we've found a good spot." He opened up the hole and came out. Outside he stood and realised he had no food. So he went to a garden, but found only hard food there. Then he went to a banana tree named Sabari and got some bananas which he ate to surfeit. Then he got up, gathered up all the ripe Sabari and hid them in his hair. Then he wrapped up his head and came back. He said, "Oh, Younger Brother come and see what's wrong with my itchy hair, please. I want you to come and delouse me."

So he came and searched for lice with his hands but the Elder Brother said, "Please bite it and see."¹ So his younger brother bit and found the ripe bananas. Then he ate up all the bananas that were in the hair. The Elder Brother said, "I went to the big garden and saw plenty of food. It would be a good idea if, say, five boys go to that garden and get some food."

So all the boys went to this garden and collected food and put it in bilums. They brought it back to where the Gogilu was. Then they went back and got more. But now the owners of the garden--many girls--came. They came into the garden and hid behind the banana bushes. They covered themselves with banana leaves and waited. Then our friends went to get food. They arrived, climbed over the fence--they were going to collect whatever they wanted and go--but the girls jumped up and said, "Ah, my husband, my husband, my husband." They grabbed a boy each, just like that. When that was all over, they all collected food and returned to where the Gogilu was. They ate. The Gogilu was standing at Manumanu. This Gogilu they cut up and made into a canoe. When they had made the canoe they paddled quickly away on the sea.

So now at Gorohu there is a mixture of Manumu and Manumanu peoples. They live there. Now these beach people use canoes to move about on the water. Manumu people still live inland.

Our story ends here.

¹

Lice are often killed by biting.

5.33 'Salayoli' by Wiëna Babaga, Kailakinumu Village, Sogeri.

Edited version. (Tape P4, side 2)

The story begins with Salayoli (a red bird-man) who lived on top of Sala. There were two rocks there--Sala and Togo. They are up behind Kailakinumu, close by. Well when Salayoli was living there he made a rope for tying up pigs. As he was twisting the rope on his leg he threw the loose end over the edge of the rock. It fell down into the Togolowo River and then went down this river into the Yuwana. The water took it down as Salayoli kept twisting more. It went into the Allilowo River and there it stuck fast. The name of this place--a mountain between Kwale and Yove--is Wudurumava.

Once it stuck fast there two girls (sisters)--Duha Nobone and Maru Nobone--found it when they came to have a bath after working in their garden. The elder sister found it first and said, "Oh, Younger Sister come and see this rope coiled up that I found." And the younger sister said, "Gee, let me see it." They pulled the rope up and saw that it ran upstream. So they said, "Good," and the elder sister said, "Oh, Younger Sister, let's follow this rope."

So they left their garden and followed the rope. As they went they rolled up the rope. They kept coiling till darkness came and they slept. In the morning they continued on. They kept going on like this until after the fourth night when they arrived at Togo. They slept at the base of Togo and Sala under palm umbrellas.

But in the early hours of the morning Salayoli got up to urinate. Normally when he did this it made a "dududududu" kind of sound but this morning it sounded differently--"dadadadadada." So Salayoli was puzzled and went to his mother (who lived with him) and said, "Oh, Mother, always when I urinate it goes "dududududu," but this morning it went "dadadadadada."

His mother went down to investigate and found the two girls sleeping under the rocks. So she went back and hid Salayoli under banana leaves. Then she descended again to the two girls. They were still sleeping, so she said, "Oh Relatives, what are you doing there?" The girls got up and replied, "Oh Relative, we found this rope and followed it here, but because we had no way of scaling the rock we slept here."

Salayoli's mother then said, "Relatives, come up on to my rock." So they went up. Salayoli's mother then gave them a mat to sit on and got betel nut, pepper, and lime, and put it in front of them. Then she said, "Relatives, I live here alone. Who is there to do my work do you suppose? There's fire there but no wood, who's going to cook our food?"

Well the elder sister got up and sent off the younger saying, "Go and get some wood. I don't want to." So the younger one did that. When she put the wood down the old woman said, "Relatives, who's going to cook our food with this wood?" Then the big sister commanded the smaller one, "Go and cook. I don't feel like it." So the younger one, obeying, got up and cooked. Then they ate.

After that she went to bring out Salayoli. She went inside and said, "Come and see the two girls who have come." So Salayoli got up and came out. Now Salayoli's skin was red--like red paint. His skin, legs, hair, all of his fingers and toes were all red. But before he came out he dressed up with bird of paradise feathers in his hair, breast shell, leg, arm and stomach bands. He then stood in front of the girls. They stood up and shouted, "Our husband." Then the bigger one said, "My husband," but Salayoli was not listening. Instead, he said, "Let's not have idle wishing, but wait." He came and sat down and broke open two betel nut. He took one and gave it to the elder girl. He then gave one to the younger girl. He said, "Both of you eat and whoever chews the reddest betelnut will become my wife."

When the elder one chewed hers it was not red but black. But the younger one's was red just like Salayoli's skin. So he said, "Good, young girl, you'll be my wife because your betel nut is red. And you, chewer of black betel nut, will return to Wudurumava." So she got her kiapa and set out.

After five months she sent word back to Salayoli and her sister to say she had prepared a feast for them. So Salayoli and his wife set out to go to Wudurumava too. Now Salayoli had wings and could fly. He always flew. But before he left he said to his mother, "Oh Mother, you see I am going to this feast that I was called to, but if you see that the clouds close in on this mountain you will know that I have met with some misfortune. And if you see that you can say, 'Oh, my son has had bad luck,' and if not, 'Oh my son is safe.'"

Then they set off. His wife walked with the messengers who had brought the invitation to the feast, and he flew. As he flew he would call out, "Salayolivio, Togoyolivio." Then he would descend to his wife and sit with her and eat betel nut. Then they would press on again--she walking and he flying. They kept going in this manner and soon reached the village. The wife reached there first and got her relatives to make a cane landing platform for her bird husband, Salayoli. They did this and put it in a tree. Then Salayoli arrived

and circled the village four times calling out, "Salayolivio, Togoyolivio," then landed on his perch. Later he sat with his wife and her elder sister on a mat. He also took off his feathers and was a man and sat on the mat. Later he descended to dance. As he danced he sang:

Salayoli loloi biage da gumigumia
Salayoli dance chief I very good style

Togoyoli lau* be* biage da
Togoyoli I am chief I

bokobokolyo
make very good style

Idule hole di nuanua o sereva
Power that my dance this poison

nonoiyo
wind quickly

Walole hole di dogadogave mamata nonoiyo
Power that my dance poison wind quickly

Salayoli di moeke Sala sa vidoli kima
Salayoli my son Sala stand mirror doing

lo yobu ni fofoyo
eye shines

Togoyoli di maeke Togo be* fareni fofoyo
Togoyoli my daughter Togo be eye shines

Ugelo mavi kevi biagelo manu dodowalo
Bird woman shell chief hill cut

Namanu mavi yagi biagelo guba dodowalo
Bowerbird woman shell chief hill cut

Salayoline mesulu mawoi wagalowege
Salayoline aphrodisiac burn glow

Ugelo mavi kevi biagelo manu dodowalo
Bird woman shell chief hill cut

Togoyoli ne wadiki mawoi sasamawege
Togoyoli aphrodisiac burn glow

Namanu mavi yagi biagelo guba dodowalo
Bowerbird woman shell chief hill cut

* Motu words.

After the dance he returned to the house. He begged his wife for some betel pepper but she said, "No, I have none." However, her sister (the elder one) was there and she said, "That does not matter, I have some." And she picked up some pepper and lime shell, and in handing it to Salayoli cut his hand with the shell. That was bad luck for him. And as the blood ran down he shook his hand and said, "Salayolivio, Salafitofito." He cried like this, "Togoyolivio, Salayolivio vio, Salaviovio, Togoviovio."

As he shook his hand different kinds of blood came out. The heavy black blood became the black skinned people (of the interior), the lighter blood became Europeans and red blood the AN's along the coast.

When the blood stopped flowing he came home to Sala and Togo. And just as he had warned his mother about bad luck and the clouds so it had happened and his mother knew what had befallen him. Salayoli could no longer fly--he had to walk. He arrived and climbed up on top of Sala. Those stones are very high but are flat on top. Then he asked his mother for a dish. He let the blood run into it until it was full. He closed it up and when he came back a boy had emerged from it--from inside the dish of blood. The lad's name was BADAMU.¹

That's the end.

¹

BADAMU is the earliest remembered ancestor. The informant chanted the following list of descendants with the following explanation:

Our ancestors are these:* (Starting from most recent)

MOMO KANI
KANI BIAE
YORI KAUKA
KAUKA MIANA
MIANA UGERO
UGERO NAHUYA
NAHUYA DAVERA
DAVERA SENAU
SENAU BADA
BADA WAMIKA
BADA MU

They are also the ancestors of the Korohi, Nidori, Hogeru, Malari, Baruari, Yaritari, Haveli, Borebere groups (Williams:1932). Actually two fellows were born of the blood BADAMU and BADA WAMIKA and these lived with their father Salayoli. They made a canoe--a very big one. When they were finished heavy rain fell. All the mountains were covered.** They took their possessions and sailed away. They sailed out on to the sea. They put people down at various points on the beach until they got as far as Manumanu and Gorohu. Our language finishes there. The Sogeru language finishes there.

* The author tried to obtain the complete family tree of this group but was unable to finish it.

** Later the informant said they went down the Yunawa and Allowo Rivers to the Kemp Welch and out into the sea that way.

5.34 'The Origin of the Koita', by Damena Goasa (Gata Clan),
Papa Village

Edited Version. (Tape P19)

Koiari and Koita ancestors originated from the same place. They lived at Goubavaga.¹ When they opened the door (supposedly from inside a cave) there were no people and not much land. So they said, "Close the door lest the supply be finished." So they closed the door. The rest of the people stayed inside. These were the ancestors of the Koiari who now live inland.

We are the Koita who came towards the coast. They first gathered together at Togosala.² But they left there and came and settled at Idabemu. They were not very happy there either. They were always fighting. So two men--Maria Siluga and Guba Siluga (their father's name was Siluga Eiya)--left and descended to Dairoto. Then they returned to Idabemu and said, "There is plenty of land down there. When we all live together we are not happy: we fight day and night. Would it not be better therefore if we split up and lived in different parts of the land?" So they did. Some went to Taurama side and some, the Gata group, came to Gatamata. The others went to Behorimata. They gave these names to the tracts of land. So now the Gata group lives on Gatamata and their village name is Papa. Their clan used to be Gata but now it is (changed to) Venehako.

1

Informants said the Koiari name for this is Gudurumava. See also Kilakila Land Title Claim No.32 evidence.

2

Note the significant correspondence between the names Wudurumava and Togosala in this story and the Koiari 'Salayoli' story in Appendix 5.33.

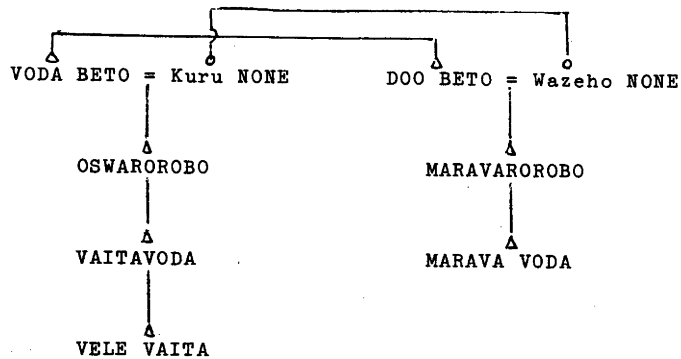
Subsequently the author visited Wudurumava in Kwale territory in the Rigo Sub-District. They told the following story which suggested that the mythological tradition of the Koiari and Koita has some basis in the oral history of the Kwale.

KWALE STORY

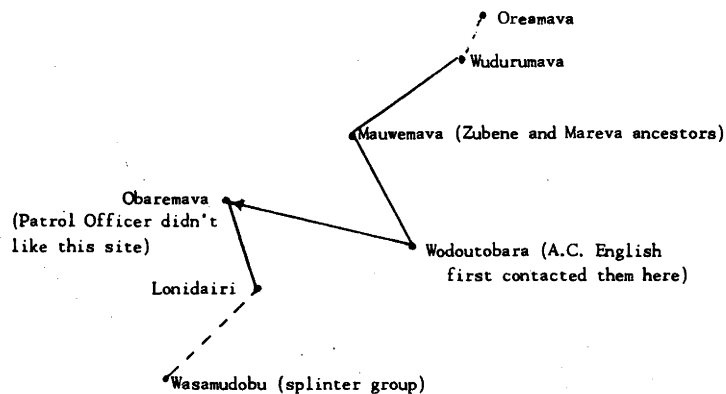
There were two men and two women at Wudurumava, the birthplace of the Lagume (a sub-group of the Kwale) ancestors. This family developed as follows:

(continued on Page 103)

footnote 1 - continued from previous page

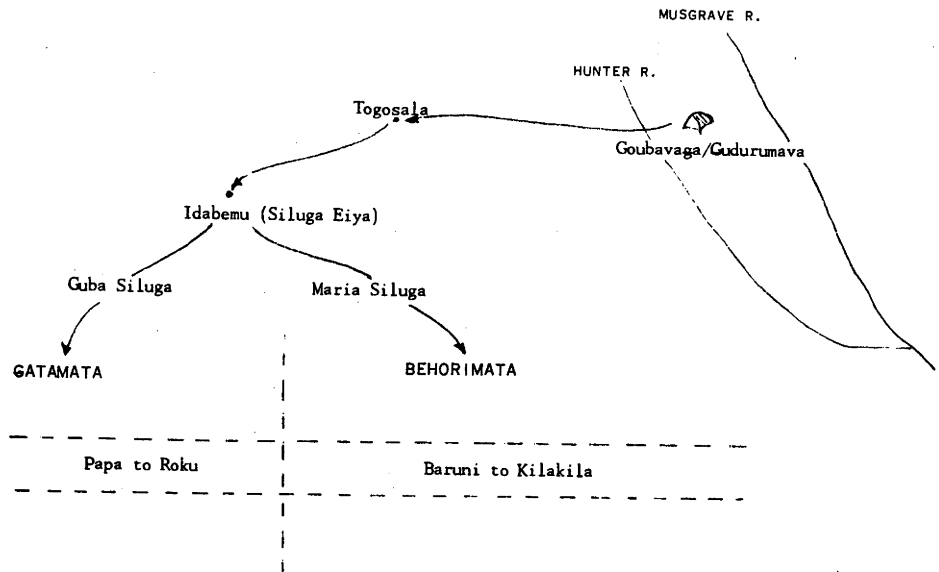


The village grew to be very large on the top of a high ridge called Wudurumava. It contained ten clans. One day they made a feast and VELE VAITA went to dance at OREAMAVA village which was only small but related. He stirred up trouble there and was finally killed by a woman. Vele's body was brought back to Wudurumava and put on the ZUBENE dubu. Then the Kwale warriors came and besieged Wudurumava village. The latter villagers found themselves unable to fight, because of 'heavy hands' associated with Vele Vaita's death. There was a very big fight, and the women escaped and fled in all directions. Some went to Koiari (especially Ogotana), some to Koita side--Baruni, Boteka, Gorohu villages--and some to other Kwale villages--Manugoro, Garihe, Gea and Wasira. The surviving men built a new village at Mauwemava. Subsequently they have built new villages as follows:



N

DIAGRAM



5.35 OVIOVI AND WADUWADU

5.35.1 Preamble

Suku ancestors once lived along the lower reaches of the Vanapa River, near where the village of Badiloho is today. Their southernmost village was Anikubava about where the sawmill crossing is now on the Vanapa River.

One ancestor Oviovi sent Waduwadu and others to look for better water and habitat upstream towards the Owen Stanley Mountains. This story tells how they found a more suitable place near Mount Magani but were forced to return to the lower reaches of the river when Oviovi allowed the game to escape and Mt. Obobasi 'erupted.' This event caused the water in the river to run hot and then cold and filled the area with stones so that now hardly any game is to be found in that area and most of it retreated to more suitable habitat lower down the river.

The story also explains why Suku own all the land on the western bank of the Vanapa River and the Kotoi and Gosisi people own the land on the eastern bank. These latter peoples were also included in the general movement. Their return to their present position may have been

hastened by the war mongering of the Boxura who live to the north east. Recently the Government has encouraged settlement in the lower reaches of the Vanapa for administrative and economic advantages.

See map at end of story.

5.35.2 'Oviovivi and Waduvalu' by Hogeri Gobori, Badiloho Village

Edited version. (Tape P19)

Oviovivi went up first. Oviovivi said, "There are pigs and people there." He sent Waduvalu saying, "Go up and see the cold river and the place of game. Wait there and later I'll come. I'll find you wherever you are. We'll stay there. You find game and send some down to us. If you do this I'll come up to you. We sent game off to this place, but we stayed here where the water is warm. There is no game here either." So Waduvalu went up to the source of the river.

Later Oviovivi bedecked himself in a headdress of Turumu feathers. He went. As he went he used the feathers to divine where Waduvalu was.¹ When he stepped into water which was not flowing past Waduvalu the feathers did not move, but when he stepped into water that had come past Waduvalu the feathers would vibrate. Thus he knew that he was on the right track when he stepped into the Vanapa River because the feathers shook. So he followed the Vanapa River upstream until the feathers stopped vibrating. Then he followed the Dala River up to the Agure tributary when he saw smoke rising up ahead. He knew that Waduvalu had slain game. He said to himself, "It seems he must have come up this way and found the place of cold water and game. So here he is and the smoke from his fire rises." So he went on and came to Mt. Magani and stood underneath it. He went on and saw that Waduvalu was cooking game. Some were in a ground oven cooking also.

When he arrived his friend said, "You've come, eh?" "Yes. I came, and now I've found you here." They were very happy. Waduvalu said, "You sent me and now you've come. You can see that this is a very good place. There is plenty of game to be found here." His friend said, "Yes. It's very good."

They opened the ground oven, ate some meat and went to sleep. In the morning Oviovivi sent Waduvalu saying, "You go and hunt." So Waduvalu cut vines to make a handle for his stone axe and went to hunt.

¹
The idea was that Waduvalu's present whereabouts could be divined from the water that flowed past him, because of the power that emanated from him, or from contact with him, e.g., when he washed, urinated, etc.

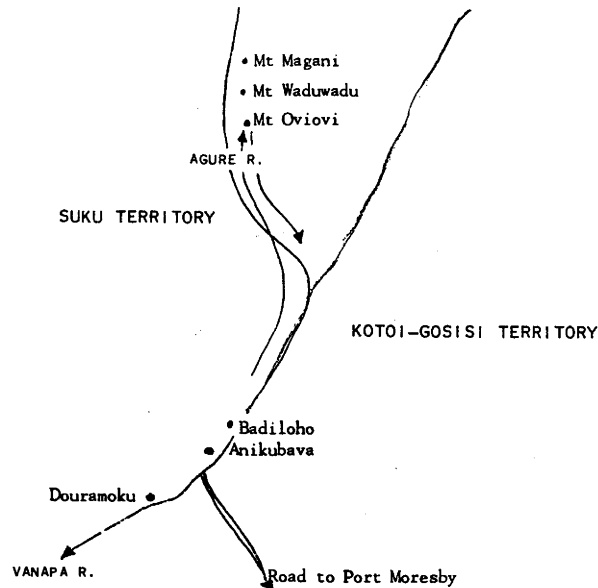
At about four o'clock as the sun was going down Oviovi went and opened the cage in which Waduwadu had put cassowaries, pigs and wallabies which he had caught. He killed many and threw them outside, and then he closed the door. When Waduwadu returned they ate and slept.

Next day Waduwadu went to the garden and Oviovi again opened the door but this time the animals escaped and raced off through the bush and Waduwadu's garden. Waduwadu was working when he heard the sugarcane leaves rattling so he went to investigate. He saw a cassowary come racing past, then a pig, then a wallaby--and all the animals he had caught. He said to himself, "Oh, my friend has made a serious mistake. All my game is running away." So he went and looked and sure enough there wasn't a thing in his cage. The ground animals had run off to their feeding places, the tree animals had climbed back up to their trees, and the hole dwelling animals had again entered their holes.

So Waduwadu called out, "Go down! Don't stay here! Go down and live where the grass is and stay there!" But the wallaby did not care to leave. Waduwadu picked up a stone and closed the mouth of a cave in Wobasi mountain and said, "This is a good place, is it not?" And he pressed the stone down. But the ground suddenly broke open and stones and vegetation went rolling down into the river. And now you can see that place. Oviovi came down too chasing the game as he went.

Water opened too and ran down. Cold water came down too. Hot water came first followed by cold water. And game came down too. Oviovi followed and said, "See here this thing has come." And Waduwadu answered, "Yes, all kinds of game have come here." Oviovi and I were talking and these things came--game, hot then cold water. They are staying here." Now we'll all live here.

5.35.3 Map



5.4 CONTRAST BETWEEN KOIARI-BARAI AND MOTU-SINAGORO

The following list and chart show all the probable (+), possible (+?), and possible but highly unlikely (+??) correspondences between the two Koiarian languages of Koiari and Barai, and two neighbouring AN languages, Motu and Sinagoro, on Wurm's modified TRIPP list. Grace's (1956) and Dempwolff's (1938) proto-AN forms are also given. The numbers in the lefthand column correspond to those in Wurm's list. All words are given in phonemic orthography: Koiari and Barai phonemes are those described below in Appendix 5.8; the Motu and Sinagoro ones are as they occur in published material, with slight modifications (explained below):

(A) Motu: Lister-Turner, R. and Clark, J.B.:

A Dictionary of the Motu Language of Papua, Education Department of Papua-New Guinea Administration, 1931. Second edition edited by Rev. Percy Chatterton of the London Missionary Society.

Lister-Turner, R. and Clark, J.B.:

A Grammar of the Motu Language of Papua, Education Department of Papua-New Guinea Administration, 1931. Second edition edited by Rev. Percy Chatterton of the London Missionary Society.

(B) Sinagoro: *Mari Bukana: Hymn Book in the Sinaugoro Language of New Guinea.* Undated. Published by the Australian and New Zealand Committee for the Papua District Committee, London Missionary Society. Printed by Australasian Medical Publishing Co., Ltd., Glebe, Australia.

A School Primer in the Sinaugoro Language, Central Division, Papua, 1954. Published as above.

LIST OF CORRESPONDENCES

NO.	ENGLISH	KOTIARI	BARAI	MOTU	SINAGORO	GRACE	*AN	DEMPWOLFF
9	father	mama	baba	tama	tama	OMO(OC)	tama	(t)ama
10	mother	neina	sei	sina	sina	OMO(OC)	tina	(t)ina
11	sib, same sex, older	nana	'uovo	kaka	kaka	OMO(OC)	kaka	
33	jaw	auki	ano'u	auki	gare	OC(OMN)	anse	dangut
34	throat	tau	sado	gado	godo	PB	ia	lihig
37	shoulder	bagi	siroi	paga	gaba	OC	(paRa qaqRa)	baga
38	arm	ada	ira'u	ima	gima	OC(EB) EG	lima (lina lirna)	
49	leg	vahi	de'u	ae	kwaku(?)			kaki<
77	ground	vata	sa'i	tano	tano	OC(EB)	tana	tanah
93	tree stump	idi umuka	idu dinu	au badibadina	gau tugukana		(kau	pubun
98	kunai	kuru	ruboido	kurukuru	regi			(dukat limput
129	big	keare	bado	bada	barego			beta [i]
140	yellow	mayakonika	bora	labora-labora	borabora			kuniq
154	drink(v)	i-nu	i-o	inu-a	niuni	OC	inu	<inum
161	take(v)	ma-nu	abe-ho	abi-a	gabiani	OC	kapi	<alap
206	thick	baruta	adunu	uduna	barukana	EG	matolu	baluaq (as in 'thick fur')
208	narrow	misuka	amu	hekahi	misina			te(m)pit
249	louse	umu	umu	utu	gutu	O(EB)	kutu	kutu
281	fight(v)	vara-ha	ara-ha	heai	vagini			

CHART OF CORRESPONDENCES

NO.	KOJARI-MOTU	KOJARI-SINAGORO	BARAI-MOTU	BARAI-SINAGORO
9	+	+	+	+
10	??	??	+	+
11	??	??		
33	+			
34			+	+
37	+			
38			??	??
49	??			
77			+	+
93		+		
98	+			
129			+	??
140			+	+
154	+	??	+	??
161			+	+
206		+	+	
208		+		
249	+	+	+	+
281		+		+

TOTALS

+	3	2	4	3
+	3	4	6	5
??	3	3	1	3
	<u>9</u>	<u>9</u>	<u>11</u>	<u>11</u>

Minimum
percentage:

1.6%

1.2%

1.9%

1.6%

(Total less
+, ??)

It is apparent from these charts that apart from possible cognates, or possible chance correspondences (as in father, arm, leg, ground, tree stump, fight) the remainder are probably borrowed terms. The direction of borrowing can be determined by considering the occurrence or non-occurrence of like forms in the Proto-AN lists.

Suggested groupings are:

AN TO NON-AN LOANING

father
mother
sib, same sex, older
shoulder
kunai?
drink
take
louse

NON-AN TO AN LOANING

jaw
throat
big?
yellow?
thick
narrow?

None of these words occurs in Capell's Central Regional Language List (1943:187-8). And, in reverse, none of the non-IN words given in this same list is reflected in the contemporary vocabulary of Koiari and/or Barai. This would seem to indicate that these languages are unrelated to Capell's Central Regional Language as far as he has been able to outline it (1943:168, 187, 266ff.).

Finally, it may be pointed out that the probability of chance correspondences occurring between these languages is quite high (though it is impossible to work out without statistics on the relative frequency of occurrences of individual phonemes), since all four languages have similar phoneme systems and syllable patterns. In the following chart some Motu and Sinagoro phonemes have been omitted, as the author considers that some pairs of phonemes as published, are overdifferentiated. Thus in Motu t and s are combined into t in the present instance, since s appears to occur only before high front vowels. In Sinagoro t and s are also combined into t, and p and f into p. The validity of r is also questioned.

LANGUAGE	VOWELS (SIMPLE) ¹	CONSONANTS	SYLLABLES
Sinagoro	i e a o u	p t k b d g - - - m n l v - kw gw g r?	Open
Motu	i e a o u	p t k b d g - - h m n l v - kw gw g r	Open
Koiari	i e a o u	- t k b d g f s h m n - v y - - - r	Open
Barai	i e a o u	- t ? b d g - s h m n - v ʒ - - - r	Open

Typological characteristics common to AN and Koiarian languages are also shown below:

- + denotes presence of the feature
- denotes absence of the feature

The AN features are those suggested by Wurm (1954) based on earlier suggestions by Schmidt (1920), Ray (1927), and Capell (1933). Two of Wurm's suggested features--similarity of grammar in large numbers of languages, and homogeneous pronouns--have been omitted as being insufficiently powerful for discriminating between the two different types of languages.

TYPOLGY CHART

AN FEATURES	NON-AN					AN	
	Ka	K	MK	B	A M	MOTU	
1. Existence of article	-	-	-	-	-	-	
2. Nouns invariable for number	+	+	+	+	+	+	
3. Prepositions rather than postpositions	-	-	-	-	-	-	
4. Natural gender only and/or absence of noun classification with sentence concord	-	-	+	+	+	?	+
5. Inclusive/exclusive distinction with pronouns	-	-	-	-	-	-	+
6. Distinction between body parts, kinship etc., and other nouns in manner of showing possessive relation	-	-	-	-	-	-	+
7. No incorporation of Subject, Object, or Dative pronouns into verbs (except by suffixation)	-	-	-	-	-	-	+
8. Simple verbs with tense indicated by particles	-	-	-	-	-	-	+
9. Numerals based on quinary, decimal, vigesimal systems	-	-	-	-	-	-	+
10. Word orders S V O	-	-	-	-	-	-	-

¹

Vowel glides also occur in these languages, but these are interpreted here as vowel sequences for the purpose of this comparison.

(where Ka = Koita
 K = Koiari
 MK = Mountain Koiari
 B = Barai
 A = Aomie
 M = Managalasi)

Obviously then, the Koiarian languages are unrelated typologically to AN languages.

5.5 *Outline History of Contact with, and Pacification of, Koiarian Peoples*

- Nov. 1872 LMS South Sea Island teachers landed at Manumanu. Supervised by Murray from Somerset, Cape York.
- 1873 Captain Moresby discovers Fairfax Harbour in "Basilisk," and returns sick LMS teachers at Manumanu to Somerset.
- Nov. 1873 LMS teachers relocated at Hanuabada, Port Moresby.
- Nov. 1874 LMS missionary Lawes arrives at Port Moresby to supervise developing mission.
- 1877 LMS station established at Hula.
 LMS missionary Chalmers arrives. Remains to do wide pioneering exploratory work amongst the Koiaric peoples and elsewhere.
- 1884 British Protectorate formally proclaimed over British New Guinea (or Papua).
 Melbourne *Age* expedition under Morrison reaches Goldie River in Mountain Koiari territory. Attacked by Varagadi-Ebe (or Ebur) warriors.
- Aug. 1885 Government established in British New Guinea with arrival of Sir Peter Scratchley in Port Moresby.
 Forbes establishes station on Sogerl Plateau.
- 1887 Rigo Government Station established under Hunter. Kemp Welch River valley patrolled for first time up to slopes of Mt. Obree. Cuthbertson scales Mt. Obree for the Geographical Society of Victoria.

Government expedition under Forbes repulsed by the Ebe-Baura confederation of Mountain Koiari sections.

- 1889 MacGregor scales Mt. Victoria and explores area around headwaters of Vanapa River.
- 1891 MacGregor visits Koiaric, and North-East Coast peoples establishing friendly relations.
Trepang fishers already established in Cape Vogel area.
- 1892 Sinagoro, Koiari, and Kwale areas now under control in Rigo Sub-District.
- 1895 Second visit of inspection of North-East Coast. Government station established on the Mambare River.
- 1896 Expeditions up Mambare, Kumusi, and Musa Rivers. Miners already prospecting in these areas.
English patrols Kokila area for first time and is attacked.
Later MacGregor accompanies English on a revisit.
- 1897 Blayney journeys into Uberi and Hagari territory of Mountain Koiari.
Buchanan reports proceedings of prospecting party into Barai territory at the head of the Kemp Welch River.
- 1898 Western Barai visited.
MacGregor patrols area between Brown and Goldie Rivers, and contacts Ebe, Wamai, Baura and Hagari peoples.
- 1899 Ballantine opens up Mountain Koiari territory around the headwaters of the Goldie and Brown Rivers.
MacGregor crosses Papua from Mambare River. Contacts Neneba section.
Government Surveyor, Stuart-Russell, examines possibility of road from Port Moresby to Kokoda via Brown River valley and The Gap.
- 1901 Ballantine patrols Koiari and Barai areas around headwaters of the Musgrave River.

Musgrave reports Orokaiva and Biagi peoples around Kokoda less belligerent.

- 1904 Buna Bay to Yodda Valley road completed.
Kokoda station established.
First contact with Managalasi people.
- 1905 Port Moresby and Rigo Sub-Districts under complete control.
Overland mail service established between Port Moresby and Kokoda through Mountain Koiari country.
- 1909 "Wawonga" (= Upper Kumusi River) peoples contacted.
Managalasi visited again.
- 1912 First complete patrol of Managalasi area.
- 1913 "Wawonga" area patrolled for first time.
- 1914 All Koiarian areas now under control and Government plans cross patrols to link stations at Kokoda, Port Moresby, Rigo, Tufi (Cape Nelson), and Abau.
- 1915 Pacification complete and all districts under full control.
Government officers concentrate on collecting ethnological information for publication in Annual Reports.

5.6. *Comparison of the Grouping of Non-AN Languages of Central Papua by Ray, Capell, and Dutton*

RAY (1929)	CAPELL (1962a)	DUTTON (1968)
"Languages more or less related to one another" (p.70)	(No relationship suggested between A, B, and C, except as listed below)	Kolarian Family
A. KOIARI GROUP	A. KOIARI-KOITA	A. KOIARIC SUB-FAMILY
1. Neneba Sub-group (Neneba)	"Dialects of Koiari-Koita form a wide-spread group stretching from the Fuyuge-Kumi country behind Port Moresby practically to Kokoda" (p.144).	1. Mountain Koiari Language (with dialects corresponding somewhat to Ray's sub-groupings)
2. Kotoi Sub-group (Kotoi, Gosisi, Suku, Uabari)		
3. Wowonga Sub-group ¹ (Wowonga, Biage, Hugu, Isurava, Karukaru, Iworo)		
4. Kagi Sub-group (Kagi, Hagari, Wamai, Itu, Meroka, Uberi, Ebe)		
5. Koita Sub-group (Koita, Koiari, Sogeri, Iarumi, Eikiri, Maiari, Favele)		
B. SERAMINA GROUP	B. SERAMINA	B. BARAIC SUB-FAMILY
Seramina, Barai, Nigubaiba, Mogoni		1. Barai Language (includes Ray's list and others from the Northern District)
	C. MANAGALASI	2. Aomle Language
	"There are no adequate records of Manugulasi or Wavonga. Dr. Strong connected the latter through Biagi with the Koiari and Koita...but this needs to be verified" (p.148). ²	3. Managalasi Language

¹ Wowonga (or Wawonga) is the Orokaiva equivalent of Favaga. See section 3.24.25 above.

² See sections 2.17 and 3.24.25 above.

5.7 Six Koiarian Word Lists

These word lists were obtained using Wurm's Modified TRIPP list discussed in Section 1.2 above. They do not represent the full word lists obtained but are sufficient to show the lexical correspondences between the languages. Much of the information that is contained in the unpublished part of the lists obtained is presented in a different manner in the description of the grammatical characteristics of the Koiarian languages given in Appendix 5.9 below.

In this presentation of the lists language equivalent "stems" of the English items are given in phonemic alphabet.¹ Apparent cognates are marked by the same numbers in brackets behind each "stem." In some cases the numbers marking apparent cognates are followed by a question mark to indicate that these items may or may not be acceptable as apparent cognates. This is necessary since no sound correspondences have been established. Gaps in the lists indicate that the relevant items were not obtained or were regarded as unreliable for some reason. In some instances more than one lexical item is included where informants were uncertain as to which form was most commonly used in the speech community. The following key explains the symbolization used by Wurm for the English glosses.

_____	main items.
-----	first supplement to Wurm list.
.	second supplement to Wurm list.
.....	unreliable.
//	additional to Swadesh TRIPP list.
[()]	hard to obtain.
CAPITALS	cultural terms.

¹ See Appendix 5.8 for sketch descriptions of the phonemes of the languages of the Koiarian Family.

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
1. <u>man</u>	ata (1)	ata (1)	maraha (2?)	barue (2)	e baru (2)	parua (2)
2. <u>woman</u>	mayi (1)	mavi (1)	keate (2)	magenahē (1?)	e meina (1?)	napara (3)
3. <u>old man</u>	ata lahu (1)	(ata) yohi (1)	kori (1?)	ama vodʒie (1)	e bado (2)	ema (3)
4. <u>old woman</u>	mayi lahu (1)	mabata (2)	mabata (2)	magenama vodʒie (3)	e meina bado (4)	parana (5)
5. <u>child (m)</u>	moe (1)	moe (1)	mo (1)	harlhe (2)	vari (2)	hariha (2)
6. <u>young boy</u> (manki)	yamika (1)	vami misuka (1)	mo ese (2)	asosoʔe (2)	vahamu (3)	sesama (2)
7. <u>husband</u>	mobora (1)	mobora (1)	korla (2)	barue (1?)	baru (1?)	parua (1?)
8. <u>wife</u>	mabara (1)	mabara (1)	keate (2)	vaborere (3)	bara (1)	napara (1)
9. <u>father</u>	mama (1)	mama (1)	mama (1)	apo (2)	baba (1)	ona (3)
10. <u>mother</u>	neina (1)	neina (1)	neina (1)	mamo (2)	sel (1)	oha (3)
11. <u>sibling</u> , <u>s.ses.older</u>	nana (1)	nana (1)	nana (1)	murle (2)	?uvo (3)	poka (4)
12. <u>sibling</u> , <u>s.ses.younger</u>	yoyo (1)	vovo (1)	hoho (1)	se (1)	?uvo (1?)	ufua (1?)
13. <u>sibling</u> , <u>opp.ses.older</u>	amakina (1)	amakina (1)	amakina (1)	maʔine (1)	maʔi (1)	maʔina (1)

	KOITA	KOJARI	Mtn. KOJARI	AOMIE	BARAI	MANAGALASI
14. <u>sibling</u> , <u>opp. sex, younger</u>						
15. <u>I</u>	da (1)	da (1)	di (1)	na (1)	na (1)	na (1)
16. <u>you (sing.)</u>	a (1)	a (1)	a (1)	dʒa (1)	a (1)	a (1)
17. <u>he</u>	au (1)	ahu (1)	eu (1) au (1)	hu (1)	ahu (1)	hu (1)
18. <u>we two incl.</u>						
19. <u>you two</u>						
20. <u>they two</u>						
21. <u>we incl.</u>	no (1)	no (1)	no (1)	no (1)	no (1)	nu (1)
22. <u>you (pl.)</u>	ya (1)	ya (1)	ɔala (1)	dʒeme (1)	ʒa (1)	dʒa(ra) (1)
23. <u>they</u>	yau (1)	yabu (1)	abu (1) uke (1)	dʒebu (1)	ʒabu (1)	pu (1)
24. <u>ail</u>	inuyati (1) bouge (2?)	nunuta (1) tahigau (6)	balita (2) bahata (2)	aho (3)	vota (2?)	poka (2?)
25. <u>head</u>	omoto (1)	kina (2)	kina (2)	simane (1?)	avono (3)	hemata (1)
26. <u>hair of head</u>	hana (1)	homo (2)	numu (3) fomo (2)	ue (4)	ui (4)	sapasa (5)
27. <u>forehead</u>	viri (1)	emo (2)	fari (1)	odae (3)	vare (1)	variera (1)

	KOITA	KOIJARI	Mtn. KOIJARI	AOHIE	BARAI	MANAGALASI
28. <u>eye</u>	ni (1)	nitaha (1)	ni (1)	nuni (1)	nio (1)	nia (1)
29. <u>nose</u>	uri (1)	uri (1)	uri (1)	nu (2)	ugo (1?)	ura (1)
30. <u>ear</u>	ihiko (1)	ihiko (1)	gorema (1?)	hiaʔi (1)	gada (2)	atae (2)
31. <u>tooth</u>	eyi (1)	eyi (1)	ai (1)	ane (2?)	gobai (1?)	opadʒa (1?)
32. <u>tongue</u>	meina (1)	neme (2)	neme (2)	bitare (3)	bitaru (3)	metara (3)
33. <u>/jaw, chin/</u>	hata (1)	auki (2)	aura (2)	negatu (3)	anoʔu (4)	sanoa (4)
34. <u>/throat/</u>	eno (1)	tau (2)	gobe (3)	hua (4)	sado (5)	maramarara (6)
35. <u>nape</u>	tuyu (1)	eno (2)	tu (1)	sonaʔaha (3)	noi (2)	oroa (4)
36. <u>mouth</u>	ava (1)	ava (1)	aka (1)	dʒoʔa (2)	iru (3)	ira (3)
37. <u>/shoulder/</u>	bagu (1)	bagi (1)	bego (1)	boahē (1?)	sirōi (2)	sireha (2)
38. <u>arm</u>	ada (1)	ada (1)	ada (1)	ave (2)	iraʔu (3)	idʒa (3?)
39. <u>/elbow/</u>	(ada) komuko (1)	(ada) komuko (1)	(adae) komuʒa (1)	(ovo) taegue (2)	(iraʔu) gamoi (1?)	idʒa toka (2?)
40. <u>palm of hand</u>	(ada) uhu (1)	(ada) uhu (1)	(adae) foto (2)	(ovo) gudue (1?)	vataʔo (3?)	idʒa vadʒa (3?)
41. <u>/finger/</u>	(ada) kaki (1)	(ada) gohino (1?)	(adae) firo (2)	(ovo) gaene (1)	iraʔu orohu (3)	idʒa rono (3)

	KOITA	KOIARI	Mtn. KOIARI	ADMIE	BARAI	MANAGALASI
42. /finger_nail/	ada kouka (1)	(gohi) karu (1?)	(adae) okofe (1?)	(ovo) gisu (2)	ira?u sigori (3)	laga voka (4)
43. /chest/	dojoka (1)	kahaha (2)	ifuka (3)	vinebi (4)	gogol (5)	tera (6)
44. <u>b</u> reast (of woman)	amu (1)	amu (1)	amu (1)	amu (1)	mosu (1)	musa (1)
45. <u>b</u> elly (bel)	vayata (1)	uni- (2)	uni (2)	da (3)	de (3)	teahua (3)
46. /nazeL/	demo (1)	demodi- (1)	demodo (1)	vinohu (2)	memel (3)	mesipa (3)
47. <u>b</u> aok	dehi (1)	gadiva- (2)	inu (3)	damuage (4)	ionadu (5)	tapa (6)
48. / <u>b</u> uttocks/	deyanimu (1)	deva- (1?)	defura (2?)	daridini (2)	debira (2?)	telra (2?)
49. <u>l</u> eg	vasa (1)	vahl- (1)	gelna (2)	horu (3)	de?u (4)	diza (5) omora (3?)
50. / <u>t</u> high/	beha (1)	beha- (1)	figu (2)	du?ahe (3)	du?a (3)	ubuone (4)
51. / <u>k</u> nee/	komuko (1)	koha- (1?)	kome (1)	agu (2)	ate (3)	atoka (3)
52. <u>s</u> ole of foot	(vasi) uhu (1)	(vahl) uhu- (1)	foto (2)	horu hitahle (3)	de?u vata?o (4)	omora hara (5)
53. <u>s</u> kin	vada (1)	vate- (1)	fate (1)	sine (2)	sa (2)	haha (1?) sisa (2)
54. / <u>b</u> ody_hair/	homo (1)	homo- (1)	fomo (1)	vinebi ue (2)		
55. <u>b</u> lood	tayo (1)	tavo- (1)	taho (1)	ko (1?)	avodu (1?)	a (1?)

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
56. <u>fat</u>	yul (1)	ul- (1)	bata (2)	guhe (1?)	godu (3?)	vare (4)
57. <u>bone</u>	lta (1)	lta- (1)	tafa (1)	ldze?ahē (1?)	?adu (1?)	ata (1?)
58. <u>heart</u>	suru (1)	unikokota- (2)	rutl (1?)	vovobadze (3)	ol?o (3?)	odza (3?)
59. <u>liver (biak?iba)</u>	ihiru (1)	lruhuni- (1)	roki (1?)	va (2)	va (2)	kamuviradza (3)
60. <u>/sore/</u>	kuhl (1)	bata bata- (2)	(fata) ohe (3)	sagehe (4)	(sa-no) buretu (5)	adzu (6)
61. <u>/dream/</u>						
62. <u>to dream</u>	yayo- (1)	yao- (1)	ðamiðami- (1?)	niə?uv- (2)	naosl nai (1?)	
63. <u>sun</u>	vani (1)	vani (1)	fani (1)	madza?e (2)	ve (3)	vea (3)
64. <u>/moon/</u>	bata (1)	bata (1)	bata (1)	manare (2)	sa?o (3)	masepe (2?)
65. <u>star</u>	vamumo (1)	koro (2)	didi (3)	djidze (3)	maganl (4)	džina (3)
66. <u>sky</u>	va (1)	va (1)	otogo (2)	?o?ido?e (3)	uo?u (4)	akwpa (5)
67. <u>cloud</u>	gousa (1)	yuva (2)	goe (1)	su (3)	lso (3)	imittl (4)
68. <u>fog</u>	yuva (1)	gousa (2)	fafita (3)			
69. <u>rain</u>	veni (1)	veni (1)	feni (1)	ane (1)	ve (1)	neha (1?)
70. <u>night</u>	vahi (1)	vaubu (2)	fafi (1)	vahi (1)	na?ire (1?)	na?imo (1?)

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
71. <u>day</u>						
72. <u>/morning/</u>	vagutu (1)	vararati (2)	fafita (3)	sisonu (4)	na?i tuba?o (5)	su?o (4?)
73. <u>/evening/</u>	vahiyeta (1)	vamaba (2)	gutu (3)	dzeni (4)	na?i sone (5)	nutuma (6) nusirei (5?)
74. <u>water</u>	eya (1)	ita (1)	e (1)	dzovo (1)	ido (1)	toa (1)
75. <u>river</u>						
76. <u>round water, pond</u>						
77. <u>ground</u>	vateta (1)	vata (1)	fata (1)	sa?a (1)	sa?i (1)	moe?a (2)
78. <u>stone</u>	muni (1)	muni (1)	mune (1)	muna (1)	umarl (1)	muna (1)
79. <u>sand</u>	siyu (1)	heu (1?)	esaga (2)	ne?ue (3)	alaru (2?)	adzara (2)
80. <u>mountain</u>	nimu (1)	numuta (1)	tana (2)	daheru (3)	rua?u (4)	hareha (5)
81. <u>bush</u>	maha (1)	mata (1)	boto (1?)	dze?e (2)	boto (1?)	netfi?a (2)
82. <u>GARDEN</u>	ye?e (1) buru ye?e (2)	buru (2)	buru (2)	mu (3)	zo (4)	d3usi?a (4)
83. <u>FENCE</u>	yara (1)	vara (1)	hara (1)	boru (2)	veru (1)	vera (1)
84. <u>wind</u>	nono (1)	hihi (2)	heburu (3)	sigage (4) bure (3)	uburu (3)	pura (3)

	KOITA	KOIARI	MEN. KOIARI	AOMIE	BARAI	MANAGALASI
85. <u>wind blows</u>						
86. <u>fire</u>	vene (1)	vene (1)	fene (1)	veni (1)	menu (1)	vena (1)
87. <u>smoke</u>	vene duke (1)	vene dul (1)	fene dul (1)	ʔuʔe (1)	oʔu (1)	ua (1)
88. <u>ashes (black)</u>	utuyo (1)	utuvu (1)	uti (1)	uone (2)	tufotu (1)	wʔa (3)
89. <u>path</u>	yuma (1)	uma (1)	humaha (1)	ori (2)	uriru (2)	unama (1?)
90. <u>tree</u>	idi (1)	idi (1)	idi (1)	idʒe (1)	idu (1)	itʃa (1)
91. <u>/trunk of tree/</u>	idi nomusaka (1)	idi hataka (2) idi gabaka (5)	idi tafafe (3)	idʒe ʔahe (4)	idu aho (4)	itʃa aha (4)
92. <u>/branch of tree/</u>	idi adaka (1)	idi adaka (1)	idi dofe (3) idi ada (1)	idʒe hane (2) idʒe ade (1)	idu donu (3)	itʃa pesa (4)
93. <u>/stump of tree/</u>	idi yalika (1)	idi umuka (2)	idi umukafe (2)	idʒe bahi (3)	idu dinu (4)	itʃa nedʒa (5)
94. <u>root of tree</u>	idi umuka (1)	idi umuka (1)	idi umukafe (1)	idʒe dirume (2)	idu girigu (3) idu aia! (5)	itanapa (4)
95. <u>bark of tree</u>	idi vataka (1)	idi veteka (1)	fatefe (1)	idʒe sine (2)	idu sa (2)	itʃa sisa (2)
96. <u>/tree top/</u>	idi teteka (1) idi koboka (4)	idi totoka (1)	tosafe (2)	idʒe name (3)	idu nibore (3?)	
97. <u>fruit of tree</u>	idi madlika (1)	idi taha (2)	baiʃe (3)	idʒe badʒe (3)	idu voho (4)	itʃa ʔina (5)
98. [(kumat.)]						

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
99. <u>SWEET POTATO</u>	inueri (1)	ina (1)	gobeu (2)	gogi (2)	gobe?u (2)	takoko (2?)
100. <u>TARO</u>	vadu (1)	vadu (1)	fadia (1)	varuhe (1) mage (2)	madu (1?)	noha (3)
101. <u>YAM</u> (a) <i>maho</i> (b) <i>tattu</i>	sina (1) vaya (1)	hago (2) vaya (1)	rovi (3) boruke (2)	dedze (4) vadzilege (3)	iro (5) sanaru (4)	ahadza (2?) vadzaka (3)
102. <u>BANANA</u>	uhi (1)	uhi (1)	ufe (1)	udzil (1)	momo (2)	adzudza (1)
103. <u>SUGARCANE</u>	imi (1)	imi (1)	imi (1)	ime (1)	umoi (1?)	osa (2)
104. <u>PANDANUS</u>	gereka (1)	vani (2)	raoka (3)	suhil (4)		
105. <u>BETEL NUT</u>	haya (1)	haya (1)	sibo (2)	ha (1)	zose (3) seru (4)	siera (4)
106. [(/tanke/)]	vabe (1)	vabe (1)	fabere (1)	suhudzil (2)	moga (3)	dzona (4)
107. <u>salt</u>	eve (1)	eve (1)	madea (2)	so (3)	misu (2?)	misa (2?)
108. <u>dog</u>	totoka (1)	to (1)	to (1)	?oe (1)	u?o (1)	ua (1)
109. <u>PIG</u>	oho (1)	oho (1)	ofo (1)	mahu (2)	mahu (2)	maha (2)
110. <u>dog's tail</u>	to teteka (1)	to teteka (1)	deteke (1)	?ouhe (2)	uko ivenu (3)	ua vina (3)
111. <u>/dog's fur/</u>	to homoka (1)	to homoka (1)	fomo (1)	?o ue (2)	uko ul (2)	ua sapasa (3)
112. <u>bird</u>	uguha (1)	ugu (1)	ugu (1)	uge (1)	mifena (2)	uka (1)

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
113. <u>feather</u>	homo (1)	homo- (1)	fomo (1)	uge ue (2)	miʔena ul (2)	uka sapasa (3)
114. <u>egg</u>	uni (1)	uni- (1)	uni (1)	ʔune (1)	miʔena anu (2)	keha (3)
115. <u>/wing/</u>	akaha (1)	ada- (1)	atugu (2)	vivodʒi (3)	miʔena adahu (1) miʔena iraʔu (4)	taha (1ʔ)
116. <u>CASSOWARY</u>	iya (1)	iya (1)	duba (2)	tubore (2)	tubo (2)	{umaha umahl} (3)
117. <u>[/snake/]</u>	yarematayo (1)	vareka (2)	ute (3)	sigebe (4)	taba (5)	tapara (5)
118. <u>fish</u>	karava (1)	mehuya (2)	hulena (3)	visu (4)	huionu (3)	kidʒa (5)
119. <u>/fly/</u>	honeyo (1)	hinova (1)	homedo (1ʔ)	vonivoni (2)	uanu (2ʔ)	kuta (3)
120. <u>[/mosquito/]</u>	una (1)	tavota (2)	unuku (1)	ʔorovoʔorove (3)	ʔumusiri (4)	sisiena (5)
121. <u>/butterfly/</u>	beberuka (1)	avako (2)	oako (2)	viodʒodʒe (3)	egome (2ʔ)	tatiʔera (4)
122. <u>HOUSE</u>	yaga (1)	yaga (1)	o (2)	dʒavu (1ʔ) ʔame (4)	aru (3)	ara (3)
123. <u>BOW</u>						
124. <u>ARROW</u> (<u>subeti-</u> <u>tute 'spear'</u>)	valga (1)	bi (2)	bi (2)	bidʒe (2)	ʒuvo (3)	pidʒa (2) yuha (3)
125. <u>string, rope</u>	yote (1)	vote (1)	hote (1)	oʔi (1)	ai (1ʔ)	edʒa (1ʔ)
126. <u>NETBAG, BILUM</u>	yaya (1)	yago (1)	ʒaha (1)	bodʒu (2)	inat (3)	naha (3ʔ)

	KOITA	KOIARI	Mtn. KOIARI	AOHIE	BARAI	MANAGALASI
127. [(woman's clothes)] (pulput)	nigi (1)	nigi (1)	nigi (1)	nlogu (1)	e?i (2)	ateha (3)
128. <u>SINGSING</u>	yavaya (1)	koa (2)	habu (1?)	djava (1)	do (1?)	djava- (1)
129. <u>big</u>	bauge (1)	keare (2)	baruga (1)	borome (1?)	bado (1?)	natoho (3)
130. <u>small</u>	avie (1)	misuka (2)	esefe (3)	bise?e (4)	amu (5)	u?ua (6)
131. <u>good</u>	maye (1)	maiteka (1)	duafe (2)	ma (1)	ma?ina (1)	mai, mamai (1)
132. <u>bad</u>	daure (1)	komara (2)	toeranu (3)	sisa (4)	ta?ena (5)	sisea (4)
133. <u>long</u>	ege (1)	ege (toniftoni va) (1)	egetana (1)	ege (1)	ifeto (2)	djodjora (3)
134. <u>short</u>	tuake (1)	duaka (1)	fugefe (2)	bune (3)	ibitu (4)	tu?ua (1)
135. <u>stick</u>	dika- (1)	gorogo- (2)	fafahani- (3)	guomo- (2?)	iona- (4)	ata?one- (5)
136. [(/hungry/)]	yuburaya- (1)	vavi- (2)	fai- (2?)	hame- (3)	nouge- (4)	matu- (5)
137. <u>red</u>	kereka (1)	kokira (2)	tahote (3)	kavu?e (4)	?abo (4)	ama (4?)
138. <u>white</u>	kae (1)	keekae (1)	taete (1)	?ed?iva (2)	abaru (3)	saesa?ina (4)
139. <u>black</u>	dubu (1)	dubuka (1)	bukate (1?)	rovø (2)	ale (3)	edja (3)
140. <u>yellow</u>	mayakotave (1)	mayakonika (1)	belfate (2)	hovø (3)	bora (4)	karakara?ina (5)

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
154. <u>drink</u>	i- (1)	i- (1)	i- (1)	i- (1)	i- (1)	id3- (1)
155. <u>stand up</u> (a) <u>arise</u> (b) <u>stand</u>	uri- (1) ra- (1)	uri- (1) rami- (1)	hoferaha- (2) rami- (1)	ri- (1) nami- (1)	uri- (1) rami- (1)	urid3- (1) namid3- (1)
156. <u>sit down</u>	ugurama- (1)	gura- (1)	uguma- (1)	hi- (2)	idasu ahi- (3)	asumahid3- (3)
157. <u>speak</u>	roi- (1) gava- (3)	roi- (1) heduva- (4)	hotofa- (2)		ro- (1)	
158. <u>/call out/</u>	toyo- (1)	tovo- (1) totova- (1)	hoa- (2)	ʔuv- (1ʔ)	u(me)- (1ʔ)	umed3- (1ʔ)
159. <u>/run/</u>	rurua- (1)	namare va- (2)	dibus- (3)	dʒuʔebi- (4) tutuv- (1ʔ)	gugugu- (1ʔ)	nu- (1ʔ)
160. <u>walk</u>						
161. <u>/take/</u>	ma- (1)	ma- (1)	ma- (1)	bad3- (1)	abe- (1)	aped3- (1)
162. <u>give me</u>	mo- (1)	mo- (1)	mi- (1)	bo- (1)	ma- (1)	mah- (1)
163. <u>give you</u>						
164. <u>give him</u>						
165. <u>hit (with hand)</u>	yama- (1)	vama- (1)	hama- (1)	ʔan- (2)	ana- (2)	ana- (2)
166. <u>break (tr.)</u>	bokova- (1)	bokova- (1)	eguma- (2)		ato- (3)	tokod3u- (3)

	KOITA	KOIARI	Mtn. KOIARI	AOMIE	BARAI	MANAGALASI
167. <u>fall</u> (<i>from stand- ing</i>)	dova- (1) youha- (6)	kureva- (2)	eseti- (3)	borov- (4)	aʔobi- (5)	odʒ- (1?)
168. <u>fall</u> (<i>from height</i>)		dobiva- (1)	doba- (1)	berov- (2)		
169. <u>sleep</u>	yaya- (1)	yava- (1)	ðaha- (1)	nɪav- (2)	nai- (2)	nedʒ- (2)
170. <u>lie on ground</u>	yaya- (1)	yava- (1)	ðaha- (1)	nɪav- (2)	nai- (2)	nedʒ- (2)
171. <u>see</u>	eraya- (1)	ereva- (1)	ere- (1)	gav- (1)	aga- (1)	ka- (1)
172. <u>hear</u>	ihi- (1)	ihi- (1)	efi- (1)	hedʒ- (1)	ihe- (1)	hedʒ- (1)
173. <u>spy</u>	nɪvɪ- (1)	nɪvɪ- (1)	nɪne- (1)	nɪv- (1)	nɪ- (1)	nɪrav- (1)
174. <u>singing</u> (v)	yavayava- (1)	koaki- (2)	habua- (3)	dʒoʔi- (4)	dosɪ- (4)	dʒavav- (1)
175. <u>cook</u> (<i>kaukau</i>)	yonoyo- (1)	maruva- (2)	rotieho- (3)	nem- (4)	ene- (5)	nɪhidʒ- (5?)

5.8	PHONOLOGICAL CHARACTERISTICS OF THE KOIARIAN LANGUAGES
5.81	INTRODUCTION
5.82	GENERAL CHARACTERISTICS
5.82.1	<i>Overview</i>
5.82.2	<i>Stops</i>
5.82.3	<i>Fricatives and Affricates</i>
5.82.4	<i>Vibrant</i>
5.82.5	<i>Vowels</i>
5.82.6	<i>Syllable Structure and Stress</i>
5.83	INDIVIDUAL LANGUAGE CHARACTERISTICS
5.83.1	<i>General</i>
5.83.2	<i>Koita</i>
5.83.3	<i>Koiari</i>
5.83.4	<i>Mountain Koiari</i>
5.83.5	<i>Aomie</i>
5.83.6	<i>Barai</i>
5.83.7	<i>Managalasi</i>

5.81 INTRODUCTION

No phonemic statements have been published on any of the languages of the Koiarian Family although tentative statements have been prepared by members of the Summer Institute of Linguistics who have worked, or are working in the Aomie and Managalasi languages.¹ These statements have been discussed with the members currently working in these languages² and have have been utilized in the following description, with certain modifications, which are discussed in the relevant language subsections below. All other phonemic statements are based on my survey materials, Koiari being the most complete.

5.82 GENERAL CHARACTERISTICS

5.82.1 Overview

Chart I shows all of the phonemes which occur in the six languages of the Family. The phonemic symbols have conventional values except that /f/ and /v/ are bilabial fricatives, /r/ is generally a flapped alveolar vibrant, /y/ is an alveo-palatal flat fricative and /e/ is normally realized as [ɛ].³ In the chart an "x" at the intersection of a phoneme row and a language column indicates that the phoneme specified by the row occurs in the particular language specified by the column. From this chart it is apparent that the phonemic systems of the languages of the Family are very similar. Thus in each language there are sets of stops,

¹See A. and M. Tobitt (1964) on Aomie, and J. and J. Parlier (1964) on Managalasi phonemes. These statements, and mine which follows, describe phonemes which are arrived at by the application of traditional phonemic principles, as expounded, for example, by Pike (1947).

²J. and J. Austing have now replaced A. and M. Tobitt in Aomie.

³In this description phonetic symbols are those suggested by the International Phonetic Association in their "The Principles of the International Phonetic Association" (1949). The following diacritics are used:

- + (below a letter) fronted variety
- (below a letter) backed variety
- ~ (below a letter) interdental variety
- ˘ (above a letter) flapped variety
- ˆ (below a vocoid) more open variety
- ˙ (below a vocoid) more close variety
- ˊ (before a syllable) primary phonetic stress
- ˋ (before a syllable) primary phonemic stress
- " (below a letter) fortis production

fricatives, affricatives, nasals, a vibrant, and at least five vowels.¹ General features of each of these sets are as follows:

Chart I: Phonemes of the Languages of the Koiarian Family

Phoneme		Koita	Koiari	Mtn Koiari	Aomie	Barai	Managalasi
CONSONANTS							
Stops	p				x		x
	t	x	x	x	x	x	x
	k	x	x	x	x		x
	ʔ				x	x	x
	b	x	x	x	x	x	
	d	x	x	x	x	x	
	g	x	x	x	x	x	
Fricatives	f		x	x			
	s	x	x	x	x ²	x	x
	h	x	x	x		x	x
	v	x	x		x	x	x
	y	x	x				
	ʒ					x	
	ð			x			
Affricates	tʃ						x
	dʒ				x		x
Nasals	m	x	x	x	x	x	x
	n	x	x	x	x	x	x
Vibrant	r	x	x	x	x	x	x
VOWELS							
	i	x	x	x	x	x	x
	e	x	x	x	x	x	x
	ə				x		
	u						x ³
	e				x		
	a	x	x	x	x	x	x
	ɔ				x		
	o	x	x	x	x	x	x
	u	x	x	x	x	x	x

Footnotes overleaf

5.82.2 Stops

In all languages stops contrast as to bilabial, alveolar and velar points of articulation, although Managalasi does not have contrast between voiced and voiceless subsets. In this latter language only voiceless contoids [p], [t] and [k] occur, and these are allophones of /p/, /t/, and /g/, respectively. /ʔ/ is characteristic of the Baraic Sub-Family, although [ʔ] also occurs in the Koiari Sub-Family languages either as an extra-systemic phoneme as in [oʔe] 'yes' in Koiari, or as a phoneme in some dialects (e.g., the Southern Dialect of Mountain Koiari). In Barai [k] occurs as an allophone of /ʔ/. It is also of interest that no /p/ occurs in most of the languages of the language family. However, it will be noticed that /f/ (a voiceless bilabial fricative) occurs instead in Koiari and Mountain Koiari. Thus /f/ may be interpreted as /p/ in these languages,¹ thereby giving more symmetry to the set of stops, but less symmetry to the set of fricatives.

5.82.3 Fricatives and Affricates

This is the area of apparent widest consonantal variation between the member languages of the family. However, this variation is more apparent than real. Thus all of the languages have a common set of fricatives /s/, /h/, and /v/ (except Mountain Koiari which has no /v/), and there are some correspondences between the affricates of the Baraic languages and the fricatives /ð/ of Mountain Koiari and /y/, of Koita and Koiari.²

Footnotes from previous page

¹It is hardly necessary to point out, however, that this does not automatically mean that there is a one-to-one correspondence between the phonemes of the languages. Reconstruction of the phonological system of the parent language, Proto-Koiarian, has not yet been attempted.

²/h/ only occurs in the phonemic system of some informants (Tobitt, 1964) - see Section 5.83.52 below.

³See discussion of /w/ in Section 5.83.72 below.

¹In some languages, e.g., Koiari and Aomie, an f-p contrast is being introduced into the phonemic systems of the younger speakers learning English.

²For example:

<u>English</u>	<u>Koita</u>	<u>Koiari</u>	<u>Mtn.</u> <u>Koiari</u>	<u>Aomie</u>	<u>Barai</u>	<u>Managalasi</u>
'you(pl.)'	ya	ya	ða(ia)	dʒeme	ʒa	dʒa(ra)

5.82.4 *Vibrant*

All of the languages have a common vibrant /r/. This phoneme also has a common set of allophones in all of the languages. These allophones are usually unflapped in word initial position, and flapped in word medial position. They also have a vibrant quality in the environment of front vowels and a lateral quality elsewhere. Barai and Mountain Koiari have extra allophones which are discussed below.

5.82.5 *Vowels*

All of the languages share a common set of five vowels: /i e a o u/. These common vowels contrast in high, mid, and low tongue positions. High and mid vowels contrast in front and back tongue positions. Managalasi and Aomie have additional (generally central) vowels. In none of the languages is vowel length phonemic.

5.82.6 *Syllable Structure and Stress*

The syllable structure of Koiarian languages is simple. There are no consonant clusters and all syllables are open, being either a vowel, or a combination of consonant and vowel. Vowoid glides are interpreted as sequences of vowels, although in Koita, Mountain Koiari, and Barai this needs further investigation together with the interpretation of stress. In the three languages of the Family studied in more detail (viz., Koiari, Aomie, and Managalasi) stress has been found to be phonemic.

None of the Koiarian languages is tonal.¹

Intonation has not been studied in any detail in any of the languages.

5.83 *INDIVIDUAL LANGUAGE CHARACTERISTICS*

5.83.1 *General*

The following sketch statements give the phonemes of each language together with a short list of words used for identifying phonemic contrasts in those languages hitherto unstudied, and,

¹This is in contrast to many other non-Austronesian languages of New Guinea for which tonal systems have been described, e.g., Telefol (Healey, 1964), Awa (Loving, 1966). See E.V. Pike (1964) for a description of the types of tonal languages to be found in New Guinea.

where necessary, some further comments on allophonic variants and other phonological features.

5.83.2 *Koita*

5.83.21 *Phonemes*

Thirteen consonant and five vowels phonemes occur in Koita. The consonant phonemes are: /t k b d g s h v y ɣ m n r/. These phonemes contrast in analogous or identical environments:

b//v	/bata/ 'moon'; /vata/ 'ground';
t//d	/ata/ 'man'; /ada/ 'arm';
k//g	/vaka/ 'cave'; /vaga/ 'left hand';
m//b	/mata/ 'land'; /bata/ 'moon';
d//n	/idi adaka/ 'tree branch'; /idi hanaka/ 'tree leaf';
y//r	/ɣamanu/ '(I) hit it'; /ramanu/ '(I) stood';
y//h	/oyo/ 'village'; /oho/ 'pig';
t//s	/lta/ 'bone'; /isaye/ 'new';
d//r	/ɣudi/ 'lime pot'; /uri/ 'nose';
t//r	/toyonu/ '(I) called out'; /royonu/ '(I) came';
r//n	/varike/ 'forehead'; /vani/ 'sun';
g//ɣ	/yaga/ 'house'; /yaya/ 'net bag, bilum';
b//y	/mabi/ 'unmarried woman (young)'; /mayi/ 'married woman';
y//i	/yaga/ 'house'; /lahu/ 'old (man)'. .

The vowel phonemes are: /leaou/. These contrast in identical environments:

i//e	/mayi/ 'woman'; /maye/ 'good';
a//e	/a/ 'you'; /e/ 'that';
a//o	/(di) mabare/ '(my) wife'; /(di) mobore/ '(my) husband';
o//u	/ogo/ 'cloth'; /ugu/ 'bird'.

5.83.22 *Allophonic Variants and other Phonological Features*

/e/ and /a/ may have allophonic variants [e^h] and [a^h] respectively before [j], e.g.,

[e^hja] 'water'; [pa^hja] 'yam (taitu)'.

Final vowels, and sometimes /m/ and /v/, are often omitted in normal conversation, e.g.,

- ... 'abu 'abu... may appear as... 'babu... '...twenty...';
- ... 'di 'ade... may appear as... 'dade... '...my arm...';
- ... 'da ka mu... may appear as... 'da 'kau... '...I just...'.
.

5.83.3 *Koiari*5.83.31 *Phonemes*

Thirteen consonant and five vowel phonemes occur in Koiari. The consonant phonemes are: /t k b d g f s h v y m n r/.¹ These phonemes contrast in analagous or identical environments:

- b// - /bata/ 'noon'; /ata/ 'man'; /baba/ 'father'; /aba/ 'hole';
 t//d /ata/ 'man'; /ada/ 'arm'; /ta/ 'and'; /da/ 'I';
 k//g /ekehe/ 'there'; /egehe/ 'before'; /koro/ 'star'; /gorogo/ 'sick';
 s//t /soreka/ 'quick'; /toroka/ 'hard'; /ita/ 'water'; /isasa/ 'uncooked';
 m//b /mata/ 'bush'; /bata/ 'moon'; /mabara/ 'wife'; /mamaka/ 'father';
 n//d /ana/ 'rattan'; /ada/ 'arm'; /numu/ 'mountain'; /dumo/ '(personal name)';
 f//v /faragi/ 'leaf for mat making'; /varaka/ 'snake'; /diafanivati/ 'weeds'; /vani/ 'sun';
 d//r /udiava/ 'doorway'; /uri/ 'nose'; /da/ 'I'; /ra-/ 'to stand';
 t//r /mabata/ 'old woman'; /mabara/ 'wife'; /ta/ 'and'; /ra-/ 'to stand';
 b//v /mabi/ 'big girl (unmarried)'; /mavi/ 'woman (married)'; /bata/ 'moon'; /vata/ 'ground';
 v// - /vuma/ 'axe'; /uma/ 'road, track';
 y//i /ya/ 'you (pl.)'; /iya/ 'cassowary'; /yuva/ 'cloud'; /iyu/ 'wasp';
 u//v /vuma-ni-gene a va/ 'Do you want (the) axe?'; /vuma-ni ura-vehitene² a ua/ 'Don't you want (the) axe?'

The vowel phonemes are: /i e a o u/. These contrast in analagous or identical environments:

- i//e /veni/ 'rain'; /vene/ 'fire'; /ikohe/ 'here'; /ekehe/ 'there';
 e//a /veni/ 'rain'; /vani/ 'day'; /ate/ 'friend'; /ata/ 'man';
 a//o /('da) mabare/ '(my) wife'; /('da) mobore/ '(my) husband'; /ote/ 'go (imperative sg.)'; /ate/ 'friend';
 o//u /unu/ 'it is'; /ono/ 'thing'; /ugu/ 'bird'; /ogo/ 'cloth'.

¹Glottal stop occurs in one word, viz. [ɔʔɛ] 'yes'. It is not counted as a phoneme of the language.

²ura is a Motu loan 'to want, wish' that is now widely used by the Koiari.

5.83.32 Allophonic Variants and Other Phonological Features

The voiceless bilabial fricative /f/ may have [p] as a free variant with [ɸ] word initially preceding back vowels, e.g.,

[pu'ɸuri] or [ɸu'ɸuri] 'Fufuri (name of rock)'.

The voiced bilabial fricative /v/ has the variant [w] before back vowels: e.g.,

[ˈwami] 'boy'; [ˈwowo] 'younger brother'; [ˈwuma] 'axe';

and [β] before front vowels: e.g.,

[βɛhi'tɛlo] 'not'; and [ˈmaβi] 'woman'.

Front vowels may be non-phonemically nasalized after /h/,

e.g.,

[ˈhĩhĩ] 'wind',

and an intrusive /h/ sometimes occurs between vowels across grammatical "word" boundaries when the second "word" begins with /a/,

e.g., /ada hakibehe-h-abuti/ where -h- signifies the intrusion.

Vowels and consonants may be non-phonemically lengthened in the syllables of "words" which carry primary stress, e.g.,

[daːk:iːnake] 'my head' and [ˈβe:ni] 'rain'.¹

Vowels are also phonetically long in single syllable utterances such as:

[ˈbi:] 'spear'; [ˈwa:] 'sky'; [ˈto:] 'dog'.

/a/ may be also phonetically long in stressed syllables containing /v/ as onset, e.g.,

[ˈwa:du] 'taro'; or [ˈwa:βɛ] 'crotin'.

Finally vowels and consonants may be elided in normal conversation as follows:

(a) Vowels

Final vowels are elided before following words beginning with a vowel: e.g.,

/ˈata ˈeke/ becomes /aˈteke/ 'that man'

/ge ahu/ becomes /ˈgahu/ 'and he'

/ne ˈa ua/ becomes /ˈnaua/ 'are you'

except (a) if the two vowels are the same, as, for example, in /ˈada aˈbuti/. In such instances the syllable

¹ Sometimes demonstrative and locative words may be deliberately lengthened to emphasize the distance (in time or place) involved, e.g. [ˈwa:::βɛhɛ] 'a very long time ago', (from [wa:βɛhɛ] 'a long time ago') or [ˈmo:::rɛhɛ] 'way down there' (from [ˈmorɛhɛ] 'down there').

boundary may disappear and both vowels may be assimilated and realized as one long vowel. Thus the last example,

/ 'ada a'buti/ becomes /a'da:'buti/
'two hands';

(b) in the following observed instance:

/yaga uhu va go/ becomes /yagahu va go/
'It's in the house';

(c) if the preceding word is a pronoun:

/da ihikone/ becomes /da^hihikone/
'my ear'.

(b) *Consonants*

Voiced bilabial consonants and /r/ may sometimes be elided,

e.g.,

- (a) /b/: /evuri tabugo/ becomes /evuri taugo/
'It's high up';
/da bebe erevanu/ becomes /daebe:revanu/
'I didn't see it';
/vadibe va ne yabu roia/ becomes /vadibevane
yau roia/ 'What did they say?'
- (b) /v/: /matare da beki vima/ becomes /matare da
beki:ma/ 'I'm sweeping';
/yaviso/ becomes /yaiso/ 'Goodbye'.
- (c) /m/: /da momi/ becomes daomi/ 'Give me!'
/da a momirihero/ becomes /da:omirihero/
'I'll give you';
/varemime.../ becomes /vareime/ 'left
and ...'.
- (d) /r/: /gurama/ becomes /guama/ 'Sit down!'

5.83.33 Syllable Structure

Syllables consist of a vocalic nucleus with an optional consonantal onset. Two syllable types occur:

- (i) V: /a/ 'you' and /a.ta/ 'man';
(ii) CV: /ma.vi/ 'woman',

where the period indicates syllable boundaries within the "words". No closed syllables occur. Glides are interpreted as a sequence of two vowels. There are no distinctive distributions of vowels or consonants. Only three combinations of vowels were not observed, viz. /eo/, /uo/ and /ie/.

5.83.34 *Stress*

Stress is phonemic in Koiari. It is symbolized (') where its placement cannot be predicted. Generally the second last syllable of two to four syllable words is stressed, e.g.,

'ata/ 'man'; /ma'bara/ 'wife'; /go'roto/ 'betel nut pepper'; /ero'kai/ '(tree name)'.

However the placement of stress is not completely predictable as the following examples show:

/ada'hotove/ 'back of hand'; /'adaka/ 'hand'; /'babaka/ 'sugar banana'; /ba'baka/ 'father'; /'balahu/ 'tree climbing kangaroo'; /'gorogo/ 'sick'.

The placement of stress may vary as words appear in different environments, e.g.,

'adaka/ 'hand': /'da:'dake/ 'my hand': /eke're 'da:da'kero/ 'that's my hand!'

From these examples it is also apparent that utterances of more than three syllables may have more than one stress.

5.83.4 *Mountain Koiari*5.83.41 *Phonemes*

Twelve consonant and five vowel phonemes occur in Mountain Koiari. The consonant phonemes are: /t k b d g f s h ð m n r/.

These phonemes contrast in analogous or identical environments:

t//d /ata/ 'people'; /ada/ 'arm';
 k//g /gobe/ 'throat'; /kome/ 'knee';
 b//f /bata/ 'moon'; /fata/ 'land';
 d//r//s /udi/ 'betel nut lime'; /uri/ 'nose'; /si/ 'flower'; /di/ 'I'; /erehanu/ '(I) saw (it)'; /esefe/ 'small';
 ð//r /ðahanu/ '(I) slept'; /rahanu/ '(It's) cooked';
 g//h//f /ofo/ 'pig'; /ogo/ 'cloth'; /hoho/ 'sibling, same sex, younger'; /fomo/ 'hair'; /fafi/ 'night'; /hafa more/ 'far away'; /goe/ 'cloud'.

The vowel phonemes are: / i e a o u/. These contrast in identical environments:

i//e /uti/ 'ashes'; /ute/ 'snake';
 a//o /boto/ 'bush'; /bata/ 'moon';
 o//u /ogo/ 'cloth'; /ugu/ 'bird'.

5.83.42 *Allophonic Variants and Other PHonological Features*

/f/ and /h/ have voiceless allophones word initially and voiced ones word medially, e.g., [ʰɸomol] 'hair'; [diʰβomol] 'my hair'; [xuʰmɔyɔ] 'path, track'. /s/ has allophone [s] word initially e.g., [sɛriʰanu] 'It's cold' and [z] word medially, e.g., [ɛʰzɛβɛ] 'small'. Sometimes [z] is well fronted, as in [ɛʰzɛβɛ] 'sand' or [ɛʰzɛβɛ] 'small', and approximates to the allophone [ʒ] of /ð/. /ð/ is usually realized as a voiced interdental fricative with quality varying from [j] to [i] to [ð], e.g., [ðaʰyanu] 'I slept' may also be heard as [jaʰyanu] 'I' or [jaʰyanu]. /r/ also has a wide variety of allophones which range from [r] or [ɹ] in the environment of high front vowels to [l] elsewhere, e.g., [ʰuril] or [uʰil] 'nose'; [ɸililʰɸililʰanu] 'It turns around'. Sometimes the flapped variants are more nearly [ʒ̥] (flapped voiced alveo-dental fricative), e.g., [ɸililʰɸililʰanu] 'It turns around', and [ʰaʰɸa] 'chin', or [faʰɸutɛ] 'how much'.

5.83.5 *Aomie*

5.83.51 Aomie phonology has been described by A. and M. Tobitt (1964). These authors give the following as a tentative phoneme inventory for the Asapa dialect of the language (with common allophones given in square brackets):

CONSONANTS

	Labial	Alveolar	Palatal	Glottal
Stops (vl.)	p[p,ɸ,f,p ^h ,h]	t	k	ʔ
(vd.)	b	d	g	
Fricatives (vl.)		s[s,ts]		
(vd.)	v[β,w]		dʒ[dʒ,dʒ]	
Nasals	m	n		
Vibrant		r[r,l]		

VOWELS

	Front	Central	Back
High	i[i,j]		u
Mid	e[ɪ,ɛ]		o[o,ɛ]
	a		ɔ[ʌ,ɔ]
Low		a	

5.83.52 In their description the authors also point out that /p/ has a wide variety of allophones. Not all speakers have the same set. Different groups of speakers have different sets depending on their age group and their contact with Police Motu and English. Thus younger speakers who know Police Motu and/or English tend to distinguish between [p, ϕ] and [h, f]. For others there is a contrast between [p^h, ϕ] and [h]. A. and M. Tobitt also interpret palatalization and labialization of all consonants as consonant plus vowel. Thus [ˈg^waβɛ] 'bury' is interpreted as /ˈguave/. [ə] is interpreted as an allophone of /o/.

For purposes of this survey I have separated /h/ from /p/ on the basis that /h/ is a phoneme in the other dialect of Aomia, viz. Zuwadza, at Namanaia village. This dialect has the following phonemes (with allophones):

CONSONANTS

	Labial	Alveolar	Palatal	Glottal
Stops(vl.)	p[p,b]	t[t,d]	k[k,g]	ʔ
Fricatives(vl.)		s[s,ts]	tʃ[tʃ]	h
(vd.)	v[β,w]		dʒ[dʒ,ʒ,dʒ,j]	
Nasals	m	n		
Vibrant		r[r,ɻ,l,l]		

VOWELS

	Front	Central	Back
High	i		u
Mid	e[ɛ]		o ɔ
Low		a[a,e,ɐ]	

I also include /ə/ as a vowel phoneme in the Asapa dialect on the advice of Mr. J. Austing (oral communication). The vowel phonemes of the Asapa dialect which I shall use then are:

High	i		u
Mid	e ə	ə	o ɔ
Low	a	a	

5.83.53 Stress

A. and M. Tobitt found stress to be contrastive on first and second syllables of words.

5.83.6 Barai

5.83.61 Phonemes

Twelve consonant and five vowel phonemes occur in Barai.

The consonant phonemes are: /t ? b d g s h v ʒ m n r/. These phonemes contrast in analogous or identical environments as follows:

?//g /ginigu/ 'hole'; /ʔiʔu/ 'bat';
 t//d /terei/ 'river frog'; /dedi/ 'faeces';
 r//d /iru/ 'mouth, a boil'; /idu/ 'tree';
 ʔ//t /maʔu/ 'wall'; /matu/ 'tortoise-shell breast plate';
 s//t /sa/ 'skin'; /ta/ 'breadfruit';
 h//v /vahamu/ 'young boy'; /a-va eiraha/ 'Who are you?'
 s//ʒ /sa/ 'skin'; /ʒa/ 'you (pl.)'.

The vowel phonemes are: /i e a o u/. These contrast in analogous or identical environments:

i//e /vari(no)/ '(my) son'; /vare(no)/ '(my) forehead';
 o//u /ido/ 'water'; /idu/ 'tree';
 e//a /ageho/ '(I) saw them'; /agaho/ '(I) saw it';
 a//o /ʒa/ 'you (pl.)'; /ʒo/ 'garden'.

5.83.62 Allophonic Variants and Other Phonological Features

The following phonemes have important allophones:

Phoneme	Allophones
/ʔ/	[ʔ] is the phonemic norm but it may fluctuate with [k] in some words, e.g., [ʔiʔu] or [ˈkiku] 'bat'.
/h/	[h] word initially with [h] or [ɣ] word medially, e.g., [ɛˈhotɛ] and [ɛˈbaɪuˈɣote] 'many men'.
/r/	[r] in the environment of high front vowels word medially, e.g., [ˈnirimu] 'I don't know'; [ɪ] elsewhere, e.g., [ɛˈbaɪu] 'man'. Unflapped variants occur in similar environments word initially, e.g., [ˈrihuve] 'wet' and [ˈluve] 'bandicoot'. [r] may fluctuate freely word medially with [ɪ] and [ɔ̃], e.g., [ˈiɪu] or [ˈiɔ̃u] 'a boil', and [ˈnirimu] or [ˈnidimu] 'I don't know'.
/ʒ/	[j] varies freely with [ʒ], e.g., [ˈʒo] or [ˈjo] 'garden', although /z/ may also be realized as [dʒ] word medially.
/a/	[a] occurs in stressed syllables and [æ] elsewhere. See examples under /h/above. /a/ may also be realized as [æ] in the environment of /ʔe/ word medially, e.g., [ˈtæʔene] 'bad'.
/o/	[o] may vary with [ɔ̃] or [õ ^u] after /h/, e.g., [ˈagehɔ̃ ^u] or [ˈagehɔ̃] '(I) saw it'.

5.83.63 *Stress*

Insufficient time was spent on this aspect of the language to determine the status of stress in it. My impression is, however, that stress is probably phonemic since primary stress has variant positions in words of the same number of syllables, e.g.,

[mo'ga] 'tanket (shrub)'; ['misu] 'salt'.

5.83.7 *Managalasi*

5.83.71 Managalasi phonology has been described by J. and J. Parlier (1964). These authors give the following as a tentative phoneme inventory for the language (with the statistically most frequently occurring allophones given in square brackets where necessary):

CONSONANTS

	Labial	Alveolar	Palatal	Glottal
Stops	p[p]	t[t]	k[k]	ʔ
Fricatives(vl.)		s	ʃ[tʃ,ts]	h
(vd.)	v[β,b ^w]		j[dʒ,dʒ]	
Nasals	m	n		
Vibrant		r[r,ɹ]		

VOWELS

	Front	Back
High	i	u[w,u]
Mid	e[e,ɛ]	o[o,ɔ]
Low	a[a,ə]	

5.83.72 In their interpretation J. and J. Parlier treat a sequence of vocoids as a sequence of vowels. They also treat a high central rounded /ɯ/ as a sequence of two vowels /i/ and /u/ with stress on the second vowel, for the following reasons:

- that /ɯ/ contrasts with /i/ and /u/;
- that /ɯ/ has a very limited distribution;
- that the sequence /iu/ does not occur so that the interpretation of /ɯ/ as a sequence of two vowels /i/ plus /u/ fills an otherwise observed gap in the vowels sequences which occur.

For comparative purposes, however, it is probably better to retain the identity of /ɯ/ in the phoneme chart thus:

High	i	ɯ	u
Mid	e		o
Low		a	

This is the system displayed in Chart I above and which I have used in transcribing the word list for Managalasi in Appendix 5.7 above. I have also used the following symbolization for some of the consonants given above so as to be in keeping with that used for the other languages of the Koiarian Family:

/c/ is written /tʃ/ and /j/ is written /dʒ/.

5.83.73 Stress

J. and J. Parlier show stress to be contrastive on first and second syllables of words.

5.9 GRAMMATICAL CHARACTERISTICS OF THE KOIARIAN LANGUAGES

5.91 INTRODUCTION

5.92 SIMPLE SENTENCES

5.92.1 *Verbal Sentences*5.92.2 *Non-Verbal Sentences*5.92.3 *Sentence Constituents*

5.93 QUESTION AND NEGATIVE VARIANTS OF SIMPLE SENTENCES

5.93.1 *Questions*5.93.2 *Negation*

5.94 PHRASAL AND CLAUSAL COORDINATION

5.94.1 *Noun Phrase Coordination*5.94.2 *Clausal Coordination*

5.95 PHRASE TYPES

5.95.1 *Noun Phrases*5.95.2 *Verb Phrases*5.95.3 *Adverbial Phrases*5.95.31 *General*5.95.32 *Time and Location*5.95.33 *Accompaniment*5.95.34 *Benefaction*5.95.35 *Manner*5.95.36 *Instrument*5.95.37 *Purpose and Reason*

5.96 POSSESSIVE CASE CONSTRUCTIONS

5.97 OTHER MISCELLANEOUS FEATURES

5.97.1 *Pronouns*5.97.2 *Number in Nouns*5.97.3 *Demonstratives*5.97.4 *Time and Tense*5.97.5 *Counting System*

5.91 INTRODUCTION

This is an unformalized general account of the principal syntactic features of the Koiarian languages together with some morphological and lexical features.¹

The account is based on the following sources: (a) one published paper on Managalasi verb structure (Parlier, 1964); (b) several unpublished papers by members of the Summer Institute of Linguistics. These deal with aspects of Aomie (Austing, 1967) and Managalasi morphology and syntax (James Parlier, 1965; Judith Parlier, 1965; J. and J. Parlier, 1963; Kerr, 1964); (c) survey material which I collected; and (d) my grammatical sketch of the Koiari language which is to be presented elsewhere.

For present purposes it is convenient to distinguish between sentences containing one clause (in the traditional sense) and those containing more than one clause. Sentences containing only one clause will hereafter be referred to as Simple Sentences. Sentences of more than one clause may be said to be derived from Simple Sentences by conjunction or subjunction (or embedding). Subjoined clauses will be treated incidentally as the description proceeds and conjunction will be treated separately in Section 5.94 following a description of Question and Negative variants of Simple Sentences. It is also convenient to use

1

Theoretically the comparison of the syntax of two or more languages ought to be the comparison of two or more sets of rules each generating an infinite number of possible sentences with assigned structural descriptions. One method of doing this for the Koiarian languages would be to attempt to write a set of syntactic rules which generate a highly restricted set of basic strings (each with an associated structural description called a Base Phrase Marker) commonly underlying each of the six languages of the family. Variation from one language to another would then be illustrated by different sets of transformational rules which produce terminal strings from the enumerated basic strings. The number and variety of such transformational rules necessary to produce terminal strings in each language would then be some index of the structural divergence of the languages relative to each other. That is, where one transformational rule could be used to generate similar terminal strings in more than one language these languages may be considered to be closely related at this point. This kind of approach is an extension of the principles inherent in the theory of Transformational Generative Grammar as expounded by Noam A. Chomsky in *Aspects of the Theory of Syntax* (Cambridge, Mass.: M.I.T. Press, 1965) and elsewhere, and specifically experimented with by Halle (1962), Klima (1964), Saporta (1965), Kazazis (1967) and others. However, at this point of time our linguistic knowledge of the Koiarian languages is so incomplete that such an approach is beyond our most pious hopes.

the functional notions of Subject (symbolized Subj), Object (symbolized Obj) etc. in lieu of such statements as "the Noun Phrase which functions as Subject...."

In the following description language names are abbreviated as follows: Koita (Ka), Koiari (K), Mountain Koiari (MtnK), Aomie (A), Barai (B), and Managalasi (M). Examples are given in phonemic orthography as presented in Appendix 5.8 above, and are written with spaces between "words" when necessary, and hyphens between morphemes within words. English glosses are given in single quotes and individual morphemes are glossed below the relevant language equivalents. For clarity also corresponding examples are given from each language to illustrate the particular syntactic features discussed.¹

The following symbols are also used:

- + obligatory occurrence of the category which this symbol precedes
- () optional occurrence of the category enclosed
- { } disjunctive listing of the morphemes enclosed

Other Symbols are explained as they are introduced throughout the text.

5.92 SIMPLE SENTENCES

Simple sentences in the Koiarian languages are of two general types: (a) verbal; (b) non-verbal. Verbal sentences will be treated first.

5.92.1 Verbal Sentences

Verbal sentences are those which contain a Verb Phrase (symbolized VP). These sentences are of the general form: + Subj (Obj) + VP. Although this may be taken to represent also the normal order of arrangement of these high order constituents, Subject and Object may be rearranged. This is possible since all of the languages (except Managalasi) have syntactic features indicating which element is the Subject. This is usually achieved either indirectly by enclitics on constituents preceding the Subject, as in Koiari (see below), or by markers on the Subject itself as in the other languages.² These two

¹ Sometimes this is not possible since during the survey sets of exactly equivalent sentences could not always be elicited.

² For Koita and Mountain Koiari these so-called Subject Markers may in fact turn out to be Specifiers similar to those of Koiari on more detailed investigation of the deep structure of these languages.

types of Subject indicators will be referred to hereafter as Specifiers (symbolized Spec) and Subject Identifiers (symbolized id) respectively. The Subject Identifiers of the various languages are:

	Ka	K	MtnK	A	B	M
Subject	{ -(ka)ki } ¹	-	{ -u }	{ -(ə)ro }	{ -ru(va) ³ }	-
Identifiers	{ -(va)ra(ki) }		{ -ike }	{ -ho ² }	{ -bora(va) }	

Examples:

- (Ka) da-kaki mari be erevanu 'I saw a woman'
 I id woman a see past
 ata-raki mari be erevanu 'The man saw a woman'
 man id woman a see past
- (K) da mavi erevanu 'I saw (a) woman'
 I woman see past
 mavi-re da erevanu 'I saw (a) woman'
 woman-Spec I see past
- (MtnK) da-u ofo hamanu 'I killed (the) pig'
 I id pig hit past
 da-ike ofo hamanu 'I killed (the) pig'
 I id pig hit past
 maraha more-u ofo hamanu 'A man killed (the) pig'
 man a id pig hit past
- (A) ama'e-ro vabore gave '(The) man saw (the) woman'
 man id woman see past
- (B) zabu-ru na bizanaha 'They speared me'
 they id me spear past
 e-bora taba aganama 'The man saw the snake'
 man id snake see past
- (M) -

¹ Koita uses -(ka)ki for pronominal Subjects and -(va)ra(ki) for nominal Subjects. Note also the similarity between the Specifier -ike in Koiari and the Subject Identifiers of Koita and Mountain Koiari. There also seems to be a close correspondence between the Specifiers -re, vare, -wahe in Koiari and Subject Identifiers -ro, -hu, -ru(va) and -bora(va).

²

Mr. J. Austing informs me that -ho, and -oho, -hu, -ohu may be 'definite' category markers, rather than Subject markers.

5.92.2 Non-Verbal Sentences

These are of the general form: + Subj + Complement + Copula.

Examples:

(Ka)	e-ra ata-ra (ki)	'That's (a) man'
	that id man Cop	
	de-ka mave-raki	'I am good'
	I id good Cop	
(K)	eke-re ata-ro	'That's (a) man'
	that Spec man Cop	
	(de-ike) maiteka-vahe da unu	'I am good'
	I Spec good Spec I Cop	
(MtnK)	di e ike-ko	'That's my water'
	My water that Cop	
	di duave	'I am good'
	I good	
(A)	aruhe ae go-dze	'That's a man'
	that man a Cop	
	na mae-dzeve	'I am good'
	I good Cop	
(B)	gare-va e baru	'That's (a) man'
	that id man	
	na ma?-ina	'I am good'
	I good Cop	
(M)	kera parua ¹	'That's (a) man'
	that man	
	na ni ² ma-rano	'I am good'
	I Int good Cop	

Footnote 3 from previous page:

Barai has different Subject Identifiers for human versus non-human, singular and plural variants. Aomie too has special distributional distinctions between -ro and -hy.

¹Note in this example that the *ra* in *kera* is probably related to the *-ra* and *-re* forms on Koita and Koiari Subjects respectively.

²/*ni/* is some kind of intensifier ('just, yet'), which also occurs in verbal sentences. These intensifiers are common (in different forms) to the Koiarian languages, e.g., *ni* in Barai, *ma* in Koiari, *mu* in Koita, and *ba* in Mountain Koiari.

Non-verbal sentences (as their name suggests) do not contain Verb Phrases (see section 5.95.2 below). Instead some sort of Copula relates the Subjects to Complements although in many of the languages it may be deleted optionally. In the Koiaric languages the copula is unchanging for tense though it may be inflected for number and person, and is based on the vowel /u/. Thus in Koiari *unu* is used for 1st and 3rd person singular, and *ua* is used for all other persons. Koita is a little more complex in that *-unu* is now only used in certain constructions, for example, questions: *ata be-na ore unu* 'Where is a man?' These forms
 man a Q where be
 seem to be closely related to the verb 'to stay, remain' whose stem is also *u-* in Koiari. On the other hand copulae in the Baraic languages do not seem to be as closely related to one another as those in the Koiaric languages.

5.92.3 Sentence Constituents

Subjects, Objects and Complements are manifested by some Noun Phrase. Complements may also be manifested by some Adjective Phrase, or by any one of the following Adverbial Phrases of Location, Accompaniment, or Benefaction. These phrases, together with those of Time, Manner, Instrument, Purpose, and Reason/Cause also occur as optional constituents of verbal sentences. There is generally no fixed order amongst Adverb Phrases, although adverbs of manner may optionally occur inside or outside of the Verb Phrase.¹ The structure of these phrases is discussed in Section 5.95.3 below.

5.93 QUESTIONS AND NEGATIVE VARIANTS OF SIMPLE SENTENCES

5.93.1 Questions:

Koiarian languages have generally simple rules for the formation of Yes-No and Information Question variants of Simple Sentences.

Yes-No Questions are achieved by either phonological (e.g., change in the intonation pattern or in the phonemic structure of some grammatical form already present) or by morphological (e.g., by the addition of some new formative) means. In either case the phonemic form of the formative is either *ne* or *na*. In Managalasi *u* may be added in sentence initial position instead. In none of the languages is the form of the verb phrase altered in any way.

¹ Except in Managalasi where adverbs of manner occur only outside of the verb phrase.

Examples:

- (ka) a-na ma^ove-nu 'Are you good?'
You Q good-be
- (K) maiteka-vahene a ua 'Are you good?'
good - Spec Q you be
- (MtnK) a-na duave 'Are you good?'
You-Q good
- (A) na dza mahe bidzoho?i wa'andeze 'Are you going in order
Q you pig spear-to going to kill the pig?'
- (B) a-ne ma?ina 'Are you good?'
You-Q good
- (M) u kera parue 'Is that (a) man?'
Q that man
a-ne marenao 'Are you good?'
You-Q good

Information Questions (that is, those corresponding to the wh-questions in English) are formed simply by the substitution of Question pro-forms for Noun Phrases, Adverbs of Location, Time, Manner, Reason etc. These are all very similar in each of the member languages:

ENGLISH	Ka	K	MtnK	A	B	M
'who'	unuhu	oine	ore	rahu	ira(ra)	ira(ra)
'whose'	unuhu	oine	ore	(?)	ira?onu	(?)
'what'	otado(vane)	vadibe	(ono)fade	rabe	ida	ira(ka)
'where' (at)	ore-he	ore-he	ore-fe	dino?e	ide(de)	itfine
'how many'	esebu	vahuti	faerute	{dimine } {dimine?e}	ida?i(me)	itfarona
'which'	ore	vore	orete	di	ira(ha)	itfihi
'when'	vaisu	vahutehe	farufera	divare	{vedaha } {vede }	(?)

'Why' is not listed because it has no one form in the Koiarian languages. There are a variety of ways of expressing this concept depending on what information one wishes to elicit. Thus 'why' may be equivalent to 'what's the matter that (you...),' or 'because of what (are you...),' or 'what are (you) going to do that (you...),' or 'for what reason are (you...).'

5.93.2 Negation

This is generally achieved by some free word or verb prefix¹ containing a bilabial stop or a suffix e.g.,

	Ka	K	MtnK	A	B	M
Negative	-veite-	bebe	-hori-	bogo	ba-	pa-

Negation in the Koiaric languages is more complex than in the Baraic languages. Koiaric languages have different selections of negativity for different syntactic structures. Thus in Koiari *bebe* is only used for sentences containing a Verb Phrase which has not optionally been expanded by using *unu* the verb 'to be.' Where this expansion has occurred either *vehite* (cf. the Koita form just given), or the discontinuous constituent *bene...gene* must be chosen. *bene* also occurs in Mountain Koiari but with only the future tense. Koita has *beta* in this case and Managalasi has *pana*. Consider:

(Ka)	e-ra beta ata-ra	'That's not (a) man'
	that-id not men-Cop	
	ata-ra beta ororo-vara	'(The) man will not come'
	man-id not come-future	
(K)	eke-re ata bene	'That's not (a) man'
	that-Spec man not	
	da bebe ota-rihe-ro	'I'll not go'
	I not go-future-Tas	
	ota-rihe-vehite-re da unu	'I'll not go'
	go-future-not-Spec I be	
(MtnK)	abu roho-rife-bene	'They'll not come'
	they come-future-not	

¹Negatives are possibly the only prefixes that occur in the Koiarian languages.

- (A) na bogo kodzari e dzeve 'I am not (a) Koiari man'
 I not Koiari man be
- (B) ze-va e baru ba'una 'That's not (a) man'
 that-id man not (be?)
- (M) hu parua pana 'He's not (a) man'
 he man not
 parue pa-rou '(A) man is not coming'
 man not-come

5.94 PHRASAL AND CLAUSAL COORDINATION

5.94.1 Noun Phrase Coordination

Noun Phrases are conjoined with the same morpheme suffix on each phrase except in Koita where *mati* is used between the last two constituents only.¹ These morphemes are:

ENGLISH	Ka	K	MtnK	A	B	M
'and'	-	-ta...-ta	-ta...-ta	-?o...-?o	-?o...-?o	{-o...-o } {-ho...-ho }

5.94.2 Clausal Coordination

Clauses may be joined by overt conjunctions, such as:

ENGLISH	Ka	K	MtnK	A	B	M
'or'	se	o(ibe)	mena	o	{ ba } { o } { be }	ho
'but'	(?)	bane(eke)	to ²	rɔhu	gero(?)	(?)

or by juxtaposition, with appropriate intonational and pausal features. Juxtaposition is commonly used to express the comparative construction of English. For example, 'he is taller than you are' would be expressed as 'You are small; he is tall.' The most common method of conjoining

¹ *mati* seems to be related to the Mountain Koiari suffix *-ti* 'also.'

² This is probably a Motu loan.

clauses is however by the so-called "medial verb construction."¹ These are special forms of the verb which occur when no overt conjunction is used. Conjunction by "medial verb" expresses a wide range of time and other relationships between the conjuncts. The morphology of these verbs is generally complex in New Guinea languages. Koiarian medial verbs by comparison are relatively simple, though the Baraic ones are more complex than the Koiaric ones. In all of the languages, however, similar suffixes are used to indicate when the same or different persons are performing or have performed the actions. When the same persons (symbolized ss) are involved the suffix is either -me or -mo, and when different persons (symbolized ds) are involved the suffix is -ge or ga. These suffixes only appear on those verbs which do not occur in sentence final position.

Examples:

- (K) ahu orovonu-ge da otinu 'When he came I went'
 he came - ds I went
 da mi-(me da) otinu 'I got it and went'
 I got-ss I went

- (B) ahu iro-ho-ga na wa'ize 'When he comes I'll go'
 he comes(?)ds I go-future
 wari-no iro-me ahi'zano 'My son came and sat down'
 son-my come-ss sat

Medial verbs are much more complex than this and require much more familiarity with the languages than I was able to obtain on the survey to determine the correspondences between the many possible forms. From text material collected, however, it does appear that all of the languages use a similar technique for joining clauses in connected discourse. Thus all informants often repeat the final verb of a preceding sentence in medial form to introduce a following sentence. This expresses the idea of say 'having done such and such...' Another technique is to use a Demonstrative plus Reason Postposition as introducer, or sentence connector. In this construction the demonstrative "stands for" the previous statement, e.g., in Koiari this is e-ru-ge... 'because of that....'² Finally a Verb Phrase in medial form may be

¹The term "medial verb" was first introduced into New Guinea linguistics by Pilhofer (1933). See Wurm (1964:81ff.) for a general description of the characteristic structure of these verbs in New Guinea Highlands languages.

²In Aomie, for example, the equivalent would be a-huni 'that-because.'

repeated several times to express the idea of 'until', e.g.,

(B) na ahi-no ahi-no ahi-no na'iʒeʒo.
 I sit sit sit sleep past

'I sat and sat and sat until I went to sleep.'

5.95 PHRASE TYPES

5.95.1 Noun Phrases

The structure of Noun Phrases is generally simple: (Rel Cl) N (Adj) (Num) (Dem), where Rel Cl = Relative Clause, N = Noun, Adj = Adjective, Num = Numeral, and Dem = Demonstrative, though there is some variation across the languages of the Family with regard to the location of Demonstratives relative to head Nouns. In Koiari Demonstratives occur after the noun head, while in Aomie they occur before the head Noun.

Adjectives and numerals follow the Noun head in all of the languages, and usually occur in that order relative to each other. Order of Adjectives is not important and Koiarian speakers rarely use more than one adjective per phrase. Adjectives may be subclassified by various intensifiers (e.g., 'very') which can occur with them. Consider, for example, 'very good' (K) maiteka-mava, (B) ma'ina tau; and 'very big' (K) keare kaye, (B) bado ma'ina. Adjectives do not agree with nouns.

Relative clauses precede the Noun head in the Koiaric languages but may follow in the Baraic languages. Relative clauses are marked by the following forms in the different languages:

	Ka	K	MtnK	A	B	M
Relative Clause Markers	{-are (future)} {-ane (past)}	-are	-are	-doho	{-ʒoru} {-horu} {-monu}	{-(dz)ora} {-(n)ona}

Examples:

(Ka) vire-ra mu ata di ohe ram-ane au-ka mu vire-nu
 that-id Int man my pig hit-who (past) he-id Int there-be
 'That's (the) man who killed my pig'

¹It is interesting that tau or tabu only occurs with (as far as can be ascertained at the moment) the Adjective evuri 'high' in Koiari.

- (K) eke-re da ohe bi-ni-are ata-varo
that-Spec my pig spear-past-who man-be
'That's (the) man who speared my pig.'
- (MtnK) ata ko-u di ofo bi-are ike-ko
man this-id my pig spear-who this-Cop
'This is (the) man who speared my pig.'
- (A) oe-ro mahe dza'iha-doho na'anodedze
dog-id pig bit- which I shot
'I shot (the) dog which bit (the) pig.'
- (B) e baru ze-va mahu-no ibedi-ve-monu
man that-id pig-my shot -do-who is
'That's (the) man who shot my pig.'
- (M) iaho dzora ve-nona
he garden do-who is
'He's (a) worker.'

iaho nana'e edzora
he fights who is (?)
'He's (a) warrior'

5.95.2 Verb Phrase

5.95.21 The Verb Phrase is the most complex constituent morphologically of the Koiarian languages. It is typically a mirror image of the sentence and contains at least the following elements: + Vroot + SR + OR + TAS, that is, a Verb Root, plus some Subject and Object Referent (which agrees in number with the Subject and Object Noun Phrases respectively), and a Tense-Aspect-Person-Number morpheme or morphemes.

5.95.22 Verb Phrases in Koiarian languages may be unusually long since they may include elements such as Adverbs of Manner, and Benefaction, and in addition in the Baraic languages, Reciprocity, Reflection, and even, as in Aomie, Location markers.

5.95.23 Verb roots in the Koiarian languages have no particular syntactic or morphological features. There is, however, a certain small subset of verbs which should be mentioned as possibly distinctive of this family. This subset contains those verbs (e.g., 'to carry,' 'to put') which have number implicit in the verb root. Thus, for

example, the root *ma-* is used in Koiari for 'to get' when one object is involved, and the root *didi-* is used for 'to get' when more than one object is involved.

5.95.24 Object referents show close agreement across the languages except that Aomie and Managalasi have different forms for human versus non-human referents. The 3rd person object referents are:

Object Marker	Ka	K	MtnK	A	B	M
Singular	-va-	-va-	-ha	-Ø-	-a-	-a-
Plural	-geve-	-(gei)yahei	-ge(fe)-	-a-	-e-	-i-

Example:

(K) da ere-va-nu 'I saw it'
 I see-OR-past
 (sg)

 da ere-geiyahei-nu 'I saw them.'
 I see-OR - past
 (plur)

5.95.25 TAS morphemes are often fused together and pose problems for analysis.¹ All of the languages seem to distinguish between Punctiliar and Continuative Aspects, Present or Immediate Future, Past, and Future Tenses. However, verb suffixes for the different tenses do not show much agreement from language to language. Take, for example, the past tense, punctiliar aspect forms for 1st person in each:

Past Tense	Ka	K	MtnK	A	B	M
1st sg	-nu	-nu	-nu	-ode	-naho	-?ote
1st plur	-nu	-nua	-ru	-are	-naho	-?are

The Baraic languages are further complicated in that they have different TAS forms for different classes of verbs. In the verbal sentences there is agreement in number between the Subject and Subject Referent in the Verb Phrase and agreement between the number and person of the Subject and the TAS suffixes on the verb. Sometimes one suffix serves for all persons and numbers, sometimes several. But the languages seldom agree either in the number of suffixes or in their form for any particular tense.

¹See Parlier (1964) on Managalasi verb morphology.

Thus, for example, in the punctiliar aspect of the past tense, we get the following:

- (Ka): one suffix for all persons and numbers;
 (K): two suffixes--one for first and third person singular, and one for the remainder (2nd person singular, 1st, 2nd, 3rd person plural);
 (MtnK): two suffixes--one for all persons, singular, and one for all persons plural;
 (B): two suffixes--one for 2nd and 3rd person singular, and one for the remainder (1st person singular, 1st, 2nd, 3rd person plural);
 (A): five suffixes--one of which serves for 1st and 3rd person plural;
 (M): three suffixes--one for first person singular, one for 2nd and 3rd person singular, and one for 1st, 2nd and 3rd person plural.

5.95.26 Finally Imperative forms of the Verb Phrase show some similarity in their positive forms though they vary widely in their negative forms. For some of the languages (not consistently within Sub-Families) the negative imperative form of the verb is achieved by a change in form of the Imperative suffix on the verb; in the others a special free form negative is used as well. The following chart gives the Imperative forms for 2nd person, singular and plural, positive and negative:

Imperative	Ka	K	MtnK	A	B	M
Sg	-Ø	-Ø	{-Ø}	{-no}	-Ø	(?)
Pos			{-nera}	{-e}		
Plur	-yahe	-yahe	-fe	{-he}		
				{-3e}		
Sg	+Prn + negu + VP-me	-hama	-hare-nera ¹	+nadi + VP{-no}	ba-VP {-ho}	(?)
Pos				{-e}	{-3o(?)}	
Plur	Prn+negu +VP-me	-hava	-hare-fafe (?)	+nadi+VP -he	ba-VP{-ho}	
					{-3o}	

All the languages distinguish between immediate and non-immediate imperative forms.

¹It is not certain whether the hare element is merely the arresting imperative form 'stop VP-ing.'

5.95.3 *Adverbial Phrases*5.95.31 *General*

Adverbial Phrases typically consist of some Noun Phrase or embedded clause plus enclitic (or for Purpose and Reason clauses, suffix). Different enclitics are characteristic of different phrase types as described below.

5.95.32 *Time and Location*

Time and location phrases or clauses are marked by similar enclitics, e.g.,

ENGLISH	Ka	K	MtnK	A	B	M
'at'	-he	-he	{ -fe } { -de } { -e }	{ -(i)re } { -?e } { -(æ)ro }	{ -he } { -?e } { -he }	-?i

Direction to a place¹ and to a person are generally distinguished also by different enclitics, e.g.,

ENGLISH	Ka	K	MtnK	A	B	M
'to a place'	{ -va } { -he }	{ -va } { -he }	{ -fe } { -de } { -e }	-ro	-?e	-?i
'to a person'	-vasina	-hina	-e	(?)	-niri	(?)
'from a place'	{ -va } { -he }	{ -va } { -he }	-e	(?)	{ -tite } { -ite } { -he } { -de }	-rene
'from a person'	-vasina	-hina	-e	(?)	-?one	(?)

5.95.33 *Accompaniment*

Accompaniment enclitics differ according to whether one or more persons is/are accompanied. In Koiari these Accompaniment enclitics are *vore* and *ruhuta*, and in Managalasi *hu'umo* and *pu'umo* for singular and plural respectively.

¹Direction to geographical locations is usually unmarked in these languages.

5.95.34 *Benefaction*

-ni (or some morpheme containing ni)¹ is a common benefactive enclitic, though in Managalasi and Aomie benefaction is indicated by a verb suffix.²

5.95.35 *Manner*

There do not appear to be any particular corresponding markers of Manner Phrases amongst the Koiarian languages. It has already been pointed out above (Section 5.92.3) that adverbs of manner may optionally occur inside or outside of the verb phrase.

5.95.36 *Instrument*

Instrumental enclitics are:

ENGLISH	Ka	K	MtnK	A	B	M
'with'	-ma	-va	{-ta} {-mo}	{-re} {-ro}	-de	-i

5.95.37 *Purpose and Reason*

Purpose and Reason/Cause are usually expressed by embedded clauses. Purpose is marked by a suffix on a tenseless-aspectless Verb Phrase and Reason/Cause by a suffix which usually contains /u/. The respective markers for each language are:

	Ka	K	MtnK	A	B	M
Purpose	-ri	-ha	-(ri)ho ³	-i(ro)	-ʔi(me)	-i(ro)
Reason/ Cause	-u (ge)	-u (ge)	-aremo	{-ni ⁴ -ʔni -ohuni -ro}	{-hu(ge)} {-mu(ge)}	-uʔe

¹For example, the Barai form is -boni. In Mountain Koiari the benefactive marker is -ho.

²In Managalasi benefaction is marked in the verb by -h-, and in Aomie by -ʔamidʒ-. It is probable that the Managalasi form is related to the Mountain Koiari form -ho just mentioned.

³The -ri- in -riho appears to signal future intention.

⁴-ni also appears in Koiari in such sentences as:
 ahū boro bi-me bataka-va-ni maia-ma-nu
 he lizard spear-ss rotten-SR-for put-SR-past

'He speared a lizard and put it to get rotten,' where -ni signals the reason for doing something.

5.96 POSSESSIVE CASE CONSTRUCTIONS

Possessive case is marked by a bound suffix (symbolized Pos) either on the possessed Noun head as in Koita and Kolari, or on the possessor Noun or Pronoun, as in the other languages. In the Baraic languages the possessor Noun or Pronoun may occur before or after the possessed Noun. In the Kolaric languages the possessor occurs only before the possessed Noun.¹ The following examples illustrate possessive constructions in the various languages:

(Ka)	di mam-e	'my father'
	my father Pos	
	di mata-me	'my land'
	my land Pos	
(K)	da mam-e	'my father'
	my father Pos	
	da mata-me	'my land'
	my land Pos	
(MtnK)	di mama	'my father'
	my father	
	maraha-e to	'the man's dog'
	man Pos dog	
(A)	na-si apo	'my father'
	my Pos father	
	ae go-hesi simane	'a man's head'
	man a Pos head	
(B)	bara-no	'my wife'
	wife my	
	e behi-ahonu avo	'a man's head'
	man a Pos head	
(M)	nw-ni oma	'my father'
	my Pos father	

¹In Koita the possessive suffix occurs after the adjective, e.g.,
 e-ra di mama mave-ve-ra 'That's my good father!'
 that-id my father good-Pos-Cop

Nouns may be possessed in a string in which case the rules remain the same:

- (Ka) a mam-e mam-e 'your father's father'
Your father Pos father Pos
- (K) a mam-e mam-e 'your father's father'
Your father-Pos father-Pos
- (MtnK) a mama-e mama 'your father's father'
Your father-Pos father
- (A) na-si vavo-hesi vavo-hesi vavo-e 'my father's
I Pos father-Pos father-Pos father-Pos father's father.'
- (B) a baba-ho-ahonu baba-ho¹ 'your father's father'
you father-Pos-Pos father-Pos
- (M) nu-ni o midzi-huni oma 'my father's father'
I-Pos father-Pos-Pos father

As for possessive pronouns the Koiari languages differ slightly from the Baraic languages in the manner in which possessive case is indicated. In the Baraic languages a possessive suffix is attached to the possessor so that for pronoun possessors we get the following forms:

		Ka	K	MtnK	A	B	M
Sg	1	- ²	-	-	(na)si	no	(nu)ni,
	2	-	-	-	(ya)si	vo,ho	(o)ni,na
	3	-	-	-	(he)si	vaho	(hu)ni,na
Plur	1	-	-	-	(no)si	nuvo	(nu)ni,na
	2	-	-	-	(dzeme)si	zo	(zo)ni,na
	3	-	-	-	(dzabe)si	zabo	(pu)ni,na

¹Barai has morphophonemic variants for 'your' which in this example happen to correspond with the morpheme for 'his.'

²It is apparent that the Koita equivalents di, ai, au, ni, yai, yau which occur could be reconstructed as say *da-i, *a-i, *au-i, *no-i, *ya-i, *yau-i, when their relationship to the Aomie forms then becomes obvious.

5.97 OTHER MISCELLANEOUS FEATURES

5.97.1 Pronouns

The pronominal systems of the six languages are similar and clearly, closely related. Only six Pronouns occur. These correspond to the combinations of 1st, 2nd and 3rd person, singular and plural number. No distinctions are made between dual and plural number, or for inclusive and or exclusive referents. There are also no gender distinctions. The forms of the Subject Pronouns are:

		Ka	K	MtnK	A	B	M
Sg	1	da	da	di/da	na	na	na
	2	a	a	a	dza	a	a
	3	au	ahu	{au} {eu}	hu	ahu	hu
Plur	1	no	no	no	no	nuvo	ne
	2	ya	ya	ða(ia)	dzeme	za	dza
	3	yau	yabu	{abu} {uke}	dzabu	zabu	pu

In the Koiaric languages the same forms are used as Object Pronouns. In the Baraic languages corresponding object referents occur in the Verb Phrase (see section 5.95.24 above).

Reflexive pronouns differ also between the Baraic and Koiaric languages:

		Ka	K	MtnK	A	B	M
Sg	1	da-varu	da-vau	da-igai	na-isive	na-nosure	na-nasi
	2	a-varu	a-vau	a-igai	dza-isive	a-osure	a-asi
	3	au-varu	ahu-vau	au-igai	he-isive	ah-osure	hu-husi
Plur	1	no-varu	no-vau	nahi-unaha	no-isive	nuvo-nuvo- sure	ne-nəsi
	2	ya-varu	ya-vau	ðaia-unaha	dzeme-isive	za-zosure	dza-dzasl
	3	yau-varu	yabu-vau	e-bia-unaha ¹	dzabe-isive	zab-osure	pu-pusi

¹e-bia means 'those (people).' yau-unaha should be the expected form but informants preferred similar forms to the one given.

5.97.2 *Number of Nouns*

Number is not inherent in nouns (that is, the same form is used for singular or plural reference) except for kinship terms, when plurality is usually marked by -uhu or something similar, e.g.,

	Ka	K	MtnK	A	B	M
Plural Marker	-uhu	-uhu	-ufu	(?) ¹	-raha	{-hu~-hidza} {-pu~-pidza}

Examples:

- (Ka) di mam-uh-e 'my fathers'
I father-Plur-Pos
- (K) no mam-uh-e 'our fathers'
we father-Plur-Pos
- (MtnK) di mum-ufu 'my fathers'
my father-Plur
- (A) -
- (B) baba-raha-no 'our fathers'
father-Plur-our
- (M) nu-ni o-pidza 'my fathers'
I Pos father Plur

5.97.3 *Demonstratives*

Demonstratives in all the languages also seem to be closely related:

	Ka	K	MtnK	A	B	M
'this'	o	oko	ko	{iæ} {ave}	ge	{iaho} {ia}
'that'	o	eke	ke	{æe} {arue}	gare	(e) kera

All the languages make fine distinctions between Demonstratives according to distance and direction away from speaker.

¹In the survey materials collected the same forms were given for plural (e.g., na-si apo ni?oi 'my two fathers') as for singular nouns (e.g., na-si apo 'my father').

5.97.4 *Time and Tense*

In these languages semantic information on 'time' is distinct from the grammatical information on 'tense' since the same lexical items are used for past and future reference:

ENGLISH	Ka	K	MtnK	A	B	M
now/today	negu (butu)	negetu	doga	džaruvo	žaruma?e	ivesi
yesterday/ tomorrow	{nu vahivru}	nuhe	nivu	nari	neru	{niri nira}
day after tomorrow/ day before yesterday	{varihe vahivuvata}	urihe	(?)	džame	{nituve nitohe}	netuvo
afterwards	ihiye	gabidahe	gabie	idženo	{gabine iso?ina mo?oru o}	tuna?i

5.97.5 *Counting System*

All languages have a counting system based on two:

Examples:

	one	two	three
(Ka)	koburabe	abu	abigava
(K)	igau	abuti	abuit-ta igau-ta
(MtnK)	igai	abul	abui-ta igai-ta
(A)	{go gemu}	nio?i	æhi nio?i æhi gemu
(B)	ogonu	ino?i	ino?i-?o ogonu-?o
(M)	kuinu	no?o	no?o pei?o

and all have a similar form for an indefinite 'one':

ENGLISH	Ka	K	MtnK	A	B	M
'a, one'	be	be	{more be}	{gemu go}	behi	pina

6.0 BIBLIOGRAPHY

This bibliography contains a list of works referred to in the text. The following abbreviations for periodicals and institutions are used:

AA	American Anthropologist
AIAS	Australian Institute of Aboriginal Studies
AL	Anthropological Linguistics
AR	Annual Report of British New Guinea, or Annual Report for the Territory of Papua
CA	Current Anthropology
CSIRO	Commonwealth Scientific and Industrial Research Organisation
IJAL	International Journal of American Linguistics
JPS	Journal of the Polynesian Society
JRAI	Journal of the Royal Anthropological Institute
Lg.	Language
O	Oceania
OL	Oceanic Linguistics
SJA	South-Western Journal of Anthropology

AUSTING, J.

- 1967 "Aomie Grammar Essentials." Unpublished manuscript
(Ukarumpa: Summer Institute of Linguistics).

BARTON, F.R.

- 1904 "Report on Central Division," *AR* (1904): Appendix A,
pp. 16-8.
- 1910 "The Annual Trading Expedition to the Papuan Gulf".
In C.G. Seligmann's (1910) *The Melanesians of
British New Guinea* (Cambridge: University Press).

BEAVER, W.N.

- 1908 "Report on a trip made ... to the Main Range."
Unpublished Patrol Report, Rigo, 11.7.1908.
- 1915 "Magisterial Report, Kumusi Division," *AR* (1914-5),
pp. 48-55.

BELSHAW, C.S.

- 1957 *The Great Village* (London: Routledge and Kegan
Paul).

BLAYNEY, J.A.

- 1897 "Report of the Resident Magistrate for the Central
Division," *AR* (1896-7), pp. 51-6.
- 1899 "Report on the Resident Magistrate for the Central
Division," *AR* (1898-9), pp. 66-74.

BRAMELL, B.W.

- 1905 "Resident Magistrate's Report for Central Division,"
AR (1904-5), pp. 108-9.

BRAMELL, E.

- 1939 "Prehistoric Stone Objects from New Guinea,"
Australian Museum Magazine, 7: 40-2.

BRAMELL, J.B.C.

- 1964 "Notes on Native Land Custom - Port Moresby Region."
Unpublished. (Port Moresby: Land Titles Commission).

CAPELL, A.

- 1933 "The Structure of the Oceanic Languages," *O*, 3(No. 4): 418-34.
- 1943 *The Linguistic Position of South-Eastern Papua* (Sydney: Australasian Medical Publishing Co.).
- 1947 "Field Notes." Unpublished.
- 1954 *A Linguistic Survey of the South-Western Pacific* (Noumea: South Pacific Commission, Technical Paper No. 70).
- 1962a *A Linguistic Survey of the South-Western Pacific* New and revised Edition. (Noumea: South Pacific Commission, Technical Paper No. 136).
- 1962b "Oceanic Linguistics Today," *CA*, 3: 371-428.

CAWLEY, F.R.

- 1918 "Report of Patrol to Iovi, Seremina, Kokila, and Durom Districts." Unpublished Patrol Report, Rigo, 27.11.1918.

CHALMERS, J.

- 1885 Part I of *Work and Adventure in New Guinea* (London: The Religious Tract Society).
- 1887 *Pioneering in New Guinea* (London: Religious Tract Society).
- 1895 *Pioneer Life and Work in New Guinea 1877-1894* (London: Religious Tract Society).

CHINNERY, E.W.P. and BEAVER, W.N.

- 1915 "The Movements of the Tribes of the Mambare Division of Northern Papua," *AR* (1914-5), 158-161, with map.

CHRETIEN, C.D.

- 1956 "Word Distributions in South Eastern Papua," *Lg.*, 32: 88-108.

CSIRO

- 1964 *Lands of the Buna-Kokoda Area, Territory of Papua and New Guinea*. Land Research Series No. 10. (Melbourne: CSIRO).
- 1965 *Lands of the Port Moresby-Kairuku Area, Papua-New Guinea*. Land Research Series No. 14. (Melbourne: CSIRO).

- 1967 *Lands of the Safia-Pongani Area, Papua-New Guinea.*
Land Research Series No. 17. (Melbourne: CSIRO).
- DEMPWOLFF, O.
1938 *Vergleichende Lautlehre des Austronesischen
Wortschatzes* Vol. III: *Austronesisches
"Wörterverzeichnis"* (Berlin: Reimer).
- DICK, R.L.
1922 "Annual Report, North-Eastern Division, Cape Nelson
Districts," *AR*, (1921-2), 72-3.
- DUTTON, T.E.
1966 "Field Notes." Unpublished.
- DYEN, I.
1956 "Language Distribution and Migration Theory," *Lg.*,
32: 611-26.
1965 *A Lexicostatistical Classification of Austronesian
Languages* (Supplement to *IJAL*, 31 (No. 1)).
1966 "Comment on Grace (1966)," *OL*, 5 (No. 1): 32-49.
- ELKIN, A.P.
1953 *Social Anthropology in Melanesia: A Review of
Research* (Melbourne: Oxford University Press).
- ENGLISH, A.C.
1896 "Report: Enclosure in Appendix H," *AR*, (1895-6),
35-8.
1898a "Report of the Government Agent for the Rigo District,"
AR, (1897-8), 105-7.
1898b "Report by Government Agent for Rigo District on
Expedition to Eastern Slopes of Mount Potter," *AR*,
(1897-8), 74-6.
1899 "Report of the Government Agent for the Rigo District,"
AR, (1898-9), 74-6.
1901 "Report of the Government Agent, Rigo District, on the
Affairs of the Portion of the Central Division under
his Control," *AR*, (1900-1), 39-42.

- ERUA, I.
1930 "A Village Burnt by Fire," *The Papuan Villager*, 1
(No. 8): 7.
- ETHERIDGE, J.R.
1908 "Ancient Stone Implements from the Yodda Valley
Goldfield," *Records of the Australian Museum*, 7: 24-8.
- FIRTH, R.W.
1952 "Notes on the Social Structure of some South-Eastern
New Guinea Communities - Part III: Koita," *Man*,
52: 86-9.
- GRACE, G.W.
1956 "A Proto-Oceanic Finder List." Unpublished mimeographed
paper.
1962 "Problems in Oceanic Linguistics Subgrouping,"
Transactions of the New York Academy of Sciences,
Ser. II, Vol. 24, pp. 684-9.
1965 "On the Scientific Status of Genetic Classification
in Linguistics," *OL*, 4 (Nos. 1 and 2): 1-14.
1966 "Austronesian Lexicostatistical Classification: a
Review Article," *OL*, 5(No. 1): 13-31, 57-8.
- GRIFFIN, H.L.
1908 "Annual Report, Northern Division," *AR*, (1907-8),
76-9.
- GROVES, M.
1954 "Dancing in Poreporena," *JRAI*, 84" 75-90.
1960 "Motu Pottery," *JPS*, 69: 3-22.
- GROVES, M., PRICE, A.V.G., WALSH, R.J., and KOOPTZOFF, O.
1957-8 "Blood Groups of the Motu and Koita Peoples," *O*, 28:
222-38.
- HADDON, A.C.
1894 *The Decorative Art of British New Guinea: A Study in
Papuan Ethnography* (Dublin: Academy House).
1900a "Studies in the Anthropogeography of British New
Guinea," *Geographical Journal*, 16: 265-91, 414-41.

- 1900b "A Classification of the Stone Clubs of British New Guinea," *JRAI*, 30: 221-50.
- 1920 *Migration of Cultures in British New Guinea* (London: Royal Anthropological Institute of Great Britain and Ireland).
- HALLE, M.
1962 "Phonology in a Generative Grammar," *Word*, 18: 54-72.
- HEALY, A.M.
1962 "Native Administration and Local Government in Papua, 1880-1960." Unpublished Doctoral thesis, The Australian National University.
- HEALEY, A.
1964 *Telefol Phonology* (Linguistic Circle of Canberra Publications, Series B - Monograph No. 3, The Australian National University).
- HENRY, C.
1915 "Patrol to the Main Ranges and the Head of the Kemp Welch River." Unpublished Patrol Report, Rigo, 20.2.1915.
- HEWES, G.W., O'GRADY, G.N., COHEN, R. and HYMES, D.H.
1960 "More on Lexicostatistics," *CA*, 1: 338-45.
- HOOPER, G.S.
1916 "Report of Patrol to Lower Bariji, Upper Bariji, Mongoni, Moni and Musa Rivers." Unpublished Patrol Report, Cape Nelson (Tufi) 21.3.1916.
- HYMES, D.H.
1960 "Lexicostatistics So Far," *CA*, 1: 3-44.
1966 "Comments on Grace (1966)," *OL*, 5 (No. 1): 50-7.
- KAZAZIS, K.
1967 "On a Generative Grammar of the Balkan Languages," *Foundations of Language*, 3: 117-23.

- KERR, H.B.
1964 "The Fundamental Structure of Managalasi Verb Inflection." Unpublished manuscript (Ukarumpa: Summer Institute of Linguistics).
- KLIMA, E.S.
1964 "Relatedness Between Grammatical Systems," *Lg.*, 40: 1-20.
- LAMB, S.M.
1959 "Some Proposals for Linguistic Taxonomy," *AL*, 1(No. 2): 33-49.
- LAMPERT, R.J.
1968 "Some Archaeological Sites of the Motu and Koiari Areas." Unpublished paper presented at the Second Waigani Seminar, Port Moresby.
- LAWES, F.E.
1890 "Report of the Assistant Resident Magistrate for the Central Division," *AR*, (1889-90): Appendix R, pp. 102-3.
- LAWES, W.G.
1878 "Ethnological Notes on the Motu, Koitapu, and Koiari Tribes of New Guinea," *JRAI*, 8: 369-77.
1886 "The Condition of New Guinea," *AR*, (1885-6), 24-6.
- LE HUNTE, G.R.
1901 "Despatch Reporting Visit of Inspection to the Eastern Parts of the Possessions," *AR*, (1900-1), 12-25.
- LISTON-BLYTH, A.
1922 "Annual Report, Northern Division - Kokoda District," *AR*, (1922): 68-9.
- LOVING, R.E.
1966 "Awa Phonemes, Tonemes, and Tonally Differentiated Allomorphs." In Linguistic Circle of Canberra Publications, Series A - Occasional Papers No. 7, The Australian National University, pp. 23-32.

McCARTHY, D.

- 1959 *Australia in the War of 1939-1945. Series 1 - Army - Volume 5: "South-West Pacific Area - First Year: Kokoda to Wau"* (Canberra, Australian War Memorial).

McCARTHY, F.D.

- 1949 "Some Prehistoric and Recent Stone Implements from New Guinea," *Records of the Australian Museum*, 22: 155-63.
- 1966 "A Possible Trend in Radiocarbon Dates in Australia," *AIAS Newsletter*, 2(No. 3): 27.

MacDONNELL, F.

- 1914a "Report of Patrol Through Doriri and Upper Moni Districts, thence to the Head of the Bariji River, thence on to the Mongoni (Upper Moni or Musa), thence through the Ibuadu, Wowonga, and Papangi Tribes, and on to Buna Bay." Unpublished Patrol Report, Cape Nelson (Tufi), April 1914.
- 1914b "Resident Magistrate's Report - North-Eastern Division," *AR*, (1913-4), 54-65.
- 1915 "Report of a Patrol to Port Moresby, via Hydrographers Valley and Mt. Nesbitt and return to Cape Nelson, via Keveri Valley." Unpublished Patrol Report, Cape Nelson (Tufi), 8.12.1915.

MacGREGOR, W.M.

- 1891 "Despatch Reporting Visit of Inspection of the Koiari District," *AR*, (1890-1), 26-8.
- 1897 "Despatch Reporting Ascent of Mambare River and Journey Across the Island," *AR*, (1896-7), 4-17.
- 1898 "Despatch Reporting Visit of Inspection to District Lying Between Port Moresby and the Headwaters of the Goldie and Brown Rivers;" *AR*, (1897-8), 1-18.

MONCKTON, C.A.W.

- 1904 "North-Eastern Division," *AR*, 1903-4), 31-4.

MORRIS, W.H.

- 1965 "The Grass Koiari - Changes and Progress," *Australian Territories*, 5(No. 6): 39-48.

MURRAY, J.H.P.

- 1909a "Lieutenant-Governor's Visits of Inspection,"
AR, (1908-9), 4-12.
- 1909b "Notes on Reports by Officers - Central Division,"
AR, (1908-9), 14-7.
- 1912 *Papua or British New Guinea* (London: Fisher Unwin).
- 1915 "Increase or Decrease of Native Population," AR,
(1914-5), 15-6.

MUSCUTT, C.R.

- 1915 "Report of Patrol to Pintoni District." Unpublished
Patrol Report, Rigo, 2.12.1915.
- 1917 "Report of Patrol to Lagumi, Uniori, Iovi, Sirimu
Districts." Unpublished Patrol Report, Rigo,
17.5.1917.

OELRICHS, A.E.

- 1911 "Magisterial Report, Kumusi Division," AR, (1910-1),
693-700.
- 1912 "Resident Magistrate's Report, Kumusi Division," AR,
(1911-2), 814-9.

O'MALLEY, J.T. and STANLEY, E.R.

- 1916 "Map of the Central Division Papua." (Data
collected from old maps and sketch charts by
Magistrates and Patrol Officers. Many of the
positions are only approximate, the map being
compiled principally as a working basis for the use
of officers on Patrol Duties).

OLMSTED, D.L.

- 1961 "Lexicostatistics as 'Proof' of Genetic Relationship:
The Case of "Macro-Manguean"," AL 3(No. 6): 9-14.

ORAM, N.D.

- 1962-3 "Field Notes." Unpublished.
- 1968 "Culture Change, Economic Development and Migration
Among the Hula," O, 38(No. 4): 243-76.
- 1968 "Taurama - Oral Sources for a Study of Recent Motuan
Pre-History." To be published in *The Papuan and New
Guinea Society Journal*.

PARLIER, James

- 1964 "Managalasi Verb Inflection," *Te Reo*, 7: 28-35.
 1965 "Features of Managalasi Mode-Aspect." Unpublished manuscript (Ukarumpa: Summer Institute of Linguistics).

PARLIER, Judith

- 1965 "Managalasi Verb Suffixes." Unpublished manuscript (Ukarumpa: Summer Institute of Linguistics).

PARLIER, J. and J.

- 1963 "Managalasi Phonology." Unpublished manuscript (Ukarumpa: Summer Institute of Linguistics).

PENCE, A.

- 1966 "Kunimaipa Phonology: Hierarchical Levels," in *Papers in New Guinea Linguistics No. 5* (Canberra: Linguistic Circle of Canberra Publications, Series A - Occasional Papers, No. 7: 49-68).

PIKE, E.V.

- 1964 "The Phonology of New Guinea Highlands Languages," *AA*, 66(No. 4, Part 2): 121-33.

PIKE, K.L.

- 1947 *Phonemics: A Technique for Reducing Languages to Writing* (Ann Arbor: University of Michigan Press).

PILHOFER, G.

- 1933 *Grammatik der Kâte-Sprache in Neuguinea*. Zeitschrift für Eingeborenen-Sprachen, Beiheft 14.

PRICE, A.V.G. and MacINTOSH, N.W.G.

- 1957-8 "A Note on the Fingerprints and Ethnic Classification of the Natives of Hula Village Near Port Moresby, Papua," *O*, 28: 204-7.

PULGRAM, E.

- 1953 "Family Tree, Wave Theory, and Dialectology," *Orbis*, 2: 67-72.

- 1956 "On Prehistoric Linguistic Expansion," in *For Roman Jakobson* (Mouton: The Hague, 1956) ed. by Morris Halle, Horace G. Lunt, and Huch McLean, pp. 411-7.
- 1957 "Linguistic Expansion and Diversification," in *Studies Presented to Joshua Whatmough on His Sixtieth Birthday* (Mouton: The Hague, 1957) ed. by Ernst Pulgram, pp. 239-52.
- 1958 "Indo-European and "Indo-Europeans"," in *The Tongues of Italy: Prehistory and History* (Harvard Uni. Press: Cambridge, Mass., 1958), by Ernst Pulgram, pp. 139-56.
- 1959 "Proto-Indo-European Reality and Reconstruction," *Lg.*, 35: 421-7.
- 1961 "The Nature and Use of Proto-Languages," *Lingua*, 10(No. 1): 18-37.
- RAY, S.H.
- 1892 "The Languages of British New Guinea," in *Transactions of the Ninth International Congress of Orientalists*, 9: 744-70.
- 1895 *A comparative Vocabulary of the Dialects of British New Guinea*. (London: Society for Promoting Christian Knowledge).
- 1907 *Reports of the Cambridge Anthropological Expedition to Torres Straits*, Vol. III: Linguistics (Cambridge: University Press).
- 1927 "The Papuan Languages," *Festschrift Meinhof* (Hamburg), pp. 377-85.
- 1929 "The Languages of the Central Division of Papua," *JRAI*, 59: 65-96.
- REAY, M.
- 1953-4 "Social Control Amongst the Orokaiva," *O*, 24: 110-8.
- RIMOLDI, M.
- 1966 "Land Tenure and Land Use Among the Mount Lamington Orokaiva," *New Guinea Research Unit Bulletin, No. 11*, (Canberra: The Australian National University).
- RUXTON, B.P.
- 1966 "Correlation and Stratigraphy of Dacitic Ashfall Layers in Northeastern Papua," *Journal of the Geological Society of Australia*, 13: 41-67.

- SAPORTA, S.
1965 "Ordered Rules, Dialect Differences, and Historical Processes," *Lg.*, 41: 218-25.
- SCHMIDT, P.W.
1920 "Papuasprachen," in *Deutsches Kolonial-Lexikon* (Leipzig), ed. by H. Schnee, Vol. 3, p. 17.
- SEBEA, G.
1941 "Case of Geita-Sebea and Others v. The Territory of Papua," *Commonwealth Law Reports*, 67: 544-60.
- SELIGMANN, C.G.
1909 "A Classification of the Natives of British New Guinea," *JRAI*, 39: 246-75, 314-33.
1910 *The Melanesians of British New Guinea* (Cambridge: University Press).
1912-3 "Five Melanesian Vocabularies for British New Guinea," *Zeitschrift für Kolonialsprachen*, 3: 182-200.
- SOUTER, G.
1964 *New Guinea: The Last Unknown* (Sydney: Angus and Robertson).
- STANLEY, E.R.
1918 "Geological Expedition Across the Owen Stanley Range," *AR*, (1917-8), 75-84.
- STEINKRAUS, W. and PENCE, A.
1964 *Languages of the Goilala Sub-District* (Port Moresby: The Department of Information and Extension Services).
- STEWERTT, W.A.
1912 "Report of patrol into the Demuri, Serimono, and Headwaters of the Kemp Welch River." Unpublished Patrol Report, Rigo, 21.6.1912.
- STONE, O.C.
1876 "Description of the Country and Natives of Port Moresby and Neighbourhood, New Guinea," *Journal of the Royal Geographical Society*, 46: 34-62.

1880 *A Few Months in New Guinea* (London, Low, Marston, Searle and Rivington).

STRONG, W.M.

- 1909 "Annual Report, North-Eastern Division," *AR*, (1908-9), 70-3.
- 1911 "Notes on the Languages of the North-Eastern and Adjoining Divisions, by Dr. W.M. Strong, Resident Magistrate, North-Eastern Division," *AR*, (1910-1), 767-81.
- 1922 "Annual Report by Government Anthropologist," *AR*, (1921-2), 24-6, with photographs.
- 1923 "Rock Paintings from the Central District, Papua (British New Guinea)," *Man*, 23: 185-6.
- 1924 "More Rock Paintings from Papua," *Man*, 24: 97-9.

STUART-RUSSELL, H.H.

- 1899 "Report by Mr. H.H. Stuart-Russell, Government Surveyor, of Road Party's Expedition via the Brown River Valley to "The Gap" and Yodda Valley," *AR*, (1898-9), 41-5.

SWADESH, M.

- 1955 "Towards Greater Accuracy in Lexicostatistic Dating," *IJAL*, 21: 121-37.
- 1959a "The Mesh Principle in Comparative Linguistics," *AL*, 1(No. 2): 7-15.
- 1959b "Linguistics as an Instrument of Prehistory," *SJA*, 15: 20-35.
- 1967 "Linguistic Classification in the Southwest," in Hymes and Bittle (1967), pp. 281-309.

TEETER, K.V.

- 1963 "Lexicostatistics and Genetic Relationship," *Lg.*, 39: 638-48.

THE PAPUAN VILLAGER

(Port Moresby: Government Printer).

- TOBITT, A.
1966 "Aomie Phonemes." Unpublished manuscript (Ukarumpa: Summer Institute of Linguistics).
- TURNER, W.Y.
1878 "The Ethnology of the Motu," *JRAI*, 7: 472-3.
- VIVIAN, A.N.
1927a "Report of Patrol to various Rigo villages - inland and coast." Unpublished Patrol Report, Rigo, 13.10.1927.
1927b "Report on Patrol to Mt. Obree." Unpublished Patrol Report, Rigo, 22.12.1927.
1928a "Report of a Patrol to districts on Western Watershed of Kemp Welch River." Unpublished Patrol Report, Rigo, 30.6.1928.
1928b "Report of a Patrol to Mt. Brown Villages." Unpublished Patrol Report, Rigo, 11.9.1928.
- VANSINA, J.
1965 *Oral Tradition: A Study in Historical Methodology*, translated by H.D. Wright (London, Routledge & Kegan Paul).
- VILLAGE DIRECTORY
(Port Moresby: Department of Native Affairs, 1960).
- VOEGELIN, C.G. and F.M.
1965 "Languages of the World: Indo-Pacific Fascicle Five," *AL*, 7(No. 9): 1-114.
- WEIMER, H.
1968 "Yareba Verb Morphology." To appear in *Te Reo*.
- WEIMER, H. and N.
1968 "Yareba Phonemes." To appear in *Te Reo*.
- WHITE, P.J.
1965 "Archaeological Excavations in New Guinea: An Interim Report," *JPS*, 74: 40-56.

- 1967 "Taim Belong Bipo: Investigations Towards a Prehistory of the Papua-New Guinea Highlands." Unpublished Doctoral thesis, the Australian National University, Canberra.
- WHITE P.J. and C.
1964 "A New Frontier in Archaeology: Rock-Art in Papua-New Guinea," *The Illustrated London News*, Nov. 14: 775-7.
- WILSON, D.
1968 "The Binandere Language Family." To appear in *Papers in New Guinea Linguistics No. 9* (Canberra: *Pacific Linguistics* Publications. Series A - Occasional Papers, No. 18).
- WILLIAMS, F.E.
1923 "Papers (Field Notes)." Unpublished. (Sydney: Mitchell Library).
1930 *Orokaiva Society* (London: Oxford University Press).
1931 "Papuan Petrographs," *JRAI*, 61: 121-57.
1932 "Sex Affiliation and Its Implications," *JRAI*, 62: 51-81.
1932-3 "Trading Voyages from the Gulf of Papua," *O*, 3: 139-66.
1939 "The Reminiscences of Ahuia Ova," *JRAI*, 69: 11-44.
- WOODWARD, R.A.
1926 "Report on Patrol to Kokila, Iovi, Lagumi, and Kemp Welch Valley." Unpublished Patrol Report, Rigo, 31.8.1926.
- WURM, S.A.
1954 "Notes on the Structural Affinities on non-Melanesian (Papuan) Languages," Sonderabdruck aus "Die Wiener Schule der Volkerkunde, Festschrift zum 25jehrigen Bestand 1929-1954."
1960 "The Linguistic Situation in the Highlands of Papua and New Guinea," *Australian Territories*, 1(No. 2): 14-23.
1960-1 "The Changing Linguistic Picture of New Guinea," *O*, 31: 121-36.
1964 "Australian New Guinea Highlands Languages and the Distribution of their Typological Features," *AA*, 66(No. 4, Part 2), 77-97.

- 1967 "Linguistics and the Pre-History of the South-Western Pacific," *The Journal of Pacific History* 2: 25-38.
- 1968 "The Papuan Linguistic Situation." To appear in Vol. VIII: *Linguistics in Oceania* ed. by J. Donald Bowen *et al.* of *Current Trends in Linguistics* ed. by Thomas A. Sebeok.

WURM, S.A. and LAYCOCK, D.C.

- 1961-2 "The Question of Language and Dialect in New Guinea," *O*, ew: 128-43.

WYATT-GILL, W.

- 1885 Part 2 of *Work and Adventure in New Guinea* (London: Religious Tract Society).

PART II

A SYNTACTIC SKETCH OF KOIARI

7.0 Introduction

7.1 Aim

The aim of this sketch is to present a set of syntactic rules which generate many Koiari sentences,¹ and to use these rules as a basis for discussion of other more complex aspects of Koiari syntax.²

7.2 Theoretical Framework : Chomsky's 'Aspects' Model

The description is made in terms of my understanding of the theoretical framework of Transformational

1

See Part I (especially Section 3.23) for a description of Koiari and its relationship to other languages of the Koiarian Family. Hitherto Koiari has been unstudied.

2

This sketch is based largely on the speech of a middle-aged informant from the village of Kailakinumu at the eastern end of the Sogeri Plateau (see Map 6, p.22). This informant is a native speaker of what I have tentatively suggested in Section 3.23.21, is the North-Eastern Sub-Dialect of the Eastern Dialect of Koiari. Police Motu, a local lingua franca, was used in the initial stages of language learning and for explanation later when necessary. Research work was carried out in the language between March 1966 and March 1967, and again for two months from April 1968. A concordance of all morphemes in the text materials recorded in the language was utilized as a check on the possible distributions of structural elements. This text material consists of approximately 1,000 (75 character) lines of free text which includes the free conversation of three speakers, folk tales, and descriptions of objects, pictures, and personal experiences. Additional supplementary material was also elicited and recorded on magnetic tape and in field notebooks.

Generative Grammar (hereafter referred to as TG) as expounded by Noam A. Chomsky in Aspects of the Theory of Syntax and other publications.¹ As this theory is now widely known a certain familiarity with it and its development will be taken for granted in this presentation.² It should be pointed out, however, that Aspects does not represent a fixed and rigid descriptive framework. Rather the book is 'an exploratory study of various problems that have arisen in the course of work on transformational grammar' (p.vi). In it Chomsky sketches what seems to him to be the most promising directions for the theory of TG to take. Some of the questions which he raises, particularly with regard to the nature of the syntactic component and its relation to the semantic component, have been taken up by a number of scholars.³

1

See Bibliography in Section 12.0 below under 'Chomsky'. Hereafter Aspects of the Theory of Syntax will be referred to simply as Aspects.

2

For historical accounts of the development of TG see especially Dingwall (1963, 1966), P.H. Matthews (1961), McCawley (1968, esp. Section IV), Uhlenbeck (1963, 1964, 1967), and sections 2-4 of Aspects. For reviews of Aspects see especially Jacobson (1966), Lamb (1967), and P.H. Matthews (1967).

3

For some critical appraisals of the treatment of syntax and semantics in TG see Anderson (1968b), Bolinger (1961, 1965), Chafe (1968), Hall (1965), Hockett (1967, 1968), Lyons (1968b), Patton (1968), Staal (1965, 1967, 1968b), and Weinreich (1963, 1966).

7.3 Two Recent Proposed Revisions of Chomsky's 'Aspects' Model

The two most promising recent refinements in TG are the case proposals of Fillmore and the very deep and abstract trees of McCawley, Ross and Lakoff.¹

7.3.1 Fillmore's Proposals

Fillmore proposes that the distinctions which Chomsky makes between categories and relations (particularly with respect to noun and prepositional phrases, and to Subject and Object in the deep structure of English) are unnecessary and can be accounted for by 'various categorially introduced Noun-phrase types - suggestive...of the traditional notion of "cases"' (Fillmore, 1966b:7).² Thus for Fillmore the scheme Subject-Verb-Object is not taken to be basic. Rather he suggests that the deep structure of a sentence contains the major constituents of 'modality', 'auxiliary' and 'proposition'. 'Propositions' are tenseless sets of

1

As I have only seen abstracts of Ross's and Lakoff's major works I shall confine my remarks to McCawley's ideas as presented in McCawley (1968), with some supporting reference to Lakoff (1968).

2

Note that Fillmore (1966b) is a more detailed version of Fillmore (1966a). I have seen only a pre-final copy of Fillmore (1968?).

relationships involving verbal elements and one or more noun phrases each of which is marked for 'case'.

Roughly speaking all adverbial elements capable of becoming subject or objects are introduced in the expansion of Proposition; all others -- Time, Benefaction, Frequentative -- are Modality elements.

In English case markers are generally realized as propositions, although in other languages case markers may include postpositions, 'case endings', and word order, or combinations of these different types. Furthermore these markers would originate as features of the verb and are attached by transformation to the noun phrase.¹ Thus the deep structure of English no longer contains Chomsky's category Prep-Phrase (Aspects, p.107).

Fillmore suggests that there are at least six cases for English : Agentive(A), Instrumental(I), Factitive(F), Dative(D), Locative(L), and Ergative(Erg) or Objective(O).²

1

See Aspects, p.170ff for a discussion of how inflectional processes (of which 'case' is one) might be handled in Chomsky's version of TG.

2

It is to be expected that the study of different languages may extend the number of cases and/or increase our understanding of the surface structure of apparently different case-type languages. Hale (1967) and Cunningham (1968) have recently investigated the case (and in Hale's paper, voice also) systems of some
(footnote continued p.

This latter is not to be confused with the notion Direct Object nor with the name of the surface case synonymous with Accusative. The Subject of a sentence may represent any one of a number of different cases. In English, say, the Subject is merely formed by moving a noun phrase from its original position after the verb to a position before the verb. In certain environments, and always in Subject position, the preposition marking case is deleted. Hence in Fillmore's examples the instrumental preposition with, which is manifested overtly in (1), is deleted in (2) below:

- | | | | | |
|-----|---------------|--------|------------|-----------------|
| (1) | (the janitor) | opened | (the door) | (with this key) |
| | Agent | | Object | Instrument |
| (2) | (this key) | opened | (the door) | |
| | Instrument | | Object | |

With Fillmore's system also comes the notion of 'case frame'. Nouns and verbs are selected according to the case environments in which they can occur, and case features of nouns and verbs are specified by

(footnote 2 continued from p. Australian Aboriginal languages. Hale demonstrated that the seemingly different ergative case and accusative case-type Australian languages have essentially the same deep structure. On the other hand Cunningham found that at least three 'extra cases -- Partitive, Purposive, and Benefactive -- are syntactically relevant to the description of the Alawa language of the Northern Territory of Australia.

slightly different rules for each. These rules are not unlike Chomsky's strict subcategorization and selectional rules.

Although Fillmore's proposals have not yet been fully developed¹ he does claim certain advantages from incorporating his 'case' proposal into a TG grammar. Firstly, in Fillmore's system sentences do not need quite so much branching structure as might be otherwise assumed (1966a:27). This is particularly relevant to the relative clause reduction rule, which, in Fillmore's system, only needs one rule instead of the two formerly required. In this discussion Fillmore also observes that have in English is only the phonological realization of be + with. This has particular relevance to Koiari and is mentioned again later in the treatment of possessive constructions.

A second advantage claimed by Fillmore for his system is that 'certain historical changes in languages may turn out to be purely syntactic, and, in fact, may pertain exclusively to the status of particular lexical

1

See Fillmore (1966b:23) for a listing of particular problems to be accounted for yet. Here Fillmore points out that 'many of these problems...are no less serious in the 'Subject-Object' [= Chomskyan] grammar'.

items as exceptions to given transformation rules' (1966a: 27). A third advantage claimed is that notions like the 'understood agent' can be clarified within this scheme (1966b:21).

Finally, Fillmore (1965a, 1966b) also suggests that the semantic component of TG as at present formulated is incomplete since it is inadequate to interpret the 'relational' concepts embodied in comparative constructions; nor can this theory interpret sentences containing 'know, think' or the deictic categories associated with 'come, go, bring, take' which cannot by themselves be interpreted by the ordinary semantic rules but which 'entail' or 'suppose' other sentences which can. Fillmore proposes that we require an extra set of rules, called entailment or supposition rules,¹ to complete this component. So far these have only been sketched and incompletely worked out. His proposal for

1

Fillmore has never explicitly equated the two terms in any published papers that I have seen. However in Fillmore (1966b:81) he does remark that 'Another matter has to do with certain apparent differences in the applicability of these rules [= entailment rules] to "bring" and "come"'. In his later treatment of "come" in Fillmore (1966c) he called these rules supposition rules. It would appear from this then that the terms are equatable.

such rules have, however, been well received by others suggesting changes in the Aspects model.

7.3.2 McCawley's Proposals

McCawley (1968) proposes an alternative conception of the base component which does not consist of rewriting rules. Instead the base component is seen to consist of (a) 'a set (unordered) of rules of two types, constituent structure and lexical; (b) Both types of rules are node admissibility conditions, the former being context-free and the latter context-sensitive; (c) The form of the rule is $\langle A;w \rangle$ (w being a non-zero string of non-terminal symbols) for constituent structure rules and $\langle A;x \text{ in env. } y \rangle$ (where x is a complex of phonological and semantic information and y is expressed in terms of selectional and strict subcategorization features) for lexical rules; the rule asserts that a node in a tree is admissible if it bears the label to the left of the semicolon, directly dominates nodes labelled as indicated to the right of the semicolon, and (in the case of lexical rules) meets the environment condition' (p.258). Note that in this latter rule x will contain a fourth type of information not currently specified in Chomsky's complex symbols, viz. syntactic features 'which

mark a morpheme as having exceptional behaviour with respect to some transformation or other (a morpheme would be exceptional, e.g., by virtue of causing a transformation not to apply even though the conditions for it are otherwise met, by causing a normally inapplicable transformation to apply, or by being allowed to appear only in environments where the conditions for a certain transformation will be met)' (p.255 fn.5).

This proposal has certain claimed advantages over Chomsky's formulation of the base component in Aspects:

- (a) It obviates the difficulty of having ambiguous derivations, that is, those which require recourse to information not in the derivations themselves to determine what trees should be admitted;
- (b) It solves the problem (which to McCawley does not really exist even in Chomsky's base) of whether rewriting rules should be ordered;
- (c) It provides against redundant rules which add inherent, strict subcategorization, and selectional features to complex symbols. In fact, it does away with rules introducing complex symbols altogether without introducing any extra complexity elsewhere in the rules. Strict subcategorization

need only be in terms of sister nodes (p.260), and there need be only 'single' selection features (against Chomsky's 'single' and 'double' features (Aspects, pp.99-100)). McCawley would like to suggest that these two latter observations could be imposed as 'highly plausible universal constraints on grammar' (p.263).

These proposals of McCawley should also be seen in relation to his view that 'selectional restrictions are actually semantic rather than syntactic in nature, that the full range of properties which figure in semantic representations can figure in selectional restrictions and that only semantic properties figure in selectional restrictions, and that it is the semantic representation of an entire syntactic constituent such as a noun phrase rather than (as implied by the proposals of Aspects) merely properties of the lexical item which constitutes its "head" that determines whether a selectional restriction is met or violated' (p.265). Evidence for this comes from paraphrases and sets of sentences in which selectional restrictions are violated by material introduced by a modifier of a head noun, e.g.,

- (1) My neighbour is the father of two;
- (2) *My buxom neighbour is the father of two.

McCawley argues that 'selectional restrictions imposed by a lexical item can be predicted from its meaning and that the supposed counter-examples to this assertion, i.e., items which supposedly have the same meaning but different selectional restrictions, actually have different meanings' (p.266).

According to Lakoff (1968:26-9) if McCawley's views are correct (and Lakoff believes they are)¹ then the Aspects definition of deep structure² will have to be modified in some way. Lakoff's suggestion is that this could be achieved by handling selection and co-occurrence restrictions 'on the level of semantic representation' (p.27) rather than as present on the same (one) level defined by other conditions of the definition of deep structure which he gives (see fn.2 below). But this has associated problems which mitigate against an

1

Lakoff (1968:26).

2

Lakoff (1968:4) defines deep structure as at present conceived as 'that level of linguistic analysis [which is] defined by the following conditions: (i) Basic grammatical relations (e.g., subject-of, object-of) are represented at this level in terms of fundamental grammatical categories (e.g., S, NP, VP, N, V); (ii) the correct generalizations about selectional restrictions and co-occurrence can be stated at this level; (iii) lexical items are assigned to their appropriate categories at this level; (iv) the structures defined at this level are the input to the transformational rules'.

apparently simple solution. Lakoff's own work on instrumental adverbs shows that whatever happens the Aspects concept of deep structure has to be changed in one of two ways - either along the possible lines just outlined above or by introducing more abstraction into the deep structure making it ~~■~~ considerably more abstract than it was previously thought to be. We await further investigation of these theoretical claims just reviewed not excluding others which have not been specifically discussed here.

7.4 Choosing a Descriptive Framework

Just in case the descriptions above should give the impression that recent proposals constitute a refutation of all that has gone before in TG, it should be emphasised that there are in fact large areas of agreement between the various proponents (old and new) about the nature of linguistic theories (e.g., all would agree that an adequate theory must include transformations). Yet from a practical point of view, the present state of TG theory is such that it is disconcerting to those who would attempt the description of so-called 'exotic' languages. One is forced to make choices between various proposals (and with the

knowledge that refinements are constantly being put forward) as well as having to face the question of whether one can (or rather, should) in fact attempt a description of a language not one's own. Concerning the latter I have accepted Postal's (1966b:98) suggestion that the best we can hope to do is to 'learn the language of study as well as possible and attempt to formulate an explicit account of the rules which generate the full syntactic structures of its sentences, not just their superficial aspects'.¹ Concerning the former I have chosen Chomsky's Aspects model as being just as appropriate for present purposes as any of the newer proposals. Thus it will serve to provide for certain observations concerning the structure of Koiari which are valid (as far as I am aware) and which will find a representation in any future descriptively adequate grammar of Koiari whatever version of TG ultimately proves to be the 'correct' one.

1

Or else give up and do as Postal elsewhere (1966a:93) suggests, viz. 'train the informant as linguist'.

7.5 The Application of Chomsky's 'Aspects' Model to Koiari¹

This sketch is concerned with only the syntactic component of Koiari. As such it represents but part of a more complete grammar which would also include phonological and semantic components.

The syntactic component presented here consists of a base, which specifies deep structure, a transformational subcomponent which maps deep structure into surface form, a set of morpheme realization rules, and a small set of morphophonemic rules.

The base component consists of phrase-structure rules, categorial rules and a lexicon. The rules of the phrase-structure section (Section 8.1) are context-free branching rules of the type described in Aspect, pp.66-7. The categorial rules (Section 8.2) replace terminal category symbols (such as N, V, etc.,) by complex symbols which are collections of

1

Apart from two earlier unpublished papers by Pence (1965) and James (1967) this is the first time that this model has been applied to languages in New Guinea at some length. I wish to express my thanks to the authors of these papers (Mr Alan Pence, Director, Summer Institute of Linguistics, New Guinea Branch, and Miss Dorothy James of the same institution) for discussing with me aspects of their papers and TG generally.

syntactic features. The lexicon (also Section 8.2) consists of an unordered list of lexical entries, which are mapped on to appropriate Phrase-markers as terminal symbols, and of syntactic redundancy rules (Aspects, p.168). Each lexical entry is composed of a distinctive feature matrix (giving the phonological representation of the lexical item) (Aspects, p.164), a complex symbol, and a semantic representation.¹ Only a representative sample of Koirai lexical items is presented here (Section 8.2).

The transformational subcomponent (Section 9.0) consists of singularly transformational rules which operate on deep structures and map them into surface structures by adjusting terminal symbols and restructuring Phrase-markers. These rules are cyclical in their application (Aspects, p.143). In Chomsky's view all transformations are obligatory and make no contribution to the semantic interpretation of sentences. Thus rules giving stylistic reorderings of sentence elements (Aspects, p.127) and rules which optionally delete

1

See Section 8.2 for a description of the practical method of representing the phonological matrix and semantic features adopted for lexical entries in this sketch description.

lexical items unrecoverably (Aspects, p.122) are excluded from this grammar. These may be considered to be part of the theory of performance (Aspects, pp.4, 127).

The morpheme realization and morphophonemic rules (Sections 10.0 and 11.0 respectively) provide phonological realizations for certain grammatical formatives and morphophonemic symbols introduced in the Phrase-Structure.

Finally, partly because of my incomplete knowledge of Koiari and partly because of time restrictions it has not been possible to be precise, nor complete, in many parts of the description. Moreover, I have also assumed in my treatment of Noun Phrases (introduced in PS rule 8.1.7), Adverbial Phrases (introduced in PS rule 8.1.9), and Adjectival Phrases (introduced in PS rule 8.1.13) that not more than one of these constituents occurs in the deep structure of sentences, and that when more than one occurs in the surface structure of sentences these are derived from conjoined sentences. However, details of these conjunction rules necessary to effect this have not been worked out and are not presented in this grammar.

7.6 Presentation

For the purposes of this study Koiari examples are cited in a systematic phonetic or morphophonemic transcription. The sounds (or phonemes) of Koiari have been presented in Part I, Section 5.83.31. Vowel sounds are represented by: i e a o u, and consonant sounds by: t k b d g f s h v y m n r. Morphophonemes are capital equivalents of these. All Koiari material is underlined and examples are presented with spaces between 'words' and hyphens between morphemes within 'words'. These spaces and hyphens have no phonetic value but are merely intended to assist the reader. Each Koiari example is given an English translation enclosed within single quotes. These translations are to be considered approximate only, and nothing about the structure of Koiari is to be inferred from them.

Apart from conventional TG symbols the following abbreviations and symbols have been employed in the syntactic sketch:

Accom	Accompaniment Enclitic
AccomP	Accompaniment Phrase
Adj	Adjective
AdjP	Adjective Phrase
AuxSR	Auxiliary Subject Referent

Ben	Benefactive Enclitic
BenP	Benefactive Phrase
C	(Any) Consonant
COMP	Complement
contin	continuative aspect
Conj	Conjunction
D	Determiner
Demon	Demonstrative
DemP	Demonstrative Phrase
DesAdvP	Descriptive Adverb Phrase
ds	different subject
env.	environment
fut	future tense
Immed	Immediate Imperative Mode
Imper	Imperative Mode
Indic	Indicative Mode
IndicA	Indicative Mode (Type) A
IndicB	Indicative Mode (Type) B
InstrP	Instrument Phrase
Int	Intensifier
INTERROG	Information Question Sentence Marker
Interrog	Information Question Formative

Lim	Limitter
LOC	Locative Expression
Loc	Locative Enclitic
LocP	Locative Phrase
Lword	Locative Word
M	Manner Adverbial
M ₁	Manner Adverbial (Type) 1
M ₂	Manner Adverbial (Type) 2
ManAdv	Manner Adverb
Mod	Modifier
MRrule	Morpheme Realization rule
N	Noun
NOM	Nominal
Non-Immed	Non-Immediate Imperative Mode
NP	Noun Phrase
Num	Numeral
OR	Object Referent
or1	object referent (type) 1
past	past tense
perf	perfective marker
pl.	plural
PP	Predicate Phrase
Pred	Predicate

PredAdj	Predicative Adjective
PredAdjP	Predicative Adjective Phrase
pres	present tense
PreS	Pre-Sentence
ProSub	Pronominal Substitute
PSrule	Phrase-Structure rule
punct	punctiliar aspect
PUR	Purpose Adverbial
q	Other Yes-No Question Formative
q-Tag	Yes-No Question Tag
QUES	Yes-No Question Sentence Marker
Quote	Quotation
repet	repetitive aspect
S	Sentence
S*	initial sentence-symbol
sg.	singular
SimP	Similarity Phrase
Spec	Specifier
SR	Subject Referent
srl	subject referent (type) 1
ss	same subject
Stative	marker for Stative form of verb
Sub	Substitute

Subj	Subjunctive Mode
SubjA	Subjunctive Mode (Type) A
SubjB	Subjunctive Mode (Type) B
T	Time Expression
Time	Time Enclitic
TimeP	Time Phrase
Trule	Transformation rule
Tword	Time word
UNCERT	Uncertainty Sentence Marker
UNU	Grammatical Formative for 'to be'
V	Verb
V	(Any) Vowel [Context will always make clear whether V means Verb or Vowel]
Voc	Vocative Suffix
VP	Verb Phrase
Vroot	Verb Root
Want	Desiderative Marker
!	Exclamation or Command Intonation
?	Question Intonation
,	'Comma' Intonation
;	Juxtaposition Conjunction Intonation
"..."	encloses quoted material
...	incomplete listing

- morpheme boundary
- < > material enclosed by these braces is
phonologically unrealized [See Section 8.1.7.7.]
- % special verb root

8.0 Koiari Base Component

8.1 Phrase-Structure Rules

8.1.0 Given: #S*#

All Koiari sentences are derived from this given initial sentence-symbol S* (representing the grammatical category 'Sentence') with limiting boundary markers #, by the following series of base and transformational rules. In these rules # is regarded as a grammatical formative (Aspects, p.66) and is not rewritten further by the base rules. All sentences begin and end with #.

$$8.1.1 \quad S^* \text{ ---} \left\{ \begin{array}{l} \text{Interjection} \\ (\text{PreS}) (\#S\#\text{Conj})^n \#S\# \end{array} \right\} \quad (<8.1.0)$$

[where $n \geq 0$]

Interjection (8.2.10)

PreS = Pre-Sentence (8.1.2)

Conj = Conjunction (8.1.1.3; 8.2.22;
T9.2.8 - 12)

8.1.1.0 The first rule of the grammar introduces Interjections as an optional selection to other types of sentences. Interjections are single-word sentences with no internal grammatical structure. They cannot be conjoined either with themselves or with any other

syntactic material. Examples of interjections are:

o'e! 'Yes!',¹ bebe! 'No!', se! 'Hey!!!'

8.1.1.1 The first rule of the grammar also allows for the expansion of the initial sentence-symbol S* into a string of one or more sentences, optionally preceded by a Pre-Sentence element, such that all sentences preceding the last one are conjoined by some Conjunction.²

8.1.1.2 The structure expressed by PS rule 8.1.1 underlies such diverse sentences in Koiari as:

(8.1.1.2a) PreS[o'e], S[ata-re da unu].

YES, MAN-SPEC³ I BE

'Yes, I am (a) man.'

(8.1.1.2b) PreS[bebe], S[yabu rovonu] Conj[-ge]⁴

NO, THEY³ CAME AND(DS)

S[da yavanu].

I SLEPT

'No, they came and I slept'.

1

In this example ' represents glottal stop. See Part I Sections 5.82.2 and 5.83.31 (fn.1).

2

The conjunction schema used here is based on that suggested by Schane (1966).

3

Spec = Specifier. See description in Section 8.1.7.3.

4

In the deep structure the conjunction in this example is actually -E⟨ge⟩ (see Sections 8.1.1.3(C), 8.2.22, and T rules T9.2.8 and T9.2.9).

(8.1.1.2c) PreS[meikana], S[orehe-nabo].

PERHAPS, WHERE-SPEC+UNCERT

'Perhaps, where is it (I don't really know).'

(8.1.1.2d) S[ota-rihe-ne a ua] Conj[o]

GO-FUT-Q YOU BE OR

S[gurama-rihe-ne a ua]?

FIT FUT-Q YOU BE

'Will you go or will you stay?'

(8.1.1.2e) S[oti] Conj[\emptyset]¹ S[kapusi mi]

GO AND(SS) CUP GET

Conj[\emptyset]¹ S[orovo]!

AND(SS) COME!

'Go and bring (the) cup!'

8.1.1.3 Note that it is assumed (see Section 7.5 above) that PS rule 8.1.1 allows for the generation of all types of phrasal and sentence co-ordination in Koiari, although only sentence co-ordination is treated here.

1

In the deep structure the conjunctions in this example are actually -I<me> (see Sections 8.1.1.3(C), 8.2.22, and T rule T9.2.8). Because of the structure of this sentence only parts of these conjunctions are represented here. These are the i's in oti and mi which result from morphophonemic changes associated with -I<me>. ' \emptyset ' is to be interpreted as 'phonologically zero'.

This treatment, though incomplete,¹ accounts for at least (on present evidence) four superficially different sets of sentences:

(A) Firstly, there are those sentences which are overtly co-ordinated by some conjunction such as baneke 'but' and o 'or', as, for example, in:²

(8.1.1.3a) S[da orovonu] Conj[baneke] S[a bebe rovonua].

I CAME BUT YOU NOT CAME

'I came but you didn't come.'

(8.1.1.3b) S[ahu-ne orovonu] Conj[o] S[ahu-ne

HE-SPEC+q CAME OR HE-SPEC+q

bebe rovonua]?

NOT CAME

'Did he come or didn't he come?'

1

The formal analysis of this highly creative aspect of Koiari will require much more extensive and intensive investigation, and it is probable that a complete and satisfactory treatment of it must await further refinements in the theory of TG. This is suggested by recent criticisms of the treatment of co-ordination in Aspects stemming from attempts to apply the present roughly sketched ideas to particular languages. The best overall reviews of the problems involved in co-ordination are contained in Schane (1966), Yamada and Igarashi (1967), and Dik (1968).

2

o 'or' looks suspiciously like an English or Motu loan. Some speakers sometimes use o together with ibe for 'or' but informants were divided in opinion as to whether ibe was the 'true' Koiari form.

(8.1.1.3c) PreS[ikana], S[nao-yabe

PERHAPS EUROPEANS-SPEC

dona-nabe yabu rava] Conj[o]

UNTRUTH-SPEC+UNCERT THEY ARE OR

S[mavaka-nabe yabu roiarero].

TRUTH-SPEC+UNCERT THEY ARE SAYING

'Perhaps (= I wonder if) (the) Europeans are
telling lies or telling the truth.'

This type of conjoining is similar to English and a fuller treatment of it in Koiari would involve corresponding problems of analysis, e.g., specification of co-occurrence restrictions between the conjuncts, number of allowable conjuncts, negativity etc.¹ Note that there is no phonological or morphological change in the conjuncts conjoined by either 'or' or 'but'.

(E) Secondly, there are those sentences which are conjoined by juxtaposition involving linking with appropriate phonological features of intonation and pause (which have not yet been studied in detail). These features are symbolized by a semicolon(;). Co-ordination by juxtaposition is illustrated by the following sentences:

1

See for example, Becker (1967), Dik (1968), Fillmore (1966b:8(fn.6)) and Longacre (1967).

(8.1.1.3d) S[da orovonu] Conj[;] S[a bebe rovonua].

I CAME ; YOU NOT CAME

'I came; you didn't come.'

(8.1.1.3e) S[eke-re duaka-vaho] Conj[;] S[eke-re

THAT-SPEC SHORT-SPEC ; THAT-SPEC

keare-vaho].

BIG-SPEC.

'That's short; that's big.'

Co-ordination by juxtaposition can be treated either as (a) a variation of conjoining with overt conjunctions (since baneke 'but' can be inserted in either of the sentences 8.1.1.3d or e without change of meaning); or alternatively as (b) a separate type of co-ordination. For this reason two entries for ';' are given in the listing of conjunctions in 8.2.22. Again no phonological or morphological change occurs in the conjuncts conjoined by ';'. Note also that semantic information expressed by the comparative construction in English is expressed in Koiari by conjunction with ';' or 'but'. See sentence 8.1.1.3e above.

(C) Thirdly, there are those sentences in which no overt conjunction occurs, but in which the verb (symbolized \bar{V}) of one of the conjuncts is in a different form from that of the other. Consider, for example:

(8.1.1.3f) S[yabu V[orovonuge]] S[da V[mi]]
 THEY CAME AND(DS) I GOT(IT)

S[V[otinu]].

WENT

'They came and I took it.'

(8.1.1.3g) S[ahu V[otege]] S[V[otege]]
 HE WENT AND(DS) WENT AND(DS)

S[V[otege]] S[da V[erevanu]].

WENT AND(DS) I SAW(HIM)

'He went and went and went (until) I saw him.'

(8.1.1.3h) S[ahu V[orovi]] S[V[mi]]
 HE CAME AND(SS) GOT(IT) AND(SS)

S[V[otinu]].

WENT

'He came and took it.'

In sentences 8.1.1.3f and g there is a change of subject between the conjuncts. This is indicated by

ge on a particular form of the verb. In sentence 8.1.1.3h the subject is the same throughout. A similar sentence which expresses the same semantic information to 8.1.1.3h is:

S[ahu V[orovime]] S[ahu V[mime]]
 HE CAME AND(SS) HE GOT(IT) AND(SS)
 S[ahu V[otinu]].
 HE WENT
 'He came and took it.'

In this sentence me indicates that the same person is doing the acting, viz. ahu 'he'. Similar sentences to those of 8.1.1.3f-h are usually referred to in the literature on New Guinea languages as 'medial verb' constructions, where 'medial verbs' are distinguished from 'final verbs', say.¹ Sometimes the two are referred to as non-finite and finite, or as dependent and independent verbs respectively.² The two types are

1

See discussion in Part I Section 5.94.2

2

Compare Healey (1966:59 fn.6): 'The term FINITE is used in this paper to mean "the Predicate contains subject person-number-gender suffixes". NON-FINITE therefore means "the Predicate does not contain subject-person suffixes".'

generally distinguished on the external distribution of the sentence conjuncts and/or on internal compositional features of the verb phrases in the conjuncts. Thus 'medial verbs' usually occur in non-final conjuncts and do not generally have the same set of subject-person and/or tense-aspect markers which occur on final verbs. Most authors who have described sentence structure of New Guinea languages containing these verbs¹ have generally concentrated on a description of the composition of the 'medial verbs' and on the semantic relationship between the conjuncts in surface sentences. Thus the distinction between conjoined and subjoined sentences has not been made explicit, being usually hidden by classifying high order constituents (such as conjuncts or subjuncts) of sentences as dependent or independent. In this way dependency may cover a variety of ways of conjoining and embedding sentences.² It seems to me that the so-called 'medial verb' constructions can be treated easily and satisfyingly as special ways of conjoining sentences to express a variety of relations between the conjuncts

1

For example, Bee (1965), Franklin (1967), Healey (1966), Loeweke and May (1966), McCarthy (1965), McKaughan (1966), and Pawley (1966).

2

See, for example, Franklin (1967) and Healey (1966).

without the aid of overt co-ordinators. I think we can also partly justify this view by the fact that no overt 'and' conjunction occurs in these languages generally.

In this grammar then several conjunctions (-I⟨me⟩, -E⟨ge⟩, -Yata⟨ge⟩, -U⟨me⟩, -U⟨ge⟩ and -ℓ) are set up to account for the types of 'medial verb' forms in Koiari. These conjunctions are entered in the lexicon (8.2.22) in such a way that they are selected on the basis of the structure of the sentences they conjoin (see T rules T9.2.8 - 12). And because the semantic relationship expressed between the conjuncts of sentences containing 'medial verbs' is usually one of time -- either sequence or simultaneity of action (parelling, for example, English 'and, and then, when, after, while...') then some of these conjunctions (viz. -I⟨me⟩, -E⟨ge⟩, -ℓ) will have varying interpretations depending on that of the conjuncts. On the other hand the remainder apparently do have some inherent semantic feature, e.g., -Yata⟨ge⟩ might be said to 'mean': 'the action (expressed by the conjunct to which it is attached) is definitely completed and...', and -U⟨me⟩ or -U⟨ge⟩ might be said to 'mean': 'as a result of, or because of (the action expressed by the conjunct to which it is attached) then...'. Note that in Koiari similar semantic

notions to those expressed by conjoined sentences with some of these conjunctions can be expressed by embedding sentences under adverb phrase nodes of Time, Location, and Purpose in the deep structure.

(D) Fourthly, there are those sentences in which no overt conjunction occurs but in which the verbs of both conjuncts are similar in form. Consider for example:

(8.1.1.3i) S[ahu V[orovi-yebene]] S [da V[oti-ye]].
 HE COME-IF I GO-IF
 'If he comes I'll go.'

In this grammar -Yebene...-Ye is treated as a discontinuous conjunction 'if'. See T rule T9.2.10. Note, however, that no more than two sentences can be conjoined by this conjunction.

8.1.2 PreS ---> { Reply } (<8.1.1)
 Address
 Vocative

Reply (8.2.11)

Address (8.2.12)

Vocative (8.1.3)

8.1.2.0 Pre-Sentences include affirmative, negative, and dubitative replies to questions (Sections 8.1.4-6), terms of address, and vocative forms of Nouns.

8.1.2.1 Examples of Reply Pre-Sentences have been given in 8.1.1.2a (affirmative), 8.1.1.2b (negative), and 8.1.1.2c (dubitative) above. The following are examples of the other types of Pre-Sentences:

PreS [Address[baba]] 'father'; PreS [Vocative[tomue]] 'Tomu'; PreS [Vocative[gavadaduna]] 'Oh Gavada!'

8.1.2.2 Phonologically Pre-Sentences are separated from the rest of the sentence material in surface form by pausal and intonational features, details of which have not been worked out. Instead, in this grammar a comma (,) will be used to represent these features.

8.1.3 Vocative ---> N[^] { -e } (-duna) (8.1.2)

N = Noun (8.2.1)

8.1.3.0 This rule provides for the generation of the vocative form of nouns (N). Two vocative suffixes have been observed. These are -e and -duna. -e occurs with Personal Names and -duna with geographical location names (usually mountains).¹ Both are regarded as

1

These names are culturally determined for an individual in that he is born into a 'group' (see Part I, Section 3.23.1 above) which associates itself with certain mountains or prominent hills in Koiari territory. The
(footnote continued p.218)

grammatical formatives in this description and will not be expanded further.¹

8.1.3.1 Examples of vocatives have already been given in Section 8.1.2.1.

8.1.4 S ---> $\left. \begin{array}{c} \text{QUES} \\ \text{INTERROG} \\ \text{UNCERT} \end{array} \right\} \text{NOM}^{\wedge}(\text{NEG})^{\wedge}\text{PP} \quad (<8.1.1)$

QUES = Yes-No Question (8.1.5)

INTERROG = Information Question (8.1.6)

UNCERT = Uncertainty Sentence
Marker (MR10.13)

NOM = Nominal (8.1.7)

NEG = Negative (MR10.4-7)

PP = Predicate Phrase (8.1.9)

(footnote 1 continued from p.217)

vocative form of these mountains is used when prey is speared during hunting. Then the hunter might call out, 'erefa-duna, I speared you (= the prey)!' as the spear strikes the prey.

1

Theoretically no phonological material should be introduced into the PS rules but should rather be taken care of by rules similar to those termed Morpheme Realization rules (Section 10.0) in this grammar. However, for present purposes the introduction of this kind of phonological material is adopted for convenience and to assist the reader.

8.1.4.0 This rule expands S into certain optional sentence-type markers QUES(Yes-No Question), INTERROG (Information Question), UNCERT(Uncertainty Sentence), and NEG(Negative),¹ together with two obligatory high order constituents NOM(Nominal) and PP(Predicate Phrase).

Every sentence in Koiari is derived from at least NOM^PP.

8.1.4.1 In the deep structure of Koiari sentences NOM functions as Subject-of, and PP as Predicate-of

1

Katz and Postal (1964:118-20, 157, 160) postulate and discuss the universality of such sentence-type markers as Q(Yes-No Question), I (Imperative), wh-(Interrogative Question), Negative and Passive. They emphasize, however, that these markers 'are not universal in the sense that they necessarily occur in every language...[but] they are members of the set of elements specified in the theory of linguistic descriptions from which the vocabularies of particular linguistic descriptions are drawn. Hence Q is analagous to the distinctive feature of Voice, which is not necessarily distinctive in any given language' (p.119). Chomsky has incorporated these ideas into his Aspects model where he makes a distinction between substantive and formal universals (pp.28-30). Sentence-type markers may then be regarded as substantive universals.

Note that no passive construction occurs in Koiari, although a 'stative' construction does. This is discussed further under the expansion of V(Verb) in Section 8.1.22 below. Finally note also that Imperative is not treated as a sentence marker in this description of Koiari. It is instead introduced under Mode in Section 8.1.37. This avoids having to block the application to Imperative to sentences containing COMP^UNU which are introduced in the expansion of PP in Section 8.1.9 below. See, however, Section 8.1.38.8.

sentences.¹ Sentences which are derived from the expansion $S \rightarrow \text{NOM}^{\wedge}\text{PP}$ are affirmative declarative sentences. Otherwise the expansion of S in 8.1.4 allows for Yes-No Question, Information Question and Uncertainty variants of affirmative or negative declarative sentences. Negative and Uncertainty variants of sentences are generated by transformational and morpheme realization rules: Cf. T9.1.6; MR10.4-7; MR10.13.

8.1.4.2 The following examples illustrate the various combinations of S material. For QUES, INTERROG and UNCERT variants of sentences preterminal and terminal forms are given. This is to illustrate simply how relevant transformational and morpheme realization rules will effect changes in certain elements of preterminal strings.

1

See Aspects, pp.68-74 for Chomsky's views on grammatical function versus grammatical categories. This distinction (and the representation of grammatical function) is basic to Chomsky's concept of what the base component of a grammar should consist of. Different views are taken by Fillmore and McCawley (as already discussed in Section 7.3 above) and others, e.g., Anderson (1968a, 1968b) and Lyons (1966a, 1967).

(8.1.4.2a) S[NOM^PP]:

NOM[ata-re] PP[rovonu].

MAN-SPEC CAME

'(The) man came.'

(8.1.4.2b) S[NOM^NEG^PP]:

NOM[ata-re] NEG[bebe] PP[rovonu].

MAN-SPEC NOT CAME

'(The) man did not come.'

(8.1.4.2c) S[Q^NOM^PP]:

Preterminal Form: Q^NOM[ata-re] PP[rovonu]?

Q MAN-SPEC CAME

Terminal Form: ata-ne rovonu?

'Did (the) man come?'

(8.1.4.2d) S[INTERROG^NOM^PP]:

Preterminal Form: INTERROG^NOM[ata-re]

INTERROG MAN-SPEC

PP [rovonu]?

CAME

Terminal Form: oine-ne rovonu?

'Who came?'

(8.1.4.2e) S[UNCERT^NOM^PP]:

Preterminal Form: UNCERT^NOM[ata-re] PP[rovonu].

UNCERT MAN-SPEC CAME

Terminal Form: ata-nabe rovonu.

'(A) man (perhaps it was) came.'

8.1.5 QUES ---> $\left. \begin{array}{c} \text{q-Tag} \\ \text{q} \end{array} \right\}$ (<8.1.4)

q-Tag = Yes-no Question Tag (T9.1.1)

q = Other Yes-No Questions
Formative (M11.MR10.12)

8.1.5.0 This rule allows for the generation of two types of Yes-No Question sentences: (a) those containing the question-tag (q-Tag) itobeto; (b) all other types (q). Since q-Tag always occurs sentence finally T rule T9.1.1 is required to reposition this grammatical formative. q is also a grammatical formative which will later combine with specifiers (Spec) to be interpreted phonologically by morpheme realization rule MR10.12. Note that q and the morpheme realization rule in which it occurs are also relevant to the generation of Information Question sentences (see 8.1.6).

8.1.5.1 Examples of Question-Tag Yes-No Questions are given in Section 9.1.1a, b and c; those of Other Yes-No Questions in 8.1.1.3b and 8.1.4.2c.

8.1.6 INTERROG ---> Interrog^q (8.1.4)

Interrog = Information Question
Formative (MR10.8)

q = Other Yes-No Questions
Formative (MR10.12)

8.1.6.0 This rule allows for the generation of Information Questions. These questions are those corresponding to the wh- questions in English.¹ For present purposes Information Question sentences are generated by morpheme realization rules MR10.8 and MR10.12. The former interprets Interrog + some category symbol as a particular morpheme which is then understood to manifest the category specified in the particular morpheme realization rule; the latter then

1

See Lees (1963). As will be seen from the discussion Koiari Information Questions can be formed in a similar way to that suggested by Lees in his T rules pp.387-8, but without the complication for shifting required for English, since Koiari does not have underlying similarity between relative clauses, wh- questions and cleft-sentences.

makes further necessary phonological changes similar to those required for q questions.

8.1.6.1 An example of an Information Question sentence has already been given in 8.1.4.2d. Other examples are:

(8.1.6.1a) Interrog + NP : (MR10.8a)
[+ human]

Given: #Interrog NOM[NP^Sub] orovonu?#
[+ human] CAME

Result: oine-ne orovonu?

WHO-SPEC+q CAME

'Who came?'

(8.1.6.1b) Interrog + NP : (MR10.8b)
[- human]

Given: #Interrog^q eke-re COMP[NP] UNU?#
[- human]

THAT-SPEC BE

Result: eke-ne vadibe-vano?

THAT-SPEC+q WHAT- SPEC+q

'What is that?' or 'That is what?'

(8.1.6.1c) Interrog + DemP: (MR10.8c)

Given: #Interrog^q ata^DemP orovonu?#

MAN CAME

Result: ata ore-ne orovonu?

MAN WHICH-SPEC+q CAME

'Which man came?'

(8.1.6.1d) Interrog + Num : (MR10.8d)

Given: # Interrog^q ata^{Num} orovonu? #

MAN CAME

Result: ata vahuti-gene orovonu?

MAN HOW MANY-SPEC+q CAME

'How many men came?'

Note that in Koiari 'how many' can be singular or plural depending on the head noun. If ata were specified as plural ([-sg]) then the resulting sentence would have been: ata vahuti-yane orovonua? 'How many men came?'

(8.1.6.1a) Interrog + Tword: (MR10.8e)

Given: #Interrog^q Tword ahu otinu?#

Result: vahutehe-gene ahu otinu?

WHEN- SPEC+q HE WENT

'When did he go?'

(8.1.6.1f) Interrog + Lword: (MR10.8f)

Given: #Interrog^q oho-re COMP[Lword] UNU?#

Result: oho-ne orehe-geno?

PIG-SPEC+q WHERE-SPEC+q

'(The) pig is where?'

(8.1.6.1g) Interrog + M: (MR10.8g)

Given: #Interrog^q M otarihe-re a ua?#

Result: ehakitaha otarihe-ne a ua?

HOW GO+FUT-SPEC+q YOU BE

'How will you go?'

Note that Interrogative Manner adverbs occur outside of the verb. See discussion in Section 8.1.32-34 and T rule T9.1.13.

(8.1.6.1h) Interrog + DesAdvP: (MR10.8h)

Given: #Interrog^q ata-re DesAdvP

MAN-SPEC

ahu oho vamanu?#

HE PIG KILLED IT

Result: ata-ne ore-ateki-gene

MAN-SPEC+q WHICH=LIKE-SPEC+q

ahu oho vamanu?

HE PIG KILLED IT

'How (= in which manner) did (the) man kill (the) pig?'

8.1.6.2 Note that no examples have been given of the English interrogative 'why'. This is because there is no single way of asking the corresponding question in Koiari. Instead these may be asked in a variety of

8.1.7.0 This rule expands Nominals (NOM) into two obligatory constituents: Noun Phrase (NP) and Substitute (Sub).

8.1.7.1 Substitutes are established to account for the observed behaviour of certain elements in the surface structure of Koiari sentences. Take, for example, the following sentences:

(8.1.7.1a) NOM[NP[da-ike]] ata-re NOM[Sub[da]] unu.
 I-SPEC MAN-SPEC I BE
 'I am (a) man.'

(8.1.7.1b) NOM[NP[a-ike]] ata-re NOM[Sub[a]] ua.
 YOU-SPEC MAN-SPEC YOU BE
 'You are (a) man.'

(8.1.7.1c) NOM[NP[yabu-ke]] ata-yabe NOM[Sub[o]] ua.
 THEY-SPEC MAN-SPEC THESE BE
 'They are men, these are.'

(8.1.7.1d) NOM[NP[yabu-ke]] ata-yabe NOM[Sub[eke]] ua.
 THEY-SPEC MAN-SPEC THOSE BE
 'They are men, those are.'

- (8.1.7.1e) NOM[NP[sarayori-re]] ugu-ro.
 SARAYORI-SPEC BIRD-SPEC
 'Sarayori is (a) bird.'
- (8.1.7.1f) NOM[Sub[da]] ata erevanu.
 I MAN SAW
 'I saw (a) man.'
- (8.1.7.1g) (i) ata-re NOM[Sub[da]] erevanu.
 MAN-SPEC I SAW
 'I saw (a) man.'
- (ii) NOM[NP[ata-re]] da erevanu.
 MAN-SPEC I SAW
 '(The) man saw me.'
- (8.1.7.1h) NOM[NP[ata-re] Sub[ahu]] da erevanu.
 MAN-SPEC HE I SAW
 '(The) man he saw me.'
- (8.1.7.1i) NOM[Sub[da]] nege tu orovonu.
 I NOW CAME
 'I came now.'
- (8.1.7.1j) nege tu-ge NOM[Sub[da]] orovonu.
 NOW-SPEC I CAME
 'I came now.'

From these sentences it is apparent that (a) there can sometimes be two elements functioning as the 'Subject' of surface sentences (e.g., Nos 8.1.7.1a-d, h);¹ (b) extra phonological material is introduced (marked SPEC in the examples) when elements are differently arranged (e.g., Nos 8.1.7.1i-j); (c) there are ambiguous sentences (e.g., No. 8.1.7.1g).

8.1.7.2 With respect to observation (a) above it becomes apparent (as more illustrative material is considered) that the second 'Subject' is always expounded by a set of elements which agree in number and person with, and which semantically 'stand for' the first 'Subject'. This set contains the following members:

	1	<u>da</u>	'I'
Singular	2	<u>a</u>	'You'
	3	<u>ahu</u>	'He, she, it'
		<u>eke</u>	'That'
		<u>oko</u>	'This'
		<u>ekemore</u>	'That (down there)'

...

1

'Subject' is here used in a traditional way for purposes of discussion. 'Subject-of' has already been formally defined for Koiari deep structure in Section 8.1.4.1.

	1	<u>no</u>	'We'
Plural	2	<u>ya</u>	'You (pl.)'
	3	<u>yabu</u>	'They'
		<u>eke</u>	'Those'
		<u>oko</u>	'These'
		<u>ekemore</u>	'Those (down there)'

...
 These members are identical to the members of the subcategory Pronoun of Nouns,¹ and the category Demonstrative Phrase (Section 8.1.26), viz.

	<u>Pronoun</u>		<u>Demonstrative Phrase</u>
	1 <u>da</u>	'I'	- -
Singular	2 <u>a</u>	'You'	- -
	3 <u>ahu</u>	'He, she, it'	<u>eke</u> 'That'
			<u>oko</u> 'This'
			<u>ekemore</u> 'That (down there)'
			...

1

In Section 8.2.1 Pronouns are identified as a subcategory of Koiari nouns by contextual and inherent (syntactic) features. Pronouns are not set up as a separate category in the PS section of this grammar since in many ways Pronouns are similar to Nouns in their syntactic behaviour (e.g., they govern surface features of verbs). The only differences between Pronouns and other Nouns, syntactically, is in the kinds of environments in which they can occur (e.g., with some numerals, such as 'two, three, all', but not with Demonstratives) in their referents, in that they have more person distinctions, and in that they cannot be possessed.

In English grammar the category status of the so-called Pronouns is very much in doubt following Postal's (1966) demonstration that the English so-called Pronouns function as articles.

	<u>Pronoun</u>		<u>Demonstrative Phrase</u>	
	1	<u>no</u> 'We'	-	-
Plural	2	<u>ya</u> 'You (pl.)'	-	-
	3	<u>yabu</u> 'They'	<u>eke</u>	'Those'
			<u>oko</u>	'These'
			<u>ekemore</u>	'Those (down
			...	there)'

Thus one way of handling these facts would be to allow a repetition of an NP dominated by S to provide two Subjects in the deep structure. But this would entail certain complications, e.g., the rules of the grammar would need to state somewhere that the repeated NP must belong to the subcategory Pronoun or must be an NP containing a Demonstrative Phrase, and that, in the latter case, all of the NP material except the Demonstrative Phrase must be deleted. The establishment of the category Substitute not only handles these facts more economically but seems to be more satisfying semantically. Related to this is the fact that the Substitute is syntactically 'mobile', and that the introduction of new phonological material as noted in observation (b) above is closely related to the position of the Substitute.

8.1.7.3 Thus, with respect to observation (b) it is apparent that the position of the Substitute in the surface structure of sentences is variable within certain limits (e.g., Substitutes (a) cannot occur sentence final or sentence initial (apparent counter-examples are discussed below in 8.1.7.4-5); (b) cannot occur after the negative bebe;¹ (c) must obligatorily occur between the constituents dominated by the same node if one of those constituents is UNU). Yet, irrespective of where the Substitute occurs the constituent preceding it is always marked by extra phonological material. For the purposes of this description this material is referred to as Specifiers (Spec). Specifiers always attach to the last element of the constituent and generally depend on that element. Thus, for example, most adjectives will 'take' -vahE, and time words (8.2.13) and most enclitics will 'take' -gE (where the capital E is a morphophoneme which will be realized as e sentence medially and as o sentence finally or before ';'). Consider for example the following phrases:

1

Except in expansions such as 8.1.40. See also discussion in 8.1.40.2.

(8.1.7.3a)	<u>ata-re</u>	'(the) man'
(8.1.7.3b)	<u>ata-yabe</u>	'(the) men'
(8.1.7.3c)	<u>Ogotana ata-vare</u>	'(the) Ogotana man'
(8.1.7.3d)	<u>ata maiteka-vahe</u>	'(the) good man'
(8.1.7.3e)	<u>ata-hina-ge</u>	'towards (the) man'
(8.1.7.3f)	<u>ata-ni-ge</u>	'for (the) man'
(8.1.7.3g)	<u>motuka-vare</u>	'(the) vehicle'
(8.1.7.3h)	<u>da-ike</u>	'I'
(8.1.7.3i)	<u>nanuka-re</u>	'Nanuka'

In certain instances the form of the Specifier depends on the structure of the whole phrase. Consider examples 8.1.7.3a and c above. That is, where there is no element following the 'head' noun the form of the specifier depends on whether some element occurs before the head noun, if, and only if, the head noun by itself 'takes' -rE. Without going into any more details at this point we may simply note that there are singular and plural variants of Specifiers for declarative, question and uncertainty kinds of sentences. The complete set of forms is:

	<u>Singular</u>		
	Question		Uncertainty
Declarative			
<u>-rE</u>	<u>-nE</u>		<u>-nabE</u>
<u>-varE</u>	<u>-vanE</u>		<u>-nabE</u>
<u>-vahE</u>	<u>-vahenE</u>		<u>-nabE</u>
<u>-gE</u>	<u>-genE</u>		<u>-nabE</u>
<u>-IkeE</u>	<u>-IkenE</u>		<u>-nabE</u>
	<u>Plural</u>		
	Question		Uncertainty
Declarative			
<u>-yabE</u>	<u>-yanE</u>		<u>-nabE</u>
<u>-yabE</u>	<u>-yanE</u>		<u>-nabE</u>
<u>-yabE</u>	<u>-yanE</u>		<u>-nabE</u>
<u>-yabE</u>	<u>-yanE</u>		<u>-nabE</u>
<u>-IkeE</u>	<u>-IkenE</u>		<u>-nabE</u>

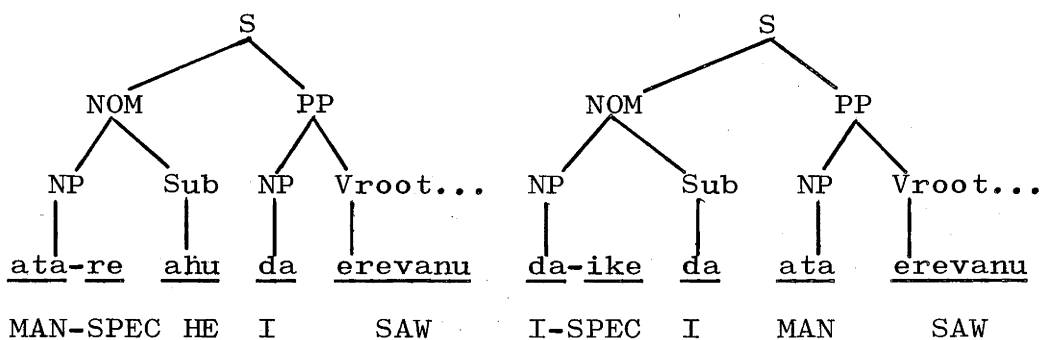
8.1.7.4 But there are other complications. These relate to observation (c) above, viz. that certain sentences are semantically ambiguous. In terms of the discussion above the occurrence of these sentences is explainable only in terms of certain allowable optional deletions: (a) those [NP, NOM] manifested by Pronouns; (b) the Substitutes ahu and yabu in certain sentences. Thus sentence 8.1.7.1g:

ata-re da erevanu

MAN-SPEC I SAW

'I saw (a) man' or '(A) man saw me.'

can be generated by the application of certain optional Transformational rules covering the optional deletions just mentioned on the following identical deep structures:



Topt: Delete ahu to give: Topt: Delete da-ike to give:

ata-re da erevanu

'(A) man saw me.'

da ata erevanu

'I saw (a) man'

Topt: Sub shift to give:

ata-re da erevanu

'I saw (a) man.'

8.1.7.5 Other syntactic features of Koiari seem to support the view that the kinds of deletion just discussed are stylistic features, and therefore properly belong to a theory of performance for Koiari speakers (see Section 7.5). These features are:

(a) that in questions involving pronominal subjects (e.g., 8.1.1.3b, 8.1.6.2a and b) ne occurs on the substitute where no [NP, NOM] occurs. This ne is identical to the phonological material added to the specifier -IkE which occurs with Pronouns when they occur in questions (see chart in Section 8.1.7.3). Thus it appears that when the [NP, NOM] is manifested by Pronouns in Questions then the [NP, NOM] can be deleted and the phonological material ne attaches to the Substitute instead.

(b) that many of the conjunctions in Koiari (see discussion in Section 8.1.1.3(C)) can be seen to consist of some morphophoneme plus specifier (included between <>) viz. -I<me>, -E<ge>, -U<me>, -U<ge>, -Yata<ge>. For most of these the specifier will always be realized since when two sentences are conjoined two subjects are required. This leads to a slight refinement in the above statements that specifiers are only realized before Substitutes. This should be qualified to:

specifiers are realized before substitutes, and, for conjunctions, when the following conjunct contains a nominal (NOM). Thus in conjoined sentences with the same subject the specifier will not be realized if the subject (either wholly or partly) is not repeated. This is the explanation of the form of sentence 8.1.1.3h above. Extra justification for calling these 'parts' of conjunctions specifiers comes from the observation that they change form in Questions just as specifiers on NP's of Nominals do. Thus:

(8.1.7.5c) ahu-ne ehe-vanu-gene a bebe manua?

HE-Q WHAT'S THE YOU NOT GET IT
MATTER -SPEC+q

'What's the matter with it that you didn't
take it?'

8.1.7.6 Thus returning to the introductory statement in 8.1.7.1 the expansion of NOM as NP^{Sub} and the establishment of Specifiers allows for a satisfying explanation of a series of seemingly unrelated features of Koiari syntax. And as has already been seen this explanation depends on the 'mobility' of Substitutes (which involves optional rules) and the optional deletion of certain sentence elements. These

optional rules are not considered to be part of the theory of competence for Koiari speakers and are therefore not included in this grammar. Consequently this grammar will not generate such ambiguous sentences as those above, nor will many of the sentences it generates have the surface form identical to that given in some examples.

8.1.7.7 There still remains one problem, however. That is, how are Specifiers to be treated in the grammar. From the discussion presented so far it would seem that Specifiers are really surface features of sentences (since they depend for their realization within S's on the position of the Substitute, and, for conjunctions, on the Nominal of the following conjunct). Consequently Specifiers will be handled by the phonological rules in any complete grammar. However, these rules will have to be relatively complex since, as has already been pointed out, there is no general rule relating the form of the Specifier to the category or grammatical formative to which it is attached. It will therefore be necessary to mark all grammatical formatives and lexical entries in some way so that the correct form of the Specifier can be predicted by the

phonological rules. For the purposes of this description the form of the Specifier is included in the phonological matrix (D, of (D, C) -- see lexical rule in 8.2.0.2 below) of the lexical entry, and in the case of grammatical formatives in their phonological representation in the base rules. This is achieved by using the special arrowhead brackets ⟨⟩, with the condition that these brackets are removed in the environment of a following Substitute (or NOM for conjunctions) by T rule T9.1.3. Then morpheme realization rules in this grammar only interpret those Specifiers which are not surrounded by the arrowhead brackets in terminal strings. Thus, for example, suppose that the following are terminal strings upon which the morpheme realization rules are to operate:

(8.1.7.7a) da negetu⟨gE⟩ orovonu.

I NOW-(SPEC) CAME

'I came now.'

(8.1.7.7b) negetu-gE da orovonu.

NOW-SPEC I CAME

These would then be phonologically interpreted respectively as:

(8.1.7.7c) da negetu orovonu.

'I came now.'

(8.1.7.7d) negetuge da orovonu.

'I came now.'

8.1.7.8 At other points in the grammar certain other observations pertaining to Specifiers will be made where relevant.

8.1.8 Sub ---> $\left. \begin{array}{l} \text{ProSub} \\ \text{DemP} \end{array} \right\}$ (<8.1.7)

ProSub = Pronominal Substitute (8.2.9)

DemP = Demonstrative Phrase (8.1.26)

8.1.8.0 The following examples illustrate various manifestations of Sub material:

(8.1.8.0a) Sub[ProSub]: (Repetition of 8.1.7.1a)

NOM[NP[da-ike] ata-re Sub[da] unu.

I-SPEC MAN-SPEC I BE

'I am (a) man.'

(8.1.8.0b) Sub[DemP]: (Repetition of 8.1.7.1d)

NOM[NP[yabu-ke] ata-yabe DemP[eke] ua.

THEY-SPEC MAN-SPEC THOSE BE

'They are men, those are.'

8.1.9	PP	--->	(T)	$\left\{ \begin{array}{l} (\text{AdvP}) \text{ VP} \\ \text{COMP}^{\wedge} \text{UNU} \end{array} \right\}$	(<8.1.4)
			T	= Time Expression	(8.1.10)
			AdvP	= Adverbial Phrase	(8.1.12)
			VP	= Verb Phrase	(8.1.21)
			COMP	= Complement	(8.1.13)
			UNU	= ('to be')	(8.1.9.2)

8.1.9.0 This rule allows for two types of sentences (other than Interjections (8.1.1.0) in Koiari, viz. those which may be called verbal (i.e., containing VP), and non-verbal (i.e., containing UNU). Both types may optionally contain some time expression symbolized by T. Note that the grammatical number of all NP's (8.1.25) in verbal sentences is independently selectable, whereas in some non-verbal sentences (viz. those whose Complements are manifested by NP or AdjP) the grammatical number of the Complement is determined by that of the NP in the Subject, i.e., by [NP, NOM].

8.1.9.1 The following examples illustrate the various combinations of Predicate Phrase material, except that only one example of each of COMP, AdvP, and VP is given. More examples of these categories will be given as their cover symbols are expanded further below.

- (8.1.9.1a) PP[VP]:
ata-re VP[rovonu].
 MAN-SPEC CAME
 '(The) man came.'
- (8.1.9.1b) PP[AdvP^VP]:
ata-re AdvP[ikohe-ge] ahu VP[orovonu].
 MAN-SPEC HERE-SPEC HE CAME
 '(The) man came here.'
- (8.1.9.1c) PP[T^AdvP^VP]:
ata-re T[negetu] AdvP[ikohe-ge] ahu
 MAN-SPEC NOW HERE-SPEC HE
 VP[orovonu].
 CAME
 '(The) man came here now.'
- (8.1.9.1d) PP[COMP^UNU]: (Repetition of 8.1.7.1a)
da-ike COMP[ata-re] da UNU[unu].
 I-SPEC MAN-SPEC I BE
 'I am (a) man.'
- (8.1.9.1e) PP[T^COMP^UNU]:
da-ike T[negetu] COMP[ata-re] da UNU[unu].
 I-SPEC NOW MAN-SPEC I BE
 'Now I am (a) man.'

8.1.9.2: UNU is a grammatical formative which is not expanded further.¹ Person and number agreements with subjects will be supplied by transformational agreement rules. Morpheme realization rules will then later supply the correct phonological interpretation to such entries as:

1

This formative is like a verb in having different forms for person and number agreements with subjects, but is unlike verbs in not having a range of suffixes to express the semantic features of aspect and tense (Section 8.1.41-42). Thus UNU is manifested by the forms unu (1st and 3rd person singular) and ua (2nd person singular, 1st, 2nd, 3rd person plural). These forms appear to be related to the following present and past tense realizations of the verb root u 'to stay, remain' in Koiari:

	<u>Present</u>	<u>Past</u>
1st and 3rd person sg.	<u>uma</u>	<u>unu</u>
2nd person sg., 1st, 2nd, 3rd person pl.	<u>ua</u>	<u>unua</u>

That is, the UNU forms appear to be a mixed set of some of the members of the present and past forms of u 'to stay, remain.' Thus in some instances it is possible to have ambiguous interpretations of surface sentences resulting from the semantic ambiguity of the forms unu and ua. For example,

(8.1.9.2a) ikohe-ge da unu
 HERE-SPEC I BE/STAYED

may mean 'I am here' or 'I stayed here'. Note that other New Guinea languages use constructions involving 'to stay, sit, stand...' to express the notion of 'to be'.

The following examples illustrate the various time expressions whose underlying structure is specified by the above rules.

(8.1.11.1a) T[Tword]: (Repetition of example 8.1.7.1i)

da Tword[negetu] orovonu.

I NOW CAME

'I came now.'

For an alternative ordering of elements in this example see 8.1.7.1j.

(8.1.11.1b) T[TimeP[NP^Time]]:

NP[vani eke] Time[-va] -ge da orovonu.

DAY THAT -ON -SPEC I CAME

'I came on that day.'

(8.1.11.1c) T[TimeP[NP^Time]]:

NP[sikisi viki]¹ Time[-va] -ge ahu okohe

SIX WEEKS -FOR-SPEC HE HERE

uma.

STAYING

'He is staying here for six weeks.'

¹

See Section 8.2.14.1.

(8.1.11.1d) T[TimeP[#S#^Time]]:

S [ahu orovoniare] Time[-he] -ge da
 HE WAS COMING -AT -SPEC I
erevanu.

SAW HIM

'I saw him while he was coming.'

8.1.12 AdvP ---> { LOC (8.1.9)
 BenP
 PUR
 InstrP
 DesAdvP }

LOC = Locative Expression (8.1.14)

BenP = Benefactive Phrase (8.1.17)

PUR = Purposive Adverbial (8.1.19)

InstrP = Instrument Phrase (8.1.20)

DesAdvP = Descriptive Adverb Phrase (8.1.29)

8.1.12.0 AdvP is categorially expanded by this rule into any one of a number of Adverbial Phrases. Examples of each of these phrases are given under the respective rules which expand each phrase cover symbol.

8.1.13 COMP ----> $\left. \begin{array}{c} \text{NP} \\ \text{AdjP} \\ \text{LOC} \\ \text{AccomP} \\ \text{BenP} \\ \text{SimP} \end{array} \right\} \text{ (<8.1.9)}$

NP = Noun Phrase (8.1.25)

AdjP = Adjective Phrase (8.1.27)

LOC = Locative Expression (8.1.14)

AccomP = Accompaniment Phrase (8.1.16)

BenP = Benefactive Phrase (8.1.17)

SimP = Similarity Phrase (8.1.18)

8.1.13.0 The following sentences illustrate variously manifested Complements (COMP):

(8.1.13.0a) COMP[NP]: (Repetition of 8.1.7.1a)

da-ike NP[ata]-re da unu.

I-SPEC MAN-SPEC I BE

'I am (a) man.'

(8.1.13.0b) COMP[AdjP]:

da-ike AdjP[maiteka]-vahe da unu.

I-SPEC GOOD -SPEC I BE

'I am good.'

(8.1.13.0c) COMP[LOC]:

da-ike LOC[ikohe]-ge da unu.

I-SPEC HERE -SPEC I BE

'I am here.'

(8.1.13.0d) COMP[Accomp]:

da-ike AccomP[vuma-vore]-ge da unu.

I-SPEC AXE-WITH -SPEC I BE

'I have (an) axe.'

(8.1.13.0e) COMP[BenP]:

eke-re BenP[da-ni] -ge eke unu.

THAT-SPEC I-FOR-SPEC THAT BE

'That is for me.'

(8.1.13.0f) COMP[SimP]:

da-ike SimP[nanuka-navate]-re da unu.

I-SPEC NANUKE-LIKE- SPEC I BE

'I am like Nanuka.'

8.1.14 LOC ---> $\left. \begin{array}{l} \text{LocP} \\ \text{Lword} \end{array} \right\}$ (<8.1.12; 8.1.13)

LocP = Locative Phrase (8.1.15)

Lword = Locative word (8.2.17)

8.1.14.0 The following example illustrates the use of the only Lword that has so far been observed:

(8.14.0a) LOC[Lword]:

vani-re ma Lword[evuri] orovonu.

SUN-SPEC PERF HIGH CAME

'(The) sun has come up high.'

8.1.15 LocP ---> $\left. \begin{array}{c} \text{NP} \\ \text{SimP} \\ \text{\#S\#} \end{array} \right\}$ Loc (<8.1.14)

NP = Noun Phrase (8.1.25)

SimP = Similarity Phrase (8.1.18)

Loc = Locative Enclitic (8.2.18)

8.1.15.0 The following examples illustrate various combinations of LocP material:

(8.1.15.0a) LocP[NP^Loc]:

NP[vata] Loc[-da] gurama!

GROUND ON SIT!

'Sit on (the) ground!'

(8.1.15.0b) LocP[NP^Loc]:

vudurubada-re NP[oho nitaha maite] Loc[-da]-ge

VUDURUBADA-SPEC PIG EYE TRUE ON-SPEC

ahu binu.

HE SPEARED

'Vudurubada speared (the) pig right in its eye.'

(8.1.15.0c) LocP[SimP^Loc]:

vamiyano-yabe LocP[ekehore-he] SimP[tomionumu-navate]

CHILDREN-SPEC THAT-AT TOMIONUMU-LIKE

Loc[-da]-ge yabu gurahanua.

-ON-SPEC THEY SAT

'(The) children sat down there -- on a place like
Tomionumu (= mountain name).'

(8.1.15.0d) LocP[NP^Loc]:

to-re yovege ahu NP[mata] Loc[-va] otinu.

DOG-SPEC CHASED + AND(DS) HE BUSH INTO WENT

'(The) dog chased it and it ran into (the) bush.'

(8.1.15.0e) LocP[NP^Loc]:

NP[efogi] Loc[-va] -ge ahu heremenu.

EFOGI AT -SPEC HE ARRIVED

'He arrived at Efogi.'

Note that for proper name geographical locations
Loc may be phonologically zero, e.g.,

(8.1.15.0f) LocP[NP^Loc]:

LocP[efogi] -ge ahu heremenu.

EFOGI Loc(\emptyset)-SPEC HE ARRIVED

'He arrived at Efogi.'

(8.1.15.0g) LocP[NP^Loc]:

NP[a yage] Loc[-he] -ge da otima.

YOUR HOUSE TO SPEC I GOING

'I am going to your house.'

(8.1.15.0h) LocP[#S#^Loc]:

S [idi-re ramare] Loc[-he]-ge da otima.

THREE-SPEC STANDING AT-SPEC I GOING

'I am going to where (the) tree is standing.'

Note the difference between this example and 8.1.15.0k below which contains an embedded relative clause.

(8.1.15.0i) LocP[NP^Loc]:

NP[nanuka] Loc[-hina]-ge ahu orovonu.

NANUKA FROM-SPEC HE GAME

'He came from (the person called) Nanuka.'

(8.1.15.0j) LocP[NP^Loc]:

ahu oti NP[idi] Loc[-behuva] yavanu.

HE WENT+AND(SS) TREE BESIDE SLEPT

'He went and slept beside (a) tree.'

(8.1.15.0k) LocP[NP^Loc]:

NP[ramare idi] Loc[-he]-ge da otima.

STANDING TREE TO -SPEC I GOING

'I am going to (the) tree which is standing.'

(8.1.15.01) LocP[NP^Loc]:

da inau NP[uma] Loc[-tana] a-hina otahi.
 I PERHAPS PATH ALONG YOU-TO SHOULD GO
 'Perhaps I should go to you along (the) path.'

(8.1.15.0m) LocP[NP^Loc]:

oho-re NP[buru] Loc[-uhuva]-ge ahu namaravi otinu.
 PIG-SPEC GARDEN INTO-SPEC HE RUNNING WENT
 '(The) pig ran into (the) garden.'

8.1.15.1 It should be pointed out here that -he and -va are used in Koiari with possessive phrases to make many of the semantic distinctions in location which are achieved by different prepositions in English, e.g.,

'behind me' = 'at my back' NP[da gadivane] Loc[-he]
 MY BACK AT

'under the house' = 'at the underpart of the house'

NP[yaga dokura] Loc[-va]
 HOUSE UNDERPART AT

8.1.16 AccomP ---> NP^Accom (<8.1.13)

NP = Noun Phrase (8.1.25)

Accom = Accompaniment Enclitic (8.2.19)

8.1.16.0 The following examples illustrate various combinations of AccomP material:

(8.1.16.0a) AccomP[NP^Accom]: (Repetition of 8.1.13.0d)

da-ike NP[vuma] Accom[-vore]-ge da unu.

I-SPEC AXE -WITH-SPEC I BE

'I have (an) axe.'

(8.1.16.0b) AccomP[NP^Accom]:

a-ne NP[vuma] Accom[-vore]-gene a ua?

YOU-SPEC+q AXE -WITH -SPEC+q YOU BE

'Have you an axe?'

(8.1.16.0c) AccomP[NP^Accom]:

da mabare-re NP[detu] Accom[-vore]-go.

MY WIFE-SPEC STOMACH -WITH-SPEC

'My wife is pregnant.' (Lit. 'my wife has (a) stomach')

(8.1.16.0d) AccomP[NP^Accom]:

eke-re NP[soupu¹haba] Accom[-ruhuta]-go.

THAT-SPEC SOAP BUBBLES -WITH-SPEC

'That (river or water) has soap bubbles.'

8.1.17 BenP ---> NP^Ben (<8.1.12; 8.1.13)

NP = Noun Phrase (8.1.25)

Ben = Benefactive Enclitic (8.2.20)

¹

soupu 'soap' is an English loan word.

8.1.17.0 The following examples illustrate various combinations of Benefactive Phrase material:

(8.1.17.0a) BenP[NP^Ben]:

NP[no] Ben[-ni] damuna kime ya nema beu subeia
 WE -TO MONEY MAKE+AND(SS) YOU THEN ABLE SURVEY
kihava.

MAKE

'You(pl.) give us money (lit. make money to us) and then you(pl.) can survey it (= the land).'

(8.1.17.0b) BenP[NP^Ben]:

mabata eke-re otime ahu NP[moeka] Ben[-vani]
 OLD WOMAN THAT-SPEC WENT+AND(SS) SHE SON -TO
ahu oko-ateki roinu ...

SHE THIS-LIKE SAID

'That old woman went and said to (her) son like this...'

(8.1.17.0c) BenP[NP^Ben]:

eke-re NP[a] Ben[-ni]-go.
 THAT-SPEC YOU -FOR -SPEC

'That is for you.'

8.1.18 SimP ---> NP^-navate<rE> (<8.1.13; 8.1.15)

NP = Noun Phrase (8.1.25)

(8.1.19.1b) PUR[#S#^-ha]:

S[hedu kibe-re da a-ni roi]

TALK A LITTLE-SPEC I YOU-TO SAY

[-ha] orovonu.

-TO CAME

'I came (in order) to talk to you a little.'

Compare this sentence with the following two:

(8.1.19.1c) PUR[#S#]:

S[hedu kibe-re da a-ni roi-riheni] orovonu.

TALK A LITTLE-SPEC I YOU-TO SAY-WANT TO CAME

'I came (in order) to talk to you a little.' [Lit.

'Wanting to talk to you a little I came.']

(8.1.19.1d) PUR[#S#]:

S[hedu kibe-re da a-ni roi-riheni]-ge

TALK A LITTLE-SPEC I YOU-TO SAY-WANT TO-SPEC

da orovonu.

I CAME

'I came (in order) to talk to you a little.'

(8.1.19.1e) PUR[#S#]:

S[vateka-vahe maiteka voi-riheni]-ge

SKIN-SPEC GOOD BECOME-WANT TO-SPEC

no ketova.

WE WASHING

'We are washing it so that its skin will become clean

(lit. good).'

8.1.19.2 -ha is a grammatical formative which is not expanded further.

8.1.20 InstrP ---> NP^-va<gE> (<8.1.12)

NP = Noun Phrase (8.1.25)

8.1.20.0 The following examples illustrate various manifestations of Instrument Phrases:

(8.1.20.0a) InstrP[NP^-va<gE>]:

NP[muni keare] [-va] -ge yabu vahanua.

STONE LARGE -WITH -SPEC THEY KILLED IT

'They killed it with (a) large stone.'

(8.1.20.0b) InstrP[NP^-va<gE>]:

yabu NP [vuma damu] [-va] vata mo-hei-nua.

THEY AXE MONEY -WITH LAND GIVE-THEM-PAST

'They gave (them pieces of) land for axe money.'

(8.1.20.0c) InstrP [NP^-va<gE>]:

NP[subu gini] [-va] -ge yabu manehenua.

SUBU PRICKLE -WITH-SPEC THEY STOOD IT UP

'They erected it with prickles (used as nails)

from the Subu tree.'

(8.1.20.0d) InstrP[NP^-va<gE>]:

NP[motu (voto)] [-va] roiso!

MOTU (LANGUAGE) -WITH SAY IT!

'Talk in (the) Motu (language)!'

8.1.20.1 -va<gE> is a grammatical formative which is not expanded further in the grammar.

8.1.21 VP ---> $\left. \begin{array}{l} (NP(NP)) \\ \text{Pred} \\ \text{PredAdjP} \\ \text{Quote} \end{array} \right\} V$ (<8.1.9)

NP = Noun Phrase (8.1.25)

Pred = Predicate (8.1.23)

PredAdjP = Predicative Adjective Phrase (8.1.28)

Quote = Quotation (8.1.24)

V = Verb (8.1.22)

8.1.21.0 This rule allows for verbs (V) to be expanded within contexts of Noun Phrases, Predicates, Predicative Adjective Phrases, and Quotations. An NP immediately dominated by VP is defined as the 'Object' of S. Where there are two NP's immediately dominated by the same VP, the NP furthest to the left of the Verb is the 'Direct Object'; the other is the 'Indirect Object.' Verbs that

occur with Objects are 'transitive'; those that occur with Objects and Indirect Objects are 'ditransitive.' Verbs that occur with no Objects are 'intransitive.' Other verbs will be defined as 'predicative', 'predicative adjectival', and 'quotative', according as they occur with Predicates, Predicative Adjective Phrases, and Quotations respectively. These descriptive terms will later be used as syntactic features subcategorizing verb roots in the lexical entry of verb roots (8.2.21). This will simplify the entry of syntactic features in C of the lexical entry (D, C) - see lexical rule 8.2.0.2.

8.1.21.1 The following sentences illustrate the various combinations of VP material:

(8.1.21.1a) VP[NP^V]:

da NP[oho] V[vodohunu].

I PIG HELD

'I held (the) pig.'

(8.1.21.1b) VP[NP^NP^V]:

ahu NP[oho] NP[da] V[mominu].

HE PIG ME GAVE

'He gave me (the) pig.'

(8.1.21.1c) VP[V]:

oho-re mata-va V[otinu].

PIG-SPEC BUSH-INTO WENT

'(The) pig went into (the) bush.'

(8.1.21.1d) VP[Pred^V]:

da Pred[gorogo] V[voinu].

I SICK BECAME

'I became sick.'

(8.1.21.1e) VP[PredAdjP^V]:

da PredAdjP[nihoro] V[%vanu].¹

I HAPPY AM

'I am happy.'

(8.1.21.1f) VP[Quote^V]:

ahu Quote[roinu, "orehegene a ota?"]

HE SAID WHERE YOU GOING?

V[tovonu].

SAID

'He said, "Where are you going?" (he said).'

1

% is a grammatical formative which represents the verb root for Predicative Adjectival verbs. % will later be realized as phonologically zero by morphophonemic rule M11.10.

- 8.1.22 V ---> Vroot (Stative)^SR^OR^(M)^MOOD (8.1.21)
- Vroot = Verb root (8.2.21)
- Stative = Dummy Symbol to Transform V's to Stative form (8.1.22.3)
- SR = Subject Referent (8.1.35)
- OR = Object Referent (8.1.36)
- M = Manner Adverbial (8.1.32)
- MOOD = Mood Elements (8.1.30)

8.1.22.0 Verbs in Koiari are complex constructions.

They typically contain much information that is also contained in other elements in the sentence. Thus they contain referents to the subject (SR's), and objects (OR's), have modal elements (MOOD), and may optionally include Stative and manner adverbial elements (M), all to the right of the verb root (Vroot). Thus Koiari verbs may be quite long, e.g.,

(8.1.22.0a)

V[Vroot[vodohu] SR[∅] OR[-yahei] M[misu-vaha]
 HOLD THEM A LITTLE-LY
 MOOD[riheni-vi-yavehite-re] da unu.
 WANT- AUXSR- NOT-SPEC I BE

'I do not want to hold them a little bit.'

8.1.22.1 The following examples illustrate some combinations of V material:

(8.1.22.1a) V[Vroot^SR^OR^MOOD]:

to-re oho V[Vroot[ere] OR[∅] OR[-geiyahei]
 DOG-SPEC PIG SEE ∅ THEM
 MOOD[-nu]].
 -PAST

'(The) dog saw (the) pigs.'

(8.1.22.1b) V[Vroot^SR^OR^M^MOOD]: No example. See example 8.1.22.0a above.

8.1.22.2 Other examples are contained in almost every illustration of various expansions in the PS rules.

8.1.22.3 'Stative' is a dummy symbol in 8.1.22 to 'trigger' relevant transformations which transform verbs into stative form. This form of the verb expresses the physical state something is in, for example, bokoravanu 'It's broken'. However, no rules will be provided for 'Stative' in this grammar because there are still several problems of analysis associated with it which need further checking and for which insufficient evidence has so far been obtained. The following are some observed features of the stative form of verbs:

(a) No agent is expressed. Thus the stative transform of da kapusi bokovanu. 'I broke (the) cup' is

I CUP BROKE IT

kapusi-re boko Stative [-ra]-vanu. '(The) cup is broken.';

CUP -SPEC BROKE PAST

(b) Some verbs are easily elicited in stative form but it is difficult to see what the source sentences for some of these are: e.g.,

(i) kikiravanu. 'It crackled.'

(ii) mavaravanu. 'It's better, finished, good (as of a sore).'

(iii) everavanu. 'It's grown up (as of a child).'

(c) Some verbs have unpredictable forms (i.e., do not behave according to the same rules as others), e.g.,

(i) da ma kabovanu. [?] ---> kukuyarahunu.

I PERF TIPPED IT OUT IT'S SPILT

'I tipped it out.' 'It's spilt.'

(ii) ...mavoinu. [?] ---> ravanu.

'(Someone) burnt it.' 'It's burnt.'

(iii) ...marumanu [?] ---> muduravanu.

'(Someone) cooked it.' 'It's cooked/soft.'

Note that -ra occurs as the stative marker. No investigation has been made of the possible MOOD elements than can occur with this marker.

8.1.23 Pred ---> $\left. \begin{array}{c} \text{AdjP} \\ \text{NP} \end{array} \right\}$ (<8.1.21)

AdjP = Adjective Phrase (8.1.27)

NP = Noun Phrase (8.1.25)

8.1.23.0 The following examples illustrate the two types of possible predicates in Koiari:

(8.1.23.0a) Pred[AdjP]:

motuka-vare AdjP[komara-mava] voinu.

VEHICLE-SPEC BAD-VERY BECAME

'(The) vehicle became very bad(ly damaged).'

(8.1.23.0b) Pred[AdjP]:

da heduve-re AdjP[vehite] voinu.

MY TALK-SPEC NONE BECAME

'My talk finished.'

(8.1.23.0c) Pred[NP]:

mavi-re NP[mahita] voinu.

WOMAN-SPEC FERNTREE BECAME

'(The) woman became a (kind of) fern-tree.'

8.1.24 Quote ---> Vroot^SR^OR (M) MOOD #S*# (<8.1.21)

Vroot = Verb Root (8.2.21)

SR = Subject Referent (8.1.35)

OR = Object Referent (8.1.36)

M = Manner Adverbial (8.1.32)

MOOD = Mood Elements (8.1.30)

8.1.24.0 Quotations may be expounded by any sentence preceded by some verbal expression whose verb root is roi 'to say', and whose MOOD elements must agree with those of the verbal expression following the Quote in 8.1.21. No distinction is made in Koiari between 'direct' and 'indirect' quotation.¹

8.1.24.1 See 8.1.21.1f, and 8.1.29.0a for examples of Quote material.

1

Quote may also include what are traditionally regarded as larger units of language -- paragraph, discourse etc. See, however, Katz and Fodor (1963: 180-1) for a discussion on how TG might regard these so-called larger units.

8.1.25 NP ---> (#S#) N (DemP)(Num)(Lim) (<8.1.7;
 8.1.11; 8.1.13;
 8.1.15; 8.1.16;
 8.1.17; 8.1.18;
 8.1.20; 8.1.21;
 8.1.23)

N = Noun (8.2.1)

DemP = Demonstrative Phrase (8.1.26)

Num = Numeral (8.2.4)

Lim = Limiter (8.2.5)

8.1.25.0 The expansion of NP introduces Nouns into the Phrase-Structure. In this expansion #S# is used to generate embedded sentences as relative clauses, various sorts of noun modifiers, nominal compounds, and possessive constructions such as occur in the following sentences:

(8.1.25.0a) NP[#S#^N]:

S[ogotana orovoniare] N[ata-vare] eke unu.

OGOTANA CAME MAN-SPEC THAT BE

'That's (the) man who came from Ogotana.'¹

¹

Ogotana is a ground name.

- (8.1.25.0b) NP[#S#^N] (with #S# 'reduced'):
 S[ogotana] N[ata-vare] eke unu.
 'That's (an) Ogotana man.'
- (8.1.25.0c) NP[#S#N] (introducing adjectives):
 N[ata] S[maiteka] -vahe eke unu.
 MAN GOOD -SPEC THAT BE
 'That's (a) good man.'
- (8.1.25.0d) NP[#S#^N] (introducing Possessive
 construction):
oko-re S_{Rel}[da ada-ke] -ro.
 THIS-SPEC MY ARM-POS SPEC
 'This is my arm.'

8.1.25.1 The following sentences illustrate various combinations of the other NP material:

- (8.1.25.1a) NP[N]: See example 8.1.7.1e.
- (8.1.25.1b) NP[N^DemP]:
 N[ata] DemP[eke] -re orovonu.
 MAN THAT -SPEC CAME
 'That man came.'

(8.1.25.1c) NP[N^Num]:

N[ata] Num[igau]-ge orovonu.

MAN ONE -SPEC CAME

'One man came.'

(8.1.25.1d) NP[N^Lim]:

N[ata] Lim[-eneve] -re orovonu.

MAN THE VERY-SPEC CAME

'The very man (i.e., the one we were talking about) came.'

8.1.26 DemP ---> (D) Demon (<8.1.8; 8.1.25)

D = Determiner (8.2.3)

Demon = Demonstrative (8.2.2)

8.1.26.0 The following examples illustrate various combinations of Determiners (D) and Demonstratives (Demon) which make up Demonstrative Phrases:

(8.1.26.0a) DemP[Demon]:

ata Demon[oko]-re orovonu.

MAN THIS-SPEC CAME

'This man came.'

(8.1.26.0b) DemP[Demon]:

ata Demon[more]-re orovonu.

MAN THAT-SPEC CAME

(downstream)
'That man (down there) came.'

(8.1.26.0c) DemP[D^Demon]:

ata D[eke] Demon[more]-re orovonu.

MAN THAT THAT-SPEC CAME

'That man (down there) came.'

(8.1.26.0d) DemP[D^Demon]:

ata D[ki] Demon[more]-re orovonu.

MAN THAT THAT -SPEC CAME

'That man (down there) came.'

8.1.26.1 The fine semantic distinctions which are apparently possible in Koiari Demonstrative Phrases are not yet completely understood.

8.1.27 AdjP ---> Adj $\left(\begin{array}{l} \left\{ \begin{array}{l} \text{-mava} \langle \text{vahE} \rangle \\ \text{-bata} \langle \text{vahE} \rangle \\ \text{-kaye} \langle \text{rE} \rangle \end{array} \right\} \end{array} \right)$ (<8.1.10; 8.1.19)

Adj = Adjective (8.2.6)

8.1.27.0 The following examples illustrate various combinations of AdjP material:

(8.1.27.0a) AdjP[Adj]:

eke-re maiovo Adj[maiteka] [-vaho].
 THAT-SPEC GIRL GOOD -SPEC

'That's (a) good girl.'

(8.1.27.0b) AdjP[Adj]:

ahu-ni hedu Adj[misuka] roi!
 HE-TO TALK SMALL TELL

'Tell him small (i.e., more intricate) talk!'

(8.1.27.0c) AdjP[Adj]:

motuka-vare Adj[komara] -vaho.
 VEHICLE-SPEC BAD -SPEC

'(The) vehicle is no good.'

(8.1.27.0d) AdjP[Adj^{-mava}<vahE>]:

eke-re maiovo Adj[maiteka] [-mava] -vaho.
 THAT-SPEC GIRL GOOD VERY -SPEC

'That's (a) very good girl (lit. a truly good girl).'

(8.1.27.0e) AdjP[Adj^{-bata}<vahE>]:

buru Adj[oboa] [-bata]-vahe da ere-geiyahei-nu.
 GARDEN MANY -VERY-SPEC I SEE-THEM-PAST

'I saw very many gardens.'

(8.1.28.0c) PredAdjP[PredAdj^Int]:

nuhe vaubu PredAdj[ribiri] Int[kibe]-re no ravanua.
 YESTERDAY NIGHT COLD (A)LITTLE-SPEC WE PAST

'Last night we were a little cold.'

8.1.29 DesAdvP ---> (Demon) ateki<gE> (<8.1.12)

Demon = Demonstrative (8.2.2)

8.1.29.0 The following examples illustrate various manifestations of Descriptive Adverb Phrases (DesAdvP):

(8.1.29.0a) DesAdvP[ateki<gE>]:

ugu vaita-re [ateki] roinu, "bebe, da yage-re oko
 BIRD A-SPEC THUS SAID, NO, MY HOUSE-SPEC THIS
unu," tovonu.

BE SAID

'A (certain) bird said thus, "No, this is my house," he said.'

(8.1.29.0b) DesAdvP[Demon^ateki<gE>]:

a-ike Demon[oko] [ateki] otiso! da-ike Demon[oko]
 YOU-SPEC THIS LIKE GO! I-SPEC THIS

[ateki] otima.

LIKE GOING

'You go this way! I'm going this way.'

(8.1.29.0c) DesAdvP[Demon^ateki⟨gE⟩]:

eke-ru-ge da Demon[eke] [ateki] roima...

THAT-BECAUSE-SPEC I THAT LIKE SAYING

'Because of that I am saying like that...'

(8.1.29.0d) DesAdvP[Demon^ateki⟨gE⟩]:

Demon[ore] [ateki]-gene ahu oko-he uma?

WHICH LIKE - Q HE THIS-AT STAYING

'How is he staying here?' or 'In what manner is he
living here?'

8.1.29.1 ateki⟨gE⟩ is a free particle which is treated here as a grammatical formative and is not expanded further in the grammar.

8.1.30 MOOD ---) $\left(\begin{array}{l} \text{-tiniva} \\ \text{Vroot}^{\wedge}\text{SR}^{\wedge}\text{OR (M)} \end{array} \right)$ (Want) Mode
(<8.1.22; 8.1.24)

-tiniva = Completive Marker

Want = Desiderative Marker (8.1.31)

Mode (8.1.37)

Vroot = Verb root (8.2.21)

SR = Subject Referent (8.1.35)

OR = Object Referent (8.1.36)

8.1.30.0 MOOD is expanded by the above rule in such a way as to allow for the generation of verbs simply with Mode elements, or for the generation of verbs which express completive action or desire, or a combination of these. Completive action is generated by selecting either -tiniva or Vroot^SR^OR(M) together with Mode. The desiderative form of verbs is generated by selecting Want in the expansion. Note that not all possible combinations of MOOD material have been observed, but that further evidence is required to justify the form of this rule.

8.1.30.1 -tiniva is a grammatical formative which is not expanded further. It is a completive marker which signifies that the actor has performed some action in its entirety. Thus it can be translated roughly by 'the lot' or by 'completely' depending on whether the action is transitive or intransitive respectively, e.g.,

(8.1.30.1a) Transitive verb: ki 'to make, do'

da ki-tiniva-nu.

I MAKE-COMPLETE-PAST

'I made the lot.'

(8.1.30.1b) Intransitive verb: oti 'to go'.

ahu oti-tiniva-nu.

HE GO-COMplete-PAST

'He went completely (and didn't come back).'

8.1.30.2 The following examples illustrate other combinations of MOOD material. Note that [Vroot, MOOD] is always manifested by vare 'to leave (off),' and that the Object Referent dominated by MOOD is always singular.

(8.1.30.2a) MOOD[Vroot^SR^OR^Mode]:

eke ki-ya¹ Vroot[vare] SR [-me] OR[∅] Mode[∅]!

THAT DO-∅ LEAVE(OFF) (SG.) (SG.) IMPER!

'Stop doing that!' (Lit. 'Leave off doing that!')

1

Ya is extra phonological material introduced between the two verb roots ki and vare in this instance. This is apparently the same material which occurs (a) before M₂ type adverbs (see example 8.1.32.0b); (b) in some OR's (8.1.36); (c) in the expansion of Indic with Aux SR (8.1.40.1 and 8.1.40.2). Ya has no meaning (at least as far as can be determined).

(8.1.30.2b) MOOD[Vroot^SR^OR^Mode]:

no oho i-ya Vroot[vare] SR[-hi] OR[∅] -me
 WE PIG EAT-∅ LEAVE(OFF) (PL.) (SG.) AND(SS)
no gura-he-ge ahu yaga keare voinu.
 WE SAT-SR(PL.)-AND(SS) HE HOUSE BIG BUILT
 'We ate (the) pig and then we sat down and he
 built (a) big house.'

(8.1.30.2c) MOOD[Want^Mode]:

...ahu uhuiama Want[-riheni] AuxSR[vi] Mode[-ma]
 HE LISTEN DESIRE (SG.) PRES
 '...he wants to listen.'

Note that this may be optionally transformed to 8.1.30.2d.

(8.1.30.2d) MOOD[Want^Mode]:

...uhuiama Want[-riheni] -ge ahu AuxSR[vi] Mode[-ma]
 LISTEN DESIRE -SPEC HE (SG.) PRES
 '...he wants to listen.'

(8.1.30.2e) ...ahu lamime ahu ono...¹

SHE STAND+AND(SS) SHE THING...
ita-uhu-va Vroot[iyagu] Want[-riheni-nabe]
 WATER-INSIDE-IN BATHE DESIRE-SPEC+UNCERT
ahu vime... meikana, da vauduvaro.
 SHE BE+AND(SS) PERHAPS I DONT KNOW

¹

ono 'thing' is used as a hesitation form.

'...she (was) standing and [thing...(hesitation)]
she wanted to bathe[...(hesitation)]. Perhaps, I
don't really know.'

(8.1.30.2f) MOOD[-tiniva^Want^Mode]:

moni magoremi [-tiniva] Want[-riheni]-ge

MONEY THROW COMPLETELY DESIRE-SPEC

da vima.

I BE+PRES

'I want to throw (the) money away completely.'

8.1.31 Want ---> -riheni<gE>^AuxSR (<8.1.30)

AuxSR = Auxiliary Subject Referent

8.1.31.0 This rule specifies that the desiderative marker Want consists of the morpheme -riheni<gE>¹ and an auxiliary subject referent AuxSR. AuxSR is always realized as va for singular subjects and as rava for plural ones. The same agreement rules apply to AuxSR as apply to other SR's.

8.1.31.1 Examples illustrating the combination of Want material have already been given in 8.1.30.2c-f. Note

1

This morpheme seems to be a combination of the future tense punctiliar aspect form rihe and the benefactive marker ni 'for'.

that the specifier gE is realized in the last three of these examples.

8.1.32 M \rightarrow $\left\{ \begin{array}{l} M_1 \\ M_2 \end{array} \right\}$ (<8.1.22; 8.1.24; 8.1.30)

M_1 = Manner Adverb₁ (8.1.33)

M_2 = Manner Adverb₂ (8.1.34)

8.1.32.0 This rule allows for the disjunctive selection of two types of Manner Adverbals, symbolized M_1 and M_2 . These adverbals are formally and distributionally distinct as is outlined further during the description of each in their relevant expansions below. The following examples illustrate the two types:

(8.1.32.0a) M[M_1]:

vuvuvi M_1 [saya-vahi] -me nema da-ni roi!
 THINK- CAREFUL-LY- AND THEN ME-TO TELL
 'Think carefully and then tell me!'

(8.1.32.0b) M[M_2]:

oho-re da vodohu-ya- M_2 [vaita-va]-nu.
 PIG-SPEC I HOLD-Ø- AGAIN- PAST
 'I held (the) pig again.'

8.1.32.1 No investigation has been made of the co-occurrence restrictions holding between the two subtypes of Manner Adverbals.

8.1.33 M_1 ---> $\text{ManAdv}^n(\text{Mod})-\underline{\text{vaha}}\langle \underline{\text{gE}} \rangle$ (<8.1.32)

[where $n = 1$ or 2]

$\text{ManAdv} = \text{Manner Adverb}$ (8.2.15)

$\text{Mod} = \text{Modifier}$ (8.2.16)

8.1.33.0 Note that the expansion allows for the reduplication of the Manner Adverb. Note also that some Manner Adverbs are identical in form with some Adjectives. The following examples illustrate various combinations of M_1 material:

(8.1.33.0a) $M_1[\text{ManAdv}^1-\underline{\text{vaha}}\langle \underline{\text{gE}} \rangle]$: No example. See 8.1.32.0a.

(8.1.33.0b) $M_1[\text{ManAdv}^2-\underline{\text{vaha}}\langle \underline{\text{gE}} \rangle]$:

vodohu $\text{ManAdv}[\underline{\text{soreka}}]$ $\text{ManAdv}[\underline{\text{soreka}}]$ $[-\underline{\text{vaha}}]!$

HOLD QUICK QUICK -LY!

'Hold it quickly!'

(8.1.33.0c) $M_1[\text{ManAdv}^1\text{Mod}^1-\underline{\text{vaha}}\langle \underline{\text{gE}} \rangle]$

vodohu $\text{ManAdv}[\underline{\text{misu}}]$ $\text{Mod}[\underline{\text{kibe}}]$ $[-\underline{\text{vaha}}]!$

HOLD LITTLE LITTLE(BIT) -LY!

'Hold it a tiny little bit!'

(8.1.33.0d) M_1 [ManAdv^ManAdv^Mod^-vahA<gE>]

vodohu ManAdv[misu] ManAdv[misu] Mod[-mava] [-vaha]!

HOLD LITTLE LITTLE VERY -LY!

'Hold it for a very short while!'

8.1.33.1 M_1 adverbs can optionally occur outside the verb. When they do -vahA<gE> is always realized as -vahi<gE>. For example, example 8.1.33.0c may be said as:

(8.1.33.1a) ManAdv[misu] Mod[kibe] [-vahi] vodohu!

LITTLE LITTLE(BIT) -LY HOLD!

'Hold it a tiny little bit!'

8.1.33.2 -vahA<gE> is a grammatical formative and is not expanded further.

8.1.34 M_2 ---> ManAdv^AuxSR (<8.1.32)

ManAdv = Manner Adverb (8.2.15)

AuxSR = Auxiliary Subject Referent (8.1.31)

8.1.34.0 The following examples illustrate various manifestations of M_2 :

(8.1.34.0a) M_2 [ManAdv^AuxSR]: No example. See

8.1.32.0b.

(8.1.34.0b) M₂ [ManAdv^AuxSR]:

vodohu-ya ManAdv[-unave] AuxSR[-ya]!

HOLD- ∅ -ONLY -(SG.)

'Only hold it!'

(8.1.34.0c) M₂ [ManAdv^AuxSR]:

vodohu-ya ManAdv[-mava] AuxSR[-va]!

HOLD ∅ -NOTHING -(SG.)

'Hold it for nothing!' (i.e., for no particular reason).

(8.1.34.0d) M₂ [ManAdv^AuxSR]:

yabu vodohu-ya ManAdv[-mava] AuxSR[-ravanua].

THEY HOLD- ∅ -NOTHING -(PL.)

'They held it for nothing.'

(8.1.34.1) M₂ adverbs cannot occur outside of the verb.

8.1.34.2 AuxSR is a grammatical formative and is not expanded further. See 8.1.31.0.

8.1.35 SR ---> { sr1 } (<8.1.22; 8.1.24; 8.1.30)

sr2
sr3
sr4
sr5
sr6
sr7
sr8
sr9

sr1 = subject referent (type) 1 [etc.].

8.1.35.0 SR is a category symbol for suffixes which refer to the grammatical number of the subject. This is the explanation of morphological changes which occur in the verb in such an example as the following where the grammatical number of the subject changes from singular to plural:

(8.1.35.0a) da ya SR[-va] OR[∅] -nu.
 I SLEEP- (SG.) ∅ -PAST
 'I slept.'

(8.1.35.0b) no ya SR[-voha] OR[∅] -nu.
 WE SLEEP- (PL.) ∅ -PAST
 'We slept.'

8.1.35.1 SR and OR could be selected disjunctively were it not for the fact that some transitive verbs have both. Generally, however, SR's subcategorize intransitive verbs and OR's transitive and distransitive verbs. The following examples show how SR and OR change form for number in the transitive verb ya 'to kill'.

(8.1.35.1a) da ya SR[-ma] OR[∅] -nu.
 I KILL (SG.) (SG.) -PAST
 'I killed it.'

(8.1.35.1b) da va SP[-mi] OR[-yahei] -nu.
 I KILL- (SG.) (PL.) -PAST
 'I killed them.'

(8.1.35.1c) no va SR[-ha] OR[∅] -nua.
 WE KILL (PL.) (SG.) PAST
 'We killed it.'

(8.1.35.1d) no ya SR[-hi] OR[-yahei] -nua.
 WE KILL (PL.) (PL.) PAST
 'We killed them.'

8.1.35.2 The morphemes represented by the different subject referents in the above expansion will be realized by morpheme realization rules in this grammar.¹ These rules are sketched here to show the manifestations of each SR type together with an example of each in one verb. Other verb roots representative of the same subset are also given. Notice that some subsets are very small. This may be a clue to the historical explanation of this complex phenomena -- either it represents some contact with other languages or it represents a dying system.

(8.1.35.2a)
$$\begin{array}{c} \text{sr1} \\ \boxed{+sg} \\ \boxed{-sg} \end{array} \quad \text{---} \rightarrow \quad \begin{array}{c} \boxed{-mV} \\ \boxed{-hV} \end{array}$$

¹ See Section 10.15.

In this symbolization the V stands for a vowel whose quality depends on the vowel of the verb root (except for one instance). The following morphophonemic rules (roughly sketched) show how V will be interpreted:

$$V \text{ ---} \rightarrow \left\{ \begin{array}{l} \underline{e} \text{ in env. Vroot ending in } \underline{e} \\ \underline{i} \text{ in env. Vroot } \underline{ra} \text{ 'to stand'} \\ \underline{a} \text{ in env. of any other Vroot} \end{array} \right\}$$

Thus we get the following realizations:

$$(i) \quad \begin{array}{l} \text{srl} \\ \boxed{+\text{sg}} \\ \boxed{-\text{sg}} \end{array} \text{ ---} \rightarrow \begin{array}{l} \boxed{-\underline{me}} \\ \boxed{-\underline{he}} \end{array} \text{ in env. Vroot ending in } \underline{e}$$

Example: da vare Srl[-me] OR[∅] -nu.

I LEAVE (SG.) -PAST

'I left it.'

no vare Srl[-he] OR[∅] -nua.

WE LEAVE (PL.) -PAST

'We left it.'

Other verb roots: magore 'to throw'; mane 'to stand up; erect'; yage 'to lift up'; tore 'to put down'; vode 'to roll up'; here 'to grow, arrive'; vavo mane 'to (have a) spell or respite.'

(ii) $\begin{array}{c} \text{sr1} \\ \boxed{+sg} \\ \boxed{-sg} \end{array} \text{ ---} \rightarrow \begin{array}{c} \boxed{-mi} \\ \boxed{-hi} \end{array}$ in env. of Vroot ra 'to stand'

Example: da ra Sr1[-mi] OR[∅] -nu.
I STAND (SG.) -PAST

'I stood.'

no ra Sr1[-hi] OR[∅] -nua.
WE STAND (PL.) -PAST

'We stood.'

This is the only verb root which has so far been encountered which belongs to this sub-class.

(iii) $\begin{array}{c} \text{sr1} \\ \boxed{+sg} \\ \boxed{-sg} \end{array} \text{ ---} \rightarrow \begin{array}{c} \boxed{-ma} \\ \boxed{-ha} \end{array}$ in env. of any other Vroot

Example: da gura Sr1[-ma] OR[∅] -nu.
I SIT (SG.) -PAST

'I sat.'

no gura sr1[-ha] OR[∅] -nua.
WE SIT (PL.) -PAST

'We sat.'

Other verb roots: maru 'to cook'; voro 'to come down (a stream)'; va 'to kill.'

(8.1.35.2b) $\begin{array}{c} \text{sr2} \\ \boxed{+sg} \\ \boxed{-sg} \end{array} \text{ ---} \rightarrow \begin{array}{c} \boxed{-va} \\ \boxed{-voha} \end{array}$

Example: See example 8.1.35.0a, b above.

ya 'to sleep' is the only example of this verb root sub-class which has so far been encountered.

(8.1.35.2c) $\begin{array}{c} \text{sr3} \\ \boxed{+\text{sg}} \\ \boxed{-\text{sg}} \end{array} \text{ ---} \rightarrow \begin{array}{c} \boxed{-\text{va}} \\ \boxed{-\text{rava}} \end{array}$

Example: (i) da omani sr3[-va] OR[∅] -nu.
I WALK ABOUT (SG.) ∅ PAST
'I walked about (aimlessly).'

(ii) no omani sr3[-rava] OR[∅] -nua.
WE WALK ABOUT (PL.) ∅ PAST
'We walked about (aimlessly).'

Other verb roots: dona 'to tell an untruth'; gorogo
'to be sick'; imi 'to beg';
namara 'to run'; hedu 'to talk';
enototo 'to cough'; bitu 'to joke';
tati 'to laugh' vavi 'to be
hungry'; nihoro 'to be happy';
dui 'to smoke (of a fire)';
fagaru 'to burp'; toto 'to drip';
sikuru 'to school (English loan).'

(8.1.35.2d) $\begin{array}{c} \text{sr4} \\ \boxed{+\text{sg}} \\ \boxed{-\text{sg}} \end{array} \text{ ---} \rightarrow \begin{array}{c} \boxed{-\text{vo}} \\ \boxed{-\text{rava}} \end{array}$

Example: (i) da to sr4[-vo] OR[∅] -nu.
I CALL (SG.) ∅ PAST
'I called out.'

- (ii) no to sr4[-rava] OR[∅] -nua.
 WE CALL (PL.) ∅ PAST
 'We called out.'

This is the only example of this sub-class which has so far been encountered.

(8.1.35.2e) sr5
 $\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ ---} \rightarrow \begin{bmatrix} -va \\ -ruhi \end{bmatrix}$

Example: (i) da voira sr5[-va] OR[∅] -nu.
 I TURN (SG.) ∅ PAST
 'I turned around.'

(ii) no voira sr5[-ruhi] OR[∅] -nua.
 WE TURN (PL.) ∅ PAST
 'We turned around.'

Other verb roots: vobara 'to rotate (something).'

(8.1.35.2f) sr6
 $\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ ---} \rightarrow \begin{bmatrix} -ti \\ -ruhi \end{bmatrix}$

Examples: (i) ahu va sr6[-ti] OR[∅] -nu.
 HE DIE- (SG.) ∅ PAST
 'He died.'

(ii) yabu va sr6[-ruhi] OR[∅] -nua.
 THEY DIE (PL.) ∅ PAST
 'They died.'

This is the only example of this sub-class of verb roots which has so far been encountered.

(8.1.35.2g) $\begin{matrix} \text{sr7} \\ [+sg] \\ [-sg] \end{matrix} \text{ ---} \rightarrow \begin{matrix} [-va] \\ [-raruhi] \end{matrix}$

Examples: (i) da kure sr7[-va] OR[∅] -nu.
 I FELL (SG.) ∅ PAST
 'I fell down.'

(ii) no kure sr7[-raruhi] OR[∅] -nua.
 WE FELL (PL.) ∅ PAST
 'We fell down.'

Other verb roots: dobi 'to fall down (thing)';
ere 'to see.'¹

(8.1.35.2h) $\begin{matrix} \text{sr8} \\ [+sg] \\ [-sg] \end{matrix} \text{ ---} \rightarrow \begin{matrix} [-va] \\ [-vorava] \end{matrix}$

Examples: (i) da nina sr8[-va] OR[∅] -nu.
 I CRY (SG.) ∅ PAST
 'I cried.'

(ii) no nina sr8[-vorava] OR[∅] -nua.
 WE CRY (PL.) ∅ PAST
 'We cried.'

Other verb roots: veu 'to urinate.'

¹

Some informants use sr7 with 'to see' others use sr9.

(8.1.35.2i) $\begin{matrix} \text{sr9} \\ \boxed{+\text{sg}} \\ \boxed{-\text{sg}} \end{matrix} \text{ ---} \rightarrow \begin{matrix} \boxed{\emptyset} \\ \boxed{\emptyset} \end{matrix}$

Examples: (i) da oti sr9[\emptyset] OR[\emptyset] -nu.

I GO \emptyset \emptyset PAST

'I went.'

(ii) no oti sr9[\emptyset] OR[\emptyset] -nua.

WE GO \emptyset \emptyset PAST

'We went.'

Other verb roots: All transitive and ditransitive verb roots except for those already listed under one of the other SR's, together with the following small set of intransitive verb roots: orovo 'to come'; u 'to stay, remain'; yagu 'to bathe'; (the Predicative verb) voi 'to become'; and roi 'to say.'

8.1.36 OR ---) $\left. \begin{matrix} \text{or1} \\ \text{or2} \\ \text{or3} \\ \text{or4} \end{matrix} \right\}$ (<8.1.22; 8.1.24; 8.1.30)

or1 = object referent (type) 1
[etc.]

8.1.36.0 Object referents refer to the grammatical number of objects in sentences.¹ The form of object

¹

Note that both SR and OR make number distinctions only between singular and plural. These markers thus serve to distinguish between singular and plural nouns not otherwise distinguished by specifiers.

referents is supplied by morpheme realization rules MR10.16 after agreement transformations have 'spread' number throughout the sentence. The following examples illustrate the four sets of OR suffixes:

(8.1.36.0a) or1

$$\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ ---> } \begin{bmatrix} -\emptyset \\ -\underline{Yahei} \end{bmatrix}$$

Example: See examples 8.1.35.1a, b, c, b.

Other verb roots: maru 'to cook'; vare 'to leave (off)'; magore 'to throw (away)'; ki 'to do'; i 'to eat or drink'; vodohu 'to hold (in embrace)'; voi 'to become.'

(8.1.36.0b) or2

$$\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ ---> } \begin{bmatrix} -va \\ -\underline{geiyahei} \end{bmatrix}^1$$

Examples: (i) da ruka SR[\emptyset] or2[-va] -nu.
 I CUT \emptyset (SG.) -PAST
 'I cut it.'

1

It is probable that gei in geiyahei represents some other element (perhaps 'together') since gei has been observed once in the intransitive verb oti-gei-riheni
 GO - ? - WANT

which could be translated from its context as 'want to go together'. Obviously more material is required to analyse this.

- (ii) da ruka SR[∅] or2[-geiyahei] -nu.
 I CUT ∅ (PL.) -PAST

'I cut them.'

Other verb roots: Perhaps ere 'to see.' See fn.
 to 8.1.35.2g.

(8.1.36.0c) or3
 $\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ ---} \rightarrow \begin{bmatrix} -mi \\ -hei \end{bmatrix}$

Examples: (i) da mo SR[∅] ors[-mi] -nu.
 I GIVE ∅ (SG.) -PAST
 'I gave it (to someone).'

(ii) da mo SR[∅] or3[-hei] -nu.
 I GIVE ∅ (PL.) -PAST
 'I gave them (to someone).'

mo 'to give' is the only example of this sub-class of
 verb roots which has so far been encountered.

(8.1.36.0d) or4
 $\begin{bmatrix} +sg \\ -sg \end{bmatrix} \text{ --} \rightarrow \begin{bmatrix} \emptyset \\ \emptyset \end{bmatrix}$

Example: (i) da oti SR[∅] or4[∅] -nu.
 I GO ∅ ∅ -PAST
 'I went.'

All intransitive verbroots belong to this sub-class.

8.1.37 Mode ---> $\left. \begin{array}{c} \text{Imper} \\ \text{Subj} \\ \text{Indic} \end{array} \right\} \quad (<8.1.30)$

Imper = Imperative (8.1.38)

Subj = Subjunctive (8.1.39)

Indic = Indicative (8.1.40)

The phrase-structure expands Mode in three ways. Examples of each will be given under the expansions of each of these respective cover symbols.

8.1.38 Imper ---> $\left. \begin{array}{c} \text{Immed} \\ \text{Non-immed} \end{array} \right\} \quad (<8.1.37)$

Immed = Immediate Imperative Mode

Non-Immed = Non-Immediate Imperative Mode

8.1.38.0 Two imperative types occur in Koiari -- immediate and non-immediate.

8.1.38.1 Immediate imperative forms for different subjects are as follows. These would, in a more complete grammar be specified by the phonological rules. The following paradigm is given to show how the morphemes are realized.

	1.	(<u>ene</u>) <u>da</u> ...- <u>hi</u>
Singular	2.	(<u>a</u>) ... \emptyset
	3.	(<u>ene</u>) <u>ahu</u> ... <u>ze</u>

1. (ene) no ...-ri
 Plural 2. (ya) ...-Yahe
 3. (ene) yabu...-ri

8.1.38.2 The following examples illustrate this paradigm.

- (8.1.38.2a) da vodohuhi! 'Let me nurse it.'
vodohu! '(You) nurse it!'
ahu vodohe! 'Let him nurse it.'
no vodohuri! 'Let us nurse it.'
vodohuyahe! '(You.pl.) nurse it.'
yabu vodohuri! 'Let them nurse it.'

8.1.38.3 Note that the phonological rules will have to account for the following exceptions to the above paradigm:

- (a) that oti 'to go' has a replace its stem vowel in all persons except 2nd, e.g.,

- da otahi! 'Let me go.'
no otari! 'Let us go.'

For 2nd person singular the stem vowel is replaced by e, e.g., ote! '(You) go!'

- (b) that the 2nd sg. imperative of i 'to eat' is unpredictably bai! 'you eat!'

(c) that some verb roots take -Yohe for the 2nd plural immediate imperative. These verbs seem to be mainly those whose OR is of form-va-, e.g., ruka-vi-yohe 'You (pl.) cut it.'

(d) that for cultural reasons there is a set of verb roots which cannot be made imperative, e.g.,

goro 'to be sick'

vavi 'to be hungry'

va 'to die'

Thus, informants did not like to say goro-va 'Be sick!' as this may bring revenge if the person to whom it was said happened to become sick sometime later.

8.1.38.4 Note also that the translation of 'let' here does not mean 'permit' or 'allow'.

8.1.38.5 ene in the above paradigm (8.1.38.1) is used for connected sentences such as:

oti ahu-ni loi-ege ene ahu orove!

GO HE-TO TELL-DS HE COME-IMPER

'Go and tell him and let him come.'

8.1.38.6 The negative counterparts to the above immediate imperative paradigm are:

- | | | |
|----------|----|---------------------------|
| | 1. | <u>da...bebe...-hi!</u> |
| Singular | 2. | ...- <u>Ihama!</u> |
| | 3. | <u>ahu...bebe...-ŕe!</u> |
| | 1. | <u>no...bebe...-ri!</u> |
| Plural | 2. | <u>ya.....-Ihava!</u> |
| | 3. | <u>yabu...bebe...-ri!</u> |

For example,

(8.1.38.6a) vodohuhama! 'Don't hold it!'

8.1.38.7 See MRrules MR10.6 for the phonological interpretation of the 2nd singular plural negative imperative suffixes -Ihama and -Ihava, and M11.7 for the interpretation of the morphophoneme I.

8.1.38.8 Note also that imperative cannot co-occur with QUES, INTERROG, UNCERT. These are blocked by conditions placed on the morpheme realization rules.¹

8.1.38.9 The non-immediate imperative has only one form, viz. -Iso which is used only for 2nd person singular subjects. The following examples illustrate this form:

(8.1.38.9a) vodohuso! 'Nurse it (at some later time)!'

¹

Alternatively this may be achieved by writing a blocking dummy symbol into PS rule 8.1.38.

No investigation has been made of the permutability of these elements with others in the sentence, except that it is known that they cannot occur sentence initial.

8.1.39.1 The sets of suffixes expanding SubjA and SubjB are closely related in that the SubjB set can easily be derived from the SubjA set as can be seen from the following:

	<u>SubjA</u>	<u>SubjB</u>
1st, 3rd Sg.	- <u>hi</u>	- <u>hima</u>
2nd Sg.	- <u>ha</u>	- <u>hama</u>
1st, 2nd, 3rd Pl.	- <u>ha</u>	- <u>hava</u>

This might suggest a further conflation of the PS rules at this point. However, such a conflation could be achieved only at the expense of complicating the transformation rules to effect the correct agreements.

8.1.39.2 The following examples illustrate the various combinations of subjunctive material.

(8.1.39.2a) Subj [SubjA]:

<u>da-ne</u>	<u>a-ni</u>	<u>kuku</u>	<u>be</u>	<u>ki</u>	SubjA[- <u>hi</u>]?
I-Q	YOU-TO	TOBACCO	SOME	MAKE	SHOULD
'Should I give (= make) some tobacco to you?'					

(8.1.39.2b) Subj[SubjA^inau]:

meikana, da [inau] ota SubjA[-hi].

PERHAPS I PERHAPS GO SHOULD

'Perhaps. Perhaps I should go.'

(8.1.39.2c) Subj[SubjB]:

kekei! da kure-va SubjB[-hima].

(GO) SLOWLY I FALL-SR- MIGHT

'(Go) slowly! I might fall down [because the rocks
are slippery, say].'

(8.1.39.2d) Subj[SubjB^nema]:

nuhe-ge da [nema] homo va-ma SubjB[-hima].

TOMORROW-SPEC I THEN HAIR KILL-SR- MIGHT

'Tomorrow I might shave.'

(8.1.39.2e) Subj[SubjB^nema^beta]:

urihe-ge no [nema] [beta] eke i

DAY AFTER TOMORROW-SPEC WE THEN INSTEAD THAT EAT-

SubjB[-hava].

MIGHT

'We might eat them the day after tomorrow instead
[of having to prepare them or do something else
with them].'

(8.1.39.2f) Subj[SubjB^{^nema}^{^beu}]:

vani-neme-he-ge no [nema][beu] more-he tia
 DAY-MID-AT-SPEC WE THEN ABLE THERE BAMBOO
bovi-ha oti SubjB[-hava].
 CUT-IN ORDER TO GO MIGHT

'At noon we can then go (down) there to cut bamboo.'

(8.1.39.2g) Subj[SubjB^{^beta}]:

da [beta] a mavoi SubjB[-hima].
 I INSTEAD YOU BURN MIGHT

'I might burn you instead [of putting the
 hot thing on the table, say].'

8.1.40 Indic ---> $\left\{ \begin{array}{l} (\text{AuxSR}) \text{ IndicA} \\ \text{IndicB (UNU)} \end{array} \right\}$ (<8.1.37)

IndicA = Indicative Mode (Type) A

IndicB = Indicative Mode (Type) B

AuxSR = Auxiliary Subject Referent (8.1.31)

UNU = ('to be') (8.1.9.2)

8.1.40.0 The division of Indic into two types A and B is to account for the observed correlation between (a) different combinations of certain tense-aspect suffixes and the transform potential of verbs containing these; and (b) different combinations of certain tense-aspect

suffixes and the conjunctions which can be used to conjoin sentences containing these.

Thus verbs containing the elements past[^]contin and pres[^]contin can optionally be transformed using an auxiliary subject referent(AuxSR) together with the same combination of tense-aspect elements. For example:

(8.1.40.0a) da ruka-va IndicA[-nu].

I CUT SR(SG.) -PAST

'I cut it.'

can optionally be transformed into:

(8.1.40.0b) ruka-vi-yavare da AuxSR[va] IndicA[-nu].

CUT-SR(SG.)-SPEC I SR(SG.) -PAST

'I cut it' (perhaps lit. 'Cutting it I was')

Similarly verbs containing other combinations of tense-aspect elements can be transformed using UNU. For example:

(8.1.40.0c) da ota IndicB[-rihe-ro].

I GO -FUT -SPEC

'I'll go.'

can optionally be transformed into:

(8.1.40.0d) ota IndicB[-rihe-re] da UNU[unu].

GO -FUT-SPEC I BE

'I'll go' (Perhaps lit. 'Going I'll be').

A glance at the listing of conjunctions in Section 8.2.22.3 will show also which conjunctions can occur with the two types of Indicative Mode: A or B.

8.1.40.1 Note that if either AuxSR or UNU is chosen in the expansion 8.1.40 then the Substitute will obligatorily occur between the rest of the verb material and AuxSR or UNU as the case may be. For AuxSR extra phonological material -Yavare will be introduced by the re-arrangement T rule T9.1.4b. This material 'behaves' like a specifier though it will not have plural forms, for example, since it is attached to verb material and therefore does not enter into agreement with nouns.

8.1.40.2. Note also that vehite<rE> may be chosen optionally as a negative (NEG) in expansions containing AuxSR or UNU. If vehite<rE> is chosen then -Yavehite<rE> will replace -Yavare in expansions containing AuxSR and this later element will be replaced by UNU; or for expansions containing UNU vehite<rE> will replace the specifier rE on the IndicB material. The following examples illustrate these points:

(8.1.40.2a) ruka-vi-yavehite-re da unu.
 CUT-SR(SG.)-NEG-SPEC I BE
 'I didn't cut it.'

Cf. examples 8.1.40.0 a and b above.

(8.1.40.2b) ota-rihe-vehite-re da unu.

GO- FUT- NEG -SPEC I BE

'I'll not go.'

Cf. examples 8.1.40.0c and d above.

The optional rules effecting these changes are not included in this grammar.

8.1.41 Indica ---> $\left. \begin{array}{l} \text{past} \\ \text{pres} \end{array} \right\}$ punct (ma) (<8.1.40)

past = past tense (8.1.42)

pres = present tense (8.1.42)

punct = punctiliar aspect (8.1.42)

ma = perfective marker

8.1.40.0 Indicative mode type A is expanded as a combination of either past or present tense with punctiliar aspect.

8.1.41.1 The following examples illustrate the various combinations of Indica material:

(8.1.41.1a) Indica[past^punct]:

da vodohu past[-ni] punct[-u].

I HOLD -PAST =PUNCT

'I held it.'

(8.1.41.1b) IndicA[pres^punct]:

da vodohu pres[-m] punct[-a].

I HOLD -PRES -PUNCT

'I'm holding it.'

(8.1.41.1c) IndicA[past^punct^ma]:

da [ma] vodohu past[-ni] punct[-u].

I PERF HOLD -PAST -PUNCT

'I've (already) held it.'

(8.1.41.1d) IndicA[pres^punct^ma]:

da [ma] vodohu pres[-m] punct[-a].

I PERF HOLD -PRES -PUNCT

'I'm already holding it.'

8.1.41.2 Morpheme realization rules will interpret tense and aspect elements phonologically for IndicA and IndicB. See Section 10.19.

8.1.41.3 ma is a grammatical formative which is not expanded further in the grammar. It normally occurs following the substitute and will be shifted to this position by T rule T9.1.12. Note that the meaning of ma is indefinite but can be roughly translated as 'already, just' or by perfective auxiliary 'have'.

(8.1.42.0c) IndicB[fut^repet^rE]:

da vodohu fut[-ri] repet [-gare] -ro.
 I HOLD -FUT -REPET -SPEC
 'I'll be holding it (regularly).'

(8.1.42.0d) IndicB[pres^contin^rE]:

da vodoh pres[∅] contin[-are] -ro.
 I HOLD -PRES -CONTIN -SPEC
 'I'm holding it.'

(8.1.42.0e) IndicB[pres^repet^rE]:

da vodohu pres[∅] repet[-gare] -ro.
 I HOLD -PRES -REPET -SPEC
 'I am holding it (regularly).'

(8.1.42.0f) IndicB[past^contin^rE]:

da vodohu past[-ni] contin[-are] -ro.
 I HOLD -PAST -CONTIN -SPEC
 'I was holding it.'

(8.1.42.0g) IndicB[past^repet^rE]:

da vodohu past[-ni] repet[-gare] -ro.
 I HOLD -PAST -REPET -SPEC
 'I was holding it (regularly).'

8.1.42.1 rE is a specifier which is always realized.¹

However, it only changes form for plural subjects when UNU is selected in the expansion of Indic in PS rule

8.1.40. Consider the following examples:

(8.1.42.1a) no otarihe Spec[-ro].

WE GO+FUT -SPEC

'We'll go.'

(8.1.42.1b) otarihe Spec[-yabe] no UNU[ua].

GO-FUT -SPEC WE BE

'We'll go.'

1

The explanation for this is probably historical, i.e., that this represents a recent development from the use of UNU which is treated here as an optional choice.

8.2 Lexical Rules

8.2.0.1 This section contains rules which map lexical categories into Complex Symbols (CS), subcategorization rules, and sample lexical entries.

8.2.0.2 Theoretically lexical entries should be of the form (D, C), where D is a distinctive feature matrix and C is a complex symbol for a set of features of various sorts, e.g., 'syntactic and semantic features, features that specify which morphological or transformational processes apply to strings containing the items in question, features that exempt items from certain phonological rules' (Aspects, p.164).

However, in this description the phonological material of the lexical entry is given in alphabetic morphophonemic symbols. Semantic features are not given but are merely hinted at by English glosses.

8.2.0.3 The specification of syntactic features involves both strict subcategorization and selection rules,¹ and is done according to the following conventions:

1

Chomsky distinguishes between these as follows:

'Rules...which analyze a symbol in terms of its categorial context, I shall henceforth call strict subcategorization rules. Rules...which analyze a

(footnote continued p.309)

(8.2.0.3a) (i) only positively specified strict subcategorization features and only negatively specified selectional features appear explicitly in lexical entries, the others being introduced by the auxiliary convention (ii);

(Aspects, p.164)

(ii) if the lexical entry (D, C) is not provided with the feature specification $[\alpha\varphi __ \psi]$ for the contextual feature $[\varphi __ \psi]$ (where $\alpha = +$ in the case of a strict subcategorization feature and $\alpha = -$ in the case of a selectional feature), then assign it the specified feature $[-\alpha\varphi __ \psi]$.

(Aspects, p.165)

(8.2.0.3b) ...a base rule that analyzes the lexical category A into a complex symbol automatically includes the feature [+A] as one of the elements of this complex symbol...[and] each lexical entry automatically, by convention, contains the feature [-A] for every lexical category A, unless it is explicitly provided with the feature [+A].

(Aspects, p.110-1)

(8.2.0.3c) suppose that $([\alpha_1 F_1], \dots, [\alpha_n F_n])$ is a maximal hierarchic sequence with respect to the grammar G, and that (D, C) is a lexical entry of G, where C contains $[\alpha_n F_n]$. Then C is extended automatically

(footnote 1 continued from p.308)

symbol (generally a complex symbol) in terms of syntactic features of the frames in which it appears, I shall call selectional rules. The latter express what are usually called "selectional restrictions" or "restrictions of occurrence".'

(Aspects, p.95; Chomsky's emphasis)

to C' containing C along with all of the specified features $[\alpha_i F_i]$, for each i , $1 \leq i < n$.

(Aspects, pp.165-6)

(8.2.0.3d) Let us say that the feature $[\alpha F]$ is lexically determined in the grammar G if there is a hierarchic sequence $([+K], \dots, [\alpha F])$ with respect to G , where K is a lexical category ($\alpha = +$ or $-$). This is to say that if (D, C) is a lexical entry and C contains $[\alpha F]$, then (D, C) is necessarily a member of the lexical category K , with respect to this entry, and it is unnecessary (by virtue of convention [(8.2.0.3c)]) to list $[+K]$ in C .

(Aspects, p.166; Chomsky's emphasis)

8.2.0.4 Lexical items are inserted into terminal strings in accordance with the convention stated in Aspects, p.164 (and earlier discussed on p.84) that:

the proper method for inserting lexical items is by a general rule that inserts the lexical entry (D, C) in a position $\dots Q \dots$ in a Phrase-marker (Q being a complex symbol developed by rewriting rules), where C is not distinct from Q in the technical sense of feature theory.

8.2.1 $N \rightarrow CS$ (<8.1.3; 8.1.25)

8.2.1.0 In this description N is rewritten as a Complex Symbol before other category symbols because Nouns are taken to be selectionally dominant.¹

¹

Nouns are said to be selectionally dominant 'in the sense that...[their] feature composition is determined by context-free subcategorization rules,...[their]'
(footnote continued p.311)

8.2.1.1 The category N is introduced in PS rules 8.1.3 and 8.1.25 which expand Vocative and NP respectively. Thus Koiari nouns should theoretically be strictly subcategorized into sixteen grammatical types corresponding to the following 'frames' in which they occur in the expansion of NP:

[— - <u>e</u>]	(<8.1.3)
[— - <u>duna</u>]	(<8.1.3)
[#S# —]	(<8.1.25)
[#S# — DemP]	(<8.1.25)
[#S# — DemP^Num]	(<8.1.25)
[#S# — DemP^Num^Lim]	(<8.1.25)
[#S# — Num]	(<8.1.25)
[#S# — Num^Lim]	(<8.1.25)
[#S# — Lim]	(<8.1.25)
[— DemP]	(<8.1.25)
[— DemP^Num]	(<8.1.25)
[— DemP^Num^Lim]	(<8.1.25)
[— Num]	(<8.1.25)
[— Num^Lim]	(<8.1.25)

(footnote 1 continued from p.310)

features being carried over by selectional rules to other lexical categories'. (Aspects, p.116).

See also Aspects, p.114ff. for a discussion of an alternative proposal suggesting that Verbs be subcategorized by a context-free rule and then selectional features associated with them are used to subcategorize 'Subject' and 'Object' nouns. Chomsky rejects this as introducing considerable and unnecessary complication into the grammar (p.115).

[___Lim] (<8.1.25)

[___] (<8.1.25)

8.2.1.2 However, nouns in Koiari are redundantly subcategorized by many of these contextual features. Thus any noun which can occur in the environment of a Demonstrative Phrase (i.e., has the contextual feature +[—DemP]) can also occur in the environment of #S#, and/or Num, and/or Lim. On the other hand there are some nouns which can only occur in the frames [—], [—Num], [—Num^Lim], and [—Lim]. These are redundantly subcategorized by the contextual features +[—Num^Lim] and +[—Lim]. That is, any noun which has the contextual feature +[—Num] will predictably have these latter features. All nouns have the contextual feature +[—] in common. Thus the following two redundancy rules are proposed to state these regularities:

(8.2.1.2a) +[—DemP] ---> +[#S#—], +[#S#—DemP],
 +[#S#—DemP^Num],
 +[#S#—DemP^Num^Lim],
 +[#S#—Num^Lim],
 +[#S#—Num], +[#S#—Lim],
 +[—]

(8.2.1.2b) $+[\text{---Num}] \text{ ---} \rangle +[\text{---Num}^{\wedge}\text{Lim}], +[\text{---Lim}],$
 $+[\text{---}].$

In these rules the arrow ($\text{---}\rangle$) means 'add the features specified on the right-hand-side of the arrow to those specified on the left-hand-side.'

Thus the principal subcategories of nouns which appear to be relevant to Koiari syntax are Pronouns and Proper Names (whose features are $[+N, +[\text{---Num}]\dots]$) and other nouns (whose features are $[+N, +[\text{---DemP}]\dots]$). However, the features $+[\text{---} \underline{-e}]$ and $+[\text{---} \underline{-duna}]$ will further subcategorize these principal classes. Thus the feature $+[\text{---} \underline{-e}]$ will distinguish between Proper Names and Pronouns and the features $+[\text{---} \underline{-duna}]$ will distinguish geographical location proper names from the remainder of other nouns with the feature $+[\text{---DemP}]$. The following examples illustrate these subcategories:

<u>ata</u> $\langle rE \rangle$	$[+N, +[\text{---DemP}], \dots]$	'man'
<u>gavada</u> $\langle rE \rangle$	$[+N, +[\text{---DemP}], +[\text{---} \underline{-duna}], \dots]$	'Gavada' (mountain name)
<u>da</u> $\langle Ike \rangle$	$[+N, +[\text{---Num}], \dots]$	'I'
<u>nanuka</u> $\langle rE \rangle$	$[+N, +[\text{---Num}], +[\text{---} \underline{-e}]$	'Nanuka' (personal name)

8.2.1.3 However, it will also be necessary to further subcategorize Pronouns for verb MOOD agreements. The

following rules separate Pronouns from Proper Names and subcategorize Pronouns and other nouns in terms of person:

- (8.2.1.3a) +[—Num] ---> [± Pro]
 (8.2.1.3b) [+ Pro] ---> [± Person]
 (8.2.1.3c) [+ Person] ---> [± 1st
 (8.2.1.3d) +[—DemP] ---> [- Person]

8.2.1.4 Nouns are also subcategorized with respect to the syntactic feature of number:

- (8.2.1.4a) [+N] ---> [± sg]

Most nouns in Koiari will be specified ambiguously for this feature since there are few nouns which have different forms for singular and plural reference. Those which do are most kinship terms of reference, and some individual words which refer to groups of persons, e.g., children, people, one's lineage or associated group. The following examples illustrate these lexical idiosyncracies:

- ata [± sg] 'man, men'
biya [- sg] 'people' (only when qualified by a Proper Name referring to a location, e.g., Ogotanabiya 'Ogotana people')

<u>rea</u>	[- sg]	'associated group' (only when qualified by a Personal Name, e.g., <u>Nanukarea</u> 'The group associated with Nanuka')
<u>vami</u>	[+ sg]	'boy, child'
<u>vamiyano</u>	[- sg]	'children'
<u>mamaka</u>	[+ sg]	'father'
<u>mamuhea</u>	[- sg]	'fathers'
<u>moeka</u>	[+ sg]	'son'
<u>vamuhea</u>	[- sg]	'sons'
...		...

8.2.1.5 Nouns are also subcategorized with respect to the syntactic features [animate] and [human] since these are relevant to the form a noun will take when possessed, or to the choice of nouns for certain phrases (e.g., location). The following rules make these subcategorizations:

(8.2.1.5a) [+N] ---> [± animate]

(8.2.1.5b) [+ animate] ---> [± human]

The Koiari pronouns can now be listed:

(8.2.1.5c) da [+ 1st, + sg, + human, ...] 'I'

a [- 1st, + sg, + human, ...] 'you'

ahu [- Person, +sg, + human, ...] 'he, she'

ahu [- Person, +sg, - human, ...] 'it'

no [+ 1st, - sg, + human,...] 'we'
ya [- 1st, - sg, + human,...] 'you(pl.)'
yabu [- Person, - sg, ± human,...] 'they'

8.2.1.6 Finally nouns need to be further subcategorized to predict their behaviour when possessed. The following rules make the necessary subcategorizations:

- (8.2.1.6a) [+N] --> [±inherently possessed]
 (8.2.1.6b) [+inherently possessed] --> [± reduce]
 (8.2.1.6c) [-inherently possessed] --> [±add syllable

 $\left. \begin{array}{c} \underline{ve} \\ \underline{ze} \\ \underline{he} \\ \underline{me} \\ \dots \end{array} \right\}]$

Underlying these rules are the facts that nouns whose referents are body parts (including parts of plants, houses, etc.) and kinship terms are inherently possessed in that they must necessarily be associated with something or someone. These nouns are usually marked by a final syllable ka. Hence these nouns will be separated from others by the rule 8.2.1.6a. However, these same nouns may be further subcategorized according to their behaviour when possessed by human nouns. Thus for some nouns the final vowel is changed to e. These are

accounted for by the feature [-reduce]. For others the final syllable is deleted and the then final vowel is changed to e. These are identified by the feature [+reduce]. The following examples illustrate this behaviour:

(8.2.1.6d)	<u>mabara</u>	'wife	da <u>mabare</u>	'my wife'
	<u>mamaka</u>	'father'	da <u>mame</u>	'my father'

...

On the other hand non-inherently possessed nouns (i.e., those with the feature [-inherently possessed]) all add a syllable when possessed by human nouns. So far the syllables ve, ʒe¹, he, and me have been identified. ve is the most common and all loan words seem to belong to this class. The following examples illustrate the four types of non-inherently possessed nouns:

(8.2.1.6e)	<u>motuka</u>	'vehicle'	da <u>motuka-ve</u>	'my vehicle'
	<u>idi</u>	'tree'	da <u>ide</u>	'my tree'
	<u>ita</u>	'water'	da <u>ita-he</u>	'my water'
	<u>mata</u>	'land'	da <u>mata-me</u>	'my land'

...

Morpheme realization rule MR10.10, which applies after the Possessive Construction T rule (T9.2.3), will

1

ʒ of the syllable ʒe is a morphophoneme which changes the final vowel to e of any word to which it is attached. See morphophonemic rule M11.9.

phonologically interpret the syntactic information presented by these latter rules of the lexical entry for nouns.

8.2.2 Demon ---> CS (<8.1.26; 8.1.29)

8.2.2.0 The category Demonstrative (Demon) is introduced in PS rules 8.1.26 and 8.1.29 which expand DemP and DesAdvP respectively. Thus Demonstratives are strictly subcategorized with respect to the following contextual features:

[—] (<8.1.26)

[D—] (<8.1.26)

[— ateki <gE>] (<8.1.29)

8.2.2.1 All Demonstratives will have the contextual feature +[—]. Several, viz., oko 'this' eke 'that' will not have the contextual feature +[D---], and only these latter two members of the category will have the contextual feature +[— ateki <gE>].

8.2.2.2 The semantic dimensions of Demonstratives are many and varied. Distinctions are made for increasing distance and/or direction away from the speaker. Although the semantic aspects of all demonstratives are not completely understood at the moment the following

rules will be sufficient to subcategorize Demonstratives for present purposes:

(8.2.2.2a)	[+Demon]	---	[± distal]
(8.2.2.2b)	[-distal]	---	[± proximate]
(8.2.2.2c)	[-proximate]	---	[± aside]
(8.2.2.2d)	[-aside]	---	[± upstream]

8.2.2.3 The following examples illustrate the variety of Demonstratives in Koiari:

<u>oko</u> <rE>	[+Demon, +[—], +[— <u>ateki</u> <gE>], [+proximate]]	'This (near speaker)'
<u>eke</u> <rE>	[+Demon, +[—], +[— <u>ateki</u> <gE>], [+distal]]	'That (just over there)'
<u>hore</u> <rE>	[+Demon, +[—], +[D—], [+upstream,...]]	'That (up there)'
<u>more</u> <rE>	[+Demon, +[—], +[D—], [-upstream,...]]	'That (down there)'
<u>vere</u> <rE>	[+Demon, +[—], +[D—], ... [+aside,...]]	'That (over there)'

8.2.2.4 All demonstratives will have additional features (e.g., ±human, ±sg) added to them by transformational rule T9.1.2 so that they agree with

the Noun in the Noun Phrases in which they occur, or which they substitute for in NOM (see Section 8.1.7).

8.2.3 D ---> CS (<8.1.26)

8.2.3.0 The category Determiner (D) is introduced in PS rule 8.1.26 which expands DemP. Only one small closed class of Determiners occurs. This class contains the members eke, and ki. These members have a common contextual feature +[—Demon], which is redundant to the category feature [+D] and therefore will not be specified in any list of features for Determiners.

8.2.4 Num ---> CS (<8.1.25)

8.2.4.0 The Category Numeral (Num) is introduced in PS rule 8.1.25 which expands NP. Thus numerals are strictly subcategorized by the following frames in which they occur:

[#S#^N^DemP—]

[#S#^N^DemP—Lim]

[#S#^N—]

[#S#^N—Lim]

[N^DemP—]

[N^DemP—Lim]

[N—]

[N—Lim]

8.2.4.1 Numerals are redundantly subcategorized by these frames, since any numeral can occur with any noun, provided that the selectional features of number are satisfied. Thus igau 'one, alone' cannot occur with plural nouns (i.e., those specified as [-sg]), and abuti 'two' cannot occur with singular nouns (i.e., those specified as [+sg]). Some numerals, e.g., be, 'a, some' and vaita 'a (certain one), some (certain ones)' can occur with singular and plural nouns, although they cannot occur in the environment of Pronouns. Finally, Numerals are subcategorized by the inherent features [\pm Positive]. This separates the negative numeral vehite 'none' from all others. The following examples illustrate how Koiari numerals are entered in the lexicon:

igau <gE> [+Num, -[(#S#)[-sg] (DemP) — (Lim)],
+ Positive, ...] 'one, alone'

abuti <gE> [+Num, -[(#S#)[+sg] (DemP) — (Lim)],
+ Positive, ...] 'two'

nunuta <gE> [+Num, -[(#S#)[+sg] (DemP) — (Lim)],
+ Positive, ...] 'all'

be <rE> [+Num, -[(#S#)[+Pro] (DemP) — (Lim)],
+ Positive, ...] 'a, some'

have restricted distributions. Thus -eneve<rE> '(the) very' cannot occur with Pronouns, while -vau<gE> 'self' can only occur with Pronouns. Thus the latter two are selectionally restricted with respect to the feature [Pro] of Nouns. The following listing illustrates how the four limiters are listed in the lexicon:

<u>-unave</u> <rE>	[+Lim, +[#S#] N(DemP)(Num)——],...	'only'
<u>-tae</u> <gE>	[+Lim, +[#S#] N(DemP)(Num)——],...	'also'
<u>-eneve</u> <rE>	[+Lim, +[#S#] N(DemP)(Num)——],	'(the)
	-[[+Pro](Num)——],...	very'
<u>-vau</u> <gE>	[+Lim, -[#S#]N(DemP)——],	'self (≠
	+[[+Pro](Num)——],...	reflexive)'

8.2.5.2 Note that unave<rE> is also a member of the category ManAdv (8.2.15).

8.2.6 Adj ---> CS (<8.1.27)

8.2.6.0 The category Adjective (Adj) is introduced in PS rule 8.1.27 which expands AdjP. Adjectives are thus strictly subcategorized by the following 'frames':

[——]
[—— <u>-mava</u> <vahE>]
[—— <u>-bata</u> <vahE>]
[—— <u>-kaye</u> <rE>]

8.2.6.1 Four subclasses of adjectives have so far been identified. All adjectives are positively specified for the contextual feature [—]. However, some will be positively specified only for this contextual feature. These are those adjectives which cannot occur within one of the remaining three frames listed above, for example:

<u>kohi</u> ⟨rE⟩	'male'
<u>mabata</u> ⟨varE⟩	'female'
<u>maite</u> ⟨rE⟩	'true'
<u>kibe</u> ⟨rE⟩	'(a) little (bit)'
...	

Other adjectives are divided into three subclasses according to the remaining three contextual features. These subclasses are:

- (a) maiteka⟨vahE⟩ [+Adj, +[—], +[— -mava⟨vahE⟩, ...] 'good'

Most of the common adjectives will be entered in the lexicon in this way, e.g., misuka⟨vahE⟩ 'small', komara⟨vahE⟩ 'bad', yoreka⟨vahE⟩ 'soft', keare⟨vahE⟩ 'big', oboa⟨vahE⟩ 'many', youka⟨vahE⟩ 'many', dubuka⟨vahE⟩ 'black', kaekae⟨vahE⟩ 'white', egeka⟨vahE⟩ 'long', riritaka⟨vahE⟩ 'long', ...;

(b) oboa⟨vahE⟩[+Adj, +[—], +[— -bata⟨vahE⟩],
...] 'many'

This is the only member of this subclass so far identified. Note that it may alternatively occur in subclass (a).

(c) keare⟨vahE⟩[+Adj, +[—], +[— -kaye⟨rE⟩],
...] 'big, tall'

This is the only member of this subclass so far identified. Note that it may also alternatively occur in subclass (a).

8.2.7 PredAdj ---> CS (<8.1.28)

8.2.7.0 The category Predicative Adjective (PredAdj) is introduced in PS rule 8.1.28 which expands PredAdjP. Thus Predicative Adjectives are strictly subcategorized with respect to the following contextual features:

+ [—]

+ [—Int]

8.2.7.1 All Predicative Adjectives will be positively specified for these two features, e.g.,

gorogo [+PredAdj, +[—(Int)],...] 'sick'

Other Predicative Adjectives are: nihoru 'happy', vani 'painfull', (haha)vumaha 'tired', mati 'ashamed', vavi

'hungry', dona 'untruthful', ita tau 'thirsty',
homoberebe 'angry', horuhoru 'crazy', libiri 'cold',
huhune 'hot (of one's body)'.

8.2.8 Int ---> CS (<8.1.28)

8.2.8.1 The category Intensifier is introduced in PS rule 8.1.28 which expands PredAdjP. Only one small closed class of Intensifiers has been observed. This class contains the members keare 'big' and kibe '(a) little (bit).' These members are strictly subcategorized by the frame [PredAdj_____]. However, because this contextual feature is common to both members it will not be overtly specified in any list of features for Intensifiers.

8.2.8.1 Note that these two lexical items are also members of the category Adjective (8.2.6), and that kibe is also a member of the category Modifier (8.2.16).

8.2.9 ProSub ---> CS (<8.1.8)

8.2.9.0 The category Pronominal Substitute (ProSub) is introduced by PS rule 8.1.8 which expands Sub. Thus all Pronominal Substitutes have the common contextual feature +[_____] which need not therefore be specified in

the lexicon. However, members of the category will be subcategorized by the following rules which will determine their selection with NP's dominated by NOM with the same features:

(8.2.9.0a) [+ProSub] ---> [±Person]

(8.2.9.0b) [+Person] ---> [±1st]

(8.2.9.0c) [+ProSub] ---> [±sg]

(8.2.9.0d) [+ProSub] ---> [±human]

8.2.9.1 The members of the category Pronominal

Substitute are:

<u>da</u>	[+ProSub, +1st, +sg, +human, ...]	'I'
<u>a</u>	[+ProSub, -1st, +sg, +human, ...]	'You'
<u>ahu</u>	[+ProSub, -Person, +sg, +human, ...]	'He, she'
<u>ahu</u>	[+ProSub, -Person, +sg, -human, ...]	'It'
<u>no</u>	[+ProSub, +1st, -sg, +human, ...]	'We'
<u>ya</u>	[+ProSub, -1st, -sg, +human, ...]	'You(pl.)'
<u>yabu</u>	[+ProSub, -Person, -sg, ±human, ...]	'They'

Note that these are identical to Pronouns (8.2.1.5c).

8.2.10 Interjection ---> CS (<8.1.1)

8.2.10.0 The category Interjection is introduced by PS rule 8.1.1 which expands S*. Thus all Interjections have the common contextual feature +[_____]. Because this

8.2.12 Address ---> CS (<8.1.2)

8.2.12.0 The category Address is introduced by PS rule 8.1.2 which expands PreS. Thus all members of this category have the common contextual feature +[____]. Because this feature is common to all members it will not be specified in the list of features for members of this category in the lexicon. Examples are all kinship terms of address:

<u>baba</u>	[+Address,...]	'father'
<u>ineka</u>	[+Address,...]	'mother'
<u>vaiuki</u>	[+Address,...]	'mother's brother'
...		

8.2.12 Tword ---> CS (<8.1.10)

8.2.13.0 The category Tword is introduced by PS rule 8.1.10 which expands T. Thus all Twords have the common contextual feature +[____].

8.2.13.1 However, Twords inherently distinguish between present and non-present time reference, although past and future non-present time are not distinguished by different Twords in Koiari. The following rules subcategorize Twords on the basis of inherent features:

[+Tword]	--->	[±present]
[+present]	--->	[±immediacy]
[-present]	--->	[±future]

8.2.13.2 The following is a sample of Koiari Twords.

For some words in this listing the semantic interpretation of [+fut] is given before that of [-fut] where [±fut] is a specified feature:

<u>negetu</u> <gE>	[-immediacy,...]	'now'
<u>ekenakike</u> <gE>	[+immediacy,...]	'(right) now'
<u>nuhe</u> <gE>	[±fut,...]	'tomorrow, yesterday'
<u>urihe</u> <gE>	[±fut,...]	'the day after tomorrow, the day before yesterday'
<u>vararati</u> <gE>	[±fut,...]	'in the morning'
<u>vamaba</u> <gE>	[±fut,...]	'in the afternoon'
<u>vaubu</u> <gE>	[±fut,...]	'in the night'

...

8.2.13.3 Note that the last three items require some other information (perhaps formally statable in Fillmore's supposition rules - see Section 7.3.1) for their correct semantic interpretation.

8.2.13.4 Note also that for the purposes of this grammar gabidahe <gE> 'later', urihe <gE> 'tomorrow, yesterday,...' are considered Twords rather than time phrases. To a certain extent this represents an

arbitrary decision to simplify the lexical entries and to preserve the unity of the semantic field. It is probable that such expressions could also be treated as time phrases marked by the enclitic -he, although nuhe⟨gE⟩ would not fit this description, since nu does not occur elsewhere as a separate morpheme.

8.2.14 Time ---) CS (8.1.11)

8.2.14.0 The category Time is introduced by PS rule 8.1.11 which expands TimeP. Thus Time is strictly subcategorized by the following contextual features:

+ [NP ____]
+ [#S# ____].

8.2.14.1 Only two members of the category Time occur: -va⟨gE⟩ 'on, for' occurs only in the environment of NP's, and -he⟨gE⟩ with #S#. Both are enclitics. Those nouns which occur as the head of NP's with -va⟨gE⟩ will be marked positively for the feature [Time] to separate them from other nouns which cannot. Many common English and Motu nouns of time have now been incorporated into Koiari and now form part of their everyday vocabulary, e.g., hours of the day, days of the week, and months of the year, fura (<Motu) 'week', ragani (<Motu) 'year', viki (<English) 'week'.

8.2.14.2 The two members of the category Time are entered in the lexicon as follows:

-va<gE> [+Time, +[[+Time,...]___],..., +Loc,...] 'on,
for'

-he<gE> [+Time, +[#S#___],..., +Loc,...] 'at, during'

8.2.14.3 Note that these enclitics are also members of the category locative (8.2.18).

8.2.15 ManAdv ---> CS (<8.1.33; 8.1.34)

8.2.15.0 The category Manner Adverb (ManAdv) is introduced by PS rules 8.1.33 and 8.1.34 which expand M_1 and M_2 respectively. Hence manner adverbs are strictly subcategorized by the following contextual features:

+ [___ -vahA<gE>] (<8.1.33)

+ [___ Mod^-vahA<gE>] (<8.1.33)

+ [___ AuxSR] (<8.1.34)

8.2.15.1 The feature + [___ Mod^-vahA<gE>] is redundant to the feature + [___ -vahA<gE>] since all adverbs which have this latter feature also have the former. However, not all adverbs with these features can be reduplicated. Hence the following rules are needed to distinguish

between those which can and those which cannot be reduplicated:

(8.2.15.1a) +[____(Mod)-vahA<gE>] ---> [+reduplicatable]

8.2.15.2 The following is a sample listing of Koiari manner adverbs:

saya [+ManAdv, -reduplicatable,...] 'careful'

Other adverbs with similar features are:

maite 'proper, true', koma 'bad', hegeregere^ϕ 'enough'.

soreka [+ManAdv, +reduplicatable.,.,] 'quick'

Other adverbs with similar features are:

keke 'slow', koro 'always', hanai^ϕ 'always', rauke 'shaking'.

vaita [+ManAdv, +[____AuxSR],...] 'again'

Other adverbs with similar features are:

unave 'only', mava or kava^ϕ 'for no reason', bubu 'a lot'.

...

8.2.16 Mod ---> CS (8.1.33)

8.2.16.0 The category Modifier (Mod) is introduced by PS rule 8.1.33 which expands M_1 . Thus all Modifiers have the common features +[ManAdv____-vahA<gE>]. Because this is common to all members it will not be specified

^ϕ

These are Motu loans now in popular use.

in any list of features for Modifiers in the lexicon.

The following two members have been observed:

<u>mava</u>	[+Mod,...]	'very'
<u>kibe</u>	[+Mod,...]	'(a) little (bit)'

8.2.16.1 Note that mava also occurs in PS rule 8.1.27 which expands AdjP, and kibe is also a member of the categories Adjective (8.2.6) and Intensifier (8.2.8).

8.2.17 Lword ---> CS (8.1.14)

8.2.17.0 The category Lword is introduced by PS rule 8.1.14 which expands LOC. Thus all Lwords have the common contextual feature +[____], which will therefore not be overtly specified besides the category feature in the listing of features for any Lword in the lexicon.

8.2.17.1 So far only one Lword has been observed in Koiari. This is evuri <gE> '(up) high.'

8.2.18 Loc ---> CS (8.1.15)

8.2.18.0 The category Locative (Loc) is introduced by PS rule 8.1.15 which expands LocP. Thus locatives are strictly subcategorized by the following contextual features:

+ [NP ____]
 + [SimP ____]
 + [#S# ____]

8.2.18.1 All locatives are enclitics, and most are selectionally restricted (a) by features inherent to nouns with which they occur in Locative Phrases (e.g., -hina⟨gE⟩ 'towards' only occurs with animate nouns); (b) by features beyond the Locative Phrases in which they occur (e.g., -tana⟨gE⟩ 'along (a road)' can only occur with verbs of motion). However, the complete specification of all these features is beyond the scope of this description. Only the most general features will be specified in the following sample lexicon of locatives:

<u>-da</u> ⟨gE⟩	[+Loc, +[NP ____], +[SimP ____],...]	'on top of'
<u>-va</u> ⟨gE⟩	[+Loc, +[NP ____], +[SimP ____],...]	'in, at, to, into, from'
<u>-he</u> ⟨gE⟩	[+Loc, +[NP ____], +[SimP ____], +[#S# ____],...]	'at, from'
<u>-tana</u> ⟨gE⟩	[+Loc, +[...+length...]____], +[with verbs of motion],...]	'along'
<u>-uhu</u> (va)⟨gE⟩	[+Loc, +[NP ____], +[SimP ____],...]	'(at, from) inside'

-hina⟨gE⟩ [+Loc, +[[...+animate...]___], 'towards,
from (a
+[verb of motion],...) person'

-behuva⟨gE⟩ [+Loc, +[NP___], +[SimP___],...] 'beside'

...

8.2.19 Accom ---> CS (<8.1.16)

8.2.19.0 The category Accompaniment Enclitic (Accom) is introduced by PS rule 8.1.16 which expands AccomP. Thus all members of this category have the common contextual feature +[NP___], which will not therefore be overtly specified besides the category feature in the listing of features for any accompaniment enclitic in the lexicon.

8.2.19.1 Two accompaniment enclitics occur: -vore⟨gE⟩ and -ruhuta⟨gE⟩ 'with'. These are two contextual variants depending on the inherent feature of number of the head noun of the Accompaniment Phrase (AccomP) in which they occur. Thus -vore⟨gE⟩ occurs with all singular nouns while -ruhuta⟨gE⟩ occurs with plural nouns (i.e., those with the feature +[-sg]). These two members of the category Accompaniment Enclitic are entered in the lexicon as follows:

-vore⟨gE⟩ [+Accom, +[[...+sg,...]___],...] 'with'
 -ruhuta⟨gE⟩ [+Accom, +[[...-sg,...]___],...] 'with'

8.2.20 Ben ---) CS (<8.1.17)

8.2.20.0 The category Benefactive Enclitic (Ben) is introduced by PS rule 8.1.17 which expands BenP. Thus all members of this category have the common contextual feature +[NP___], which will not therefore be overtly specified besides the category feature in the listing of features for any benefactive enclitic in the lexicon.

8.2.20.1 Two benefactive enclitics occur: -ni⟨gE⟩ and -vani⟨gE⟩ 'to, for'. These are contextual variants depending on inherent features of the head noun of the Benefactive Phrase (BenP) in which they occur. Thus -ni⟨gE⟩ occurs with non-inherently possessed nouns while -vani⟨gE⟩ occurs with inherently possessed nouns (see Section 8.2.1.6). Thus these two members of the category Benefactive Enclitic are entered in the lexicon as follows:

-ni⟨gE⟩ [+Ben, -[[...+inherently possessed,...]
 ___],...] 'to, for'
 -vani⟨gE⟩ [+Ben, -[[...-inherently possessed,...]
 ___],...] 'to, for'

8.2.21 Vroot ---> CS (<8.1.22; 8.1.24; 8.1.30)

8.2.21.0 The category Verb Root (Vroot) is introduced in PS rules rewriting VP, Quote and MOOD. Thus verb roots are strictly subcategorized with respect to the following 'frames':

[__Stative^SR^OR^M^MOOD]	(<8.1.22)
[__Stative^SR^OR^MOOD]	(<8.1.22)
[__SR^OR^M^MOOD]	(<8.1.22)
[__SR^OR^MOOD]	(<8.1.22)
[__SR^OR^M^MOOD^#S#]	(<8.1.24)
[__SR^OR^MOOD^#S#]	(<8.1.24)
[__SR^OR^M^Want^Mode]	(<8.1.30)
[__SR^OR^Want^Mode]	(<8.1.30)
[__SR^OR^M^Mode]	(<8.1.30)
[__SR^OR^Mode]	(<8.1.30)

8.2.21.1 Many of these frames redundantly strictly subcategorize verb roots. Thus all verb roots (as far as is known) may occur with a manner adverbial (M), and those verb roots which can occur with Mode can also occur with Want. Thus the following redundancy rules are proposed to state these regularities:

(8.2.21.1a)

$$\left[\begin{array}{l} +[___ \text{SR}^{\text{OR}} \text{MOOD}] \\ +[___ \text{Stative}^{\text{SR}} \text{OR}^{\text{MOOD}}] \\ +[___ \text{SR}^{\text{OR}} \text{MOOD}^{\#S\#}] \\ +[___ \text{SR}^{\text{OR}} \text{Mode}] \end{array} \right] \text{ ---> } \left[\begin{array}{l} +[___ \text{SR}^{\text{OR}} \text{M}^{\text{MOOD}}] \\ +[___ \text{Stative}^{\text{SR}} \text{OR}^{\text{M}} \text{MOOD}] \\ +[___ \text{SR}^{\text{OR}} \text{M}^{\text{MOOD}} \#S\#] \\ +[___ \text{SR}^{\text{OR}} \text{M}^{\text{Mode}}] \end{array} \right]$$

(8.2.21.1b)

$$+[___ \text{SR}^{\text{OR}} \text{Mode}] \text{ ---> } +[___ \text{SR}^{\text{OR}} \text{Want}^{\text{Mode}}]$$

Thus these are four possible subtypes of verb roots which will have the following contextual features:

- (a) $+[___ \text{Stative}^{\text{SR}} \text{OR}^{\text{MOOD}}]$
- (b) $+[___ \text{SR}^{\text{OR}} \text{MOOD}]$
- (c) $+[___ \text{SR}^{\text{OR}} \text{MOOD}^{\#S\#}]$
- (d) $+[___ \text{SR}^{\text{OR}} \text{Mode}]$

The first two features (i.e., (a) and (b)) separate those verb roots which can occur with Stative from those which cannot. The second two features - (c) and (d) - identify only two verb roots, viz. roi 'to say' and vare 'to leave (off)' respectively. Both these verb roots also belong to the subtype which will be specified positively for feature (a) above.

8.2.21.2 There will of course be further subdivisions amongst verb roots according to the syntactic features 'transitive, intransitive' etc. mentioned in Section 8.1.21.0.

8.2.21.3 Some verb roots are also selectionally restricted as regards plurality of subject and object nouns (see 8.1.41.1 and 8.1.21.0 for formal definitions of Subject and Object respectively). For example:

ma [+Vroot, +[NP[...+sg]]...___SR^OR^MOOD,...] 'to get
(one object)
didi [+Vroot, +[NP[...-sg]]...___SR^OR^MOOD, 'to get
...] (more than one object)
bou [+Vroot, +[___SR^OR^MOOD], -[+singular 'to
... subject],...] congregatè'

Verb roots may well be selectionally restricted also as regards the features animate and/or human of Subject and Object nouns, but no detailed investigation has been made of this.

8.2.21.4 Verb roots are also selectionally restricted as regards the form of the Subject Referent (SR) and Object Referent (OR) in the verb. Sample lists of these have already been given under the expansion of SR and OR in Sections 8.1.35 and 8.1.36 respectively above.

8.2.21.5 The following sample list of verb roots shows how these might be entered in the lexicon. It is to be

understood of course that it is not possible to give all subcategorizing and selectional features. Only the more obvious ones are listed.

<u>gura</u>	[+Vroot, +[___[sr1][or4] MOOD], +intransitive, -[-animate subject],...]	'to sit'
<u>va</u>	[+Vroot, +[NP[...+animate]]...___[sr1][or1] MOOD], +transitive,...]	'to kill'
<u>boko</u>	[+Vroot, +[NP[...-animate]]...___(Stative) [sr9][or2]MOOD, +transitive,...]	'to break'
<u>voi</u>	[+Vroot, +[___[sr9][or4] MOOD], +predicative, ...]	'to become'
<u>mo</u>	[+Vroot, +[___[sr9][or3]MOOD], +ditransitive, -[-animate subject],...]	'to give'
<u>ɘ¹</u>	[+Vroot, +[___[sr7][or4]MOOD], +predicative adjectival, -[-animate subject],...]	'to be (sick)'
<u>to</u>	[+Vroot, +[___[sr4][or4]MOOD], +quotative, -[-animate subject],...]	'to say, call out'
<u>vare</u>	[+Vroot, +[___[sr1][or4]MOOD], -[-animate subject],...]	'to leave (off)'
<u>roi</u>	[+Vroot, +[___[sr9][or4]MOOD#S#], -[-animate subject],...]	'to say'
...		

1

The verb root ɘ will be interpreted as phonologically zero by morphophonemic rule M11.10.

8.2.22 Conj ---> CS (<8.1.1)

8.2.22.0 The category Conjunction (Conj) is introduced in PS rule 8.1.1 which expands S*. Thus conjunctions are characterized by the contextual features +[PreS#S#___#S#] and +[#S#___#S#]. However, because these features are common to all members of this category they will not be overtly specified in the list of features for any conjunction.

8.2.22.1 Yet, if the lexical rules are to make the correct insertions in the structural indices of conjoining transformations (see T9.2.8-T9.2.12) it will be necessary to distinguish between phrasal and sentence conjunctions, and of the latter, between those which require changes in the structure of the conjunct sentences and those which do not.¹ Furthermore, some sentence conjunctions require changes only in the preceding conjunct; others require changes in both. And of those which require changes in the preceding conjunct there will be different choices depending on whether the subject of the conjunct sentences are

1

See discussion of Conjunctions in Section 8.1.1.3.

distinct or nondistinct.¹ The following rules are proposed therefore to make these necessary subcategorizations:

8.2.22.1a	[+Conj]	---	[±phrasal]
8.2.22.1b	[-phrasal]	---	[±requires changes in conjuncts]
8.2.22.1c	[+requires changes in conjuncts]	---	{ [+requires changes in preceding conjuncts] [+requires changes in both conjuncts] }
8.2.22.1d	[+requires changes in preceding conjuncts]	---	[±same subject] ²

8.2.22.2 Finally, conjunctions are selectionally restricted by the structure of the conjunct sentences they conjoin. For present purposes only one selectional

1

I assume that distinct and nondistinct can be defined as, say, a difference or non-difference respectively in the signs of the syntactic features [person] and [number] of the noun phrases manifesting the subject of each conjunct.

2

Note that these features are somewhat similar to those which McCawley suggests (see Section 7.3.2 above) in that they mark conjunctions as having particular behaviour with respect to some transformation. See also Aspects, p.174.

feature will be specified in the lexical entry of conjunctions. Other (semantic) features may also be relevant.¹

8.2.22.3 The following is a list of sentence conjunctions so far identified:

<u>o</u>	[+Conj, -requires changes in conjuncts, (+disjunction),...]	'or'
<u>baneke,</u> <u>banere,</u>		
;	[+ConJ, -requires changes in conjuncts, (-disjunction),...]	'but'
;	[+Conj, -requires changes in conjuncts, (+juxtaposition),...]	'and'

1

For example, it may prove descriptively desirable to include such a hierarchical feature tree as the following among the selectional features of conjunctions:

[+Conj]	--->	[±combination]
[+combination]	--->	[±juxtaposition]
[-juxtaposition]	--->	[±simultaneous time]
[-simultaneous time]	--->	[±sequential time]
[-sequential time]	--->	[±reason]
[-combination]	--->	[±disjunction]

-I <me>

[+Conj, -[#S[NOM^PP { [COMP^UNU
[...VP[...Mode { [Non-Immed]]]
[Subj]
[IndicB] } }]]] # ___ #S#],
+same subjects, (+simultaneous time?)
,...] 'and, and then'

-E <ge>

[+Conj, -[#S[NOM^PP { [COMP^UNU
[...VP[...Mode { [Non-Immed]]]
[Subj]
[IndicB] } }]]] # ___ #S#],
-same subjects,...] 'and, and then,
when, after'

-Yata <ge>

[+Conj, -[#S[NOM^PP { [COMP^UNU
[...VP[...Mode { [Non-Immed]]]
[Subj]
[IndicB] } }]]] # ___ #S#],
±same subjects,...] 'and then'

-Yebene...-Ye

[+Conj, -[#S[NOM^PP { [COMP^UNU
[...VP[...Mode { [Imper]]]
[Subj]
[IndicB] } }]]] # ___ #S#],
+requires changes in both conjuncts,...] 'If'

-U<me>

[+Conj, -[#S[NOM^PP [...VP[...Mode { [Imper]]]] #___#S#],
 { [Subj]
 [IndicA]

+same subjects,...]

'because'

-U<ge>

[+Conj, -[#S [NOM^PP[...VP[...Mode { [Imper]]]] #___#S#],
 { [Subj]
 [IndicA]

-same subjects,...]

'because'

-~~U~~

[+Conj, -[#S[NOM^PP { [COMP^UNU]
 [...VP[...Mode { [Imper]]]] } #___#S#],
 { [Subj]
 [IndicA]

-requires changes in conjuncts,...]

'and'

9.0 Transformational Subcomponent

This section contains rules which operate on preterminal strings provided by the phrase-structure and lexical rules to give terminal strings of formatives. The transformations of this section are divided into two sets:

(a) those of Sub-section 9.1 apply only to Phrase Markers not containing the boundary symbols #...#.

These rules are ordered and apply cyclically;

(b) those of Sub-section 9.2 apply to embedded and conjoined sentences removing the boundary symbols #...# and making other necessary structural changes to provide strings of formatives upon which the rules of Sub-section 9.1 can apply. At the moment there does not seem to be any reason to order the rules of Sub-section 9.2.

The rules of both sub-sections keep re-applying until there is no structure left to which any transformation of either sub-section applies.

9.1 Rearrangement and Agreement Transformations

9.1.1 Shifting Question Tag (q-Tag) to Sentence Final Position

(Cf. PS rules 8.1.4 and 8.1.5)

T9.1.1	SD:	#	q-Tag	NOM(NEG)PP	#
		1	2	3 4 5	6
	SC:	1	∅	3 4 5+2	6

The following example illustrates the application of this rule:

(9.1.1a)	SD:	#q-Tag	<u>ata-re</u>	<u>orovonu?</u>	#	
		q-Tag	MAN-SPEC	CAME		
		'q-Tag	(the) man	came?'		
	SC:	#	∅	<u>ata-re</u>	<u>orovonu</u>	q-Tag? #
				MAN-SPEC	CAME	q-Tag
				'(The) man	came	q-Tag?'

q-Tag is later realized phonologically (MR10.1) as itobeto, so that the terminal string becomes finally: atare orovonu itobeto? '(The) man came, didn't he?'

Other examples are:

(9.1.1b)	<u>eke-re</u>	<u>da-ye-ro,</u>	<u>itobeto?</u>
	THAT-SPEC	HI-POS-SPEC	q-TAG

'That's mine, isn't it?'

(9.1.1c)	<u>otarihe-re</u>	<u>a</u>	<u>ua,</u>	<u>itobeto?</u>
	GO+FUT-SPEC	YOU	BE	q-TAG

'You will go, won't you? or 'You are going, aren't you?'

9.1.1.0 Note that the use of q-Tag requires extra-linguistic knowledge on the part of the speaker. Thus a speaker would not use q-Tag unless he was sure that the hearer's answer would be in the affirmative. To formally express this in a TG would require a new set of rules, perhaps of the sort called entailment rules by Fillmore (see Section 7.3.1).

9.1.2 Spread of Inherent Syntactic Features Across Constituents of Noun Phrases (Cf. PS rule 8.1.25)

T9.1.2 SD: # X^NP[(#S#)^N^ Y] Z #

[α animate]

[β human]

SC: # X^NP[(#S#)^N^ ... Y] Z #

[α animate][α animate]

[β human] [β human]

... ..

Conditions: (i) X = null or non-null;

(ii) Y = DemP and/or Num

and/or Lim;

(iii) Z ≠ null.

9.1.3 Removal of Arrowhead Brackets From Around
Specifiers Preceding Substitutes and Nominals

(Cf. Section 8.1.7.7)

T9.1.3	SD:	#	X	<Spec>	Y^Z	#
		1	2	3	4 5	6 7 8
	SC:	1	2	∅	4 ∅	6 7 8

Conditions: (i) X, Y, Z ≠ null;

(ii) if Y = Sub;

(iii) if final element
of X is Conj and
Y is NOM.

9.1.4 Obligatory Shift of Substitutes (Cf. PS rule
8.1.7, but esp. Section 8.1.7.2)

9.1.4.0 Three separate rules will be given in this
section. These rules correspond to three different
structural descriptions.

T9.1.4a

SD:	#	NOM[NP^Sub]	X^COMP^UNU	#	(<8.1.9; 8.1.13)
	1	2	3 4 5	6	7
SC:	1	2	∅ 4	5+3	6 7

Conditions: (i) X = null or non-null;

(ii) Sub ≠ yabu

Note that the derivation will block if the Substitute is manifested by the 3rd person plural pronoun yabu under the conditions stated. Thus this rule filters out the non-occurrence of yabu ua in surface sentences (Cf. Section 8.1.9.3). The following example illustrates how the above rule (T9.1.4a) applies. This example is a repetition of example 8.1.13.0a.

(9.1.4.0a)

SD: #NOM[NP[<u>da-ike</u>]	Sub[<u>da</u>]	COMP[<u>ata</u> < <u>re</u> >]	UNU[<u>unu</u>]	#
	I-SPEC	I	MAN-SPEC	BE
SC: #	<u>da-ike</u>	∅	<u>ata</u> < <u>re</u> >	<u>da</u> <u>unu</u> #
	I-SPEC		MAN-SPEC	I BE

T rule T9.1.3 will again apply to this structure removing the arrowhead brackets around re on COMP[ata] 'man', and after morpheme realization rules and morphophonemic rules have applied the sentence will have the surface form:

daike atare da unu. 'I am (a) man.'

Note that Trule T9.1.4a also underlies the sentences 8.1.13.0b, c, d, e, and f. The following examples illustrate other sentences in which Substitutes are manifested by plural pronominal substitutes (ProSub: PS8.1.8) and demonstrative phrases (DemP: PS8.1.8) respectively:

(9.1.4.0b) no-ike maiteka-mava-yabe Sub[ProSub[no]]
 WE-SPEC GOOD-VERY-SPEC(PL.) WE

ua..

BE

'We are very good.'

(9.1.4.0c) maiovo-yabe maiteka-yabe
 GIRL-SPEC(PL.) GOOD-SPEC(PL.)

Sub[DemP[o]] ua.

THESE BE

'These girls are good.' (Lit. '(the) girls
 (are) good these are.')

T9.1.4b

SD: # NOM[NP^Sub] X^ AuxSR^Indica # (<8.1.40)

1 2 3 4 5 6 7

SC: 1 2 \emptyset 4-Yavare+3 5 6 7

Conditions: (i) X \neq null;

(ii) X must contain Vroot and obligatory
 elements to the right of it as
 expressed by the expansion in PS
 rule 8.1.22, but must not contain
 elements 'Stative' and 'Want'.

This rule does not apply to structural descriptions
 containing the dummy symbol 'Stative' or the

desiderative marker 'Want' in PS rule 8.1.22. The following example shows how T9.1.4b applies:

(9.1.4.0d)

SD: #NOM[NP[no-ike] Sub[no]] ehe vareha AuxSR[-rava]
 WE-SPEC WE THERE LEAVE(IT) -(PL.)
 Indica[-nua] #
 -PAST

SC: # no-ike \emptyset ehe varehi-yavare
 WE-SPEC THERE LEAVE-Yavare
 Sub[no] ravanua #
 WE ARE+PAST

After other morpheme realization and morphophonemic rules have applied this string will be phonologically realized as:

noike ehe varehiyavare no ravanua. 'We left it there.'

Note that as has already been pointed out in Section 8.1.40.1 -Yavare behaves like a specifier except that it does not have a plural variant. However, -Yavare becomes -Yavane in Yes-No Questions. The following examples illustrate these points:

(9.1.4.0e) bokovi-yavane a vanua?
 BREAK-Yavare +q YOU ARE+PAST
 'Did you break it?'

After appropriate morpheme realization and morphophonemic rules have applied to this string the following phonological string results:

aike kurevarihere a ua! 'You'll fall down!'

The following are further examples of surface sentences whose underlying structures have been modified by T rule T9.1.4c:

(9.1.4.0h) da oti-ya-varemi-me da beta
 I GO- Ya-LEAVE+AND(SS) I INSTEAD
gabidahe voiravi rovorihere
 AFTERWARDS TURN AROUND COME+FUT+SPEC
 Sub[da] unu.
 I BE

'After I have gone I'll then (afterwards) turn around and come back.'

(9.1.4.0i) otarihe -yabe Sub[no] ua.
 GO+FUT SPEC(PL.) WE BE
 'We'll go.'

(9.1.4.0j) ata be-yabe uhuiamare-yabe
 MAN SOME-SPEC(PL.) HEAR+PRES CONTIN-SPEC
o ua.
 THESE BE
 'Some men understand.'

(9.1.4.0k) vadibe i-rihe-ne Sub[a] ua?

WHAT EAT-FUT-SPEC+q YOU BE

'What are you going to eat?'

(9.1.4.0l) vahutehe tauni ota-rihe-ne Sub[a] ua?

WHEN TOWN GO-FUT-SPEC+q YOU BE

'When are you going to town?'

9.1.5 Person and Number Spread Throughout Sentences not Containing Conjoined NP's (Cf. Section 7.5)

9.1.5.0 Two separate rules will be given in this section. These rules correspond to two different structural descriptions based on PS rule 8.1.9.

T9.1.5a

SD: #NOM[NP[N^ X] <Spec> Sub]^Y^COMP[Z<Spec>]^UNU#

[α sg] (<8.1.9; 8.1.13)
 $\left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\}$

SC: #NOM[NP[N^ X] <Spec> Sub]^Y^COMP[Z<Spec>]^UNU#

[α sg] [α sg] [α sg] [α sg]
 $\left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\}$ $\left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\}$

Conditions: (i) X, Y = null or non-null;

(ii) Z \neq null;

(iii) α, β = + or -.

See examples 9.1.4.0a, b, and c, and 9.1.4.0o and j.

T9.1.5b

SD: #NOM[NP[N[^] X]⟨Spec⟩Sub] Y[^] VP[(NP (NP))

$$\begin{array}{ccc} [\alpha \text{ sg}] & & [\varphi \text{ sg}] \\ \left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\} & & \end{array}$$

V[Vroot[^]SR[^]OR[^](M)[^]MOOD[Vroot[^]SR[^]OR (M)(Want[...
AuxSR])] Mode#

SC: #NOM[NP[N[^] X]⟨Spec⟩Sub] Y[^]VP[(NP(NP))

$$\begin{array}{ccc} [\alpha \text{ sg}] & [\alpha \text{ sg}] & [\varphi \text{ sg}] \\ \left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\} & & \end{array}$$

V[Vroot[^]SR[^]OR[^](M)[^]MOOD[Vroot[^]SR[^]OR[^](M)(Want
[α sg][φ sg] [α sg][+sg]

[...AuxSR])Mode#

$$\begin{array}{ccc} [\alpha \text{ sg}] & [\alpha \text{ sg}] & \\ \left\{ \begin{array}{l} [\beta \text{ 1st}] \\ [-\text{Person}] \end{array} \right\} & & \end{array}$$

Conditions: (i) X,Y = null or non-null;

(ii) If V[M] and MOOD[M] are manner adverbs of type 2(PS8.1.34) then add the feature [α sg] to AuxSR in M₂[...AuxSR];

- (iii) $\alpha, \beta = +$ or $-$,
- (iv) If Mode [AuxSR^{IndicA}]
add the feature [α sg]
to AuxSR;
- (v) If Mode [IndicB^{rE}UNU]
add the feature [α sg]
to the specifier rE.

This rule is regrettably complex but is necessarily so to specify the possible agreements between (a) specifiers and the elements to which they are attached; (b) subjects and SR's, AuxSR's (see Section 8.1.30.0), and Mode elements; (c) objects and OR's.

Examples of the various agreements specified by the above rule have been given or discussed as follows:

- (i) between specifiers and NP's: section 8.1.7.3;
- (ii) between specifiers and IndicB material:
8.1.42.1a, b;
- (iii) between subjects and SR's: 8.1.35.0a, b;
8.1.35.1a-d; and 8.1.35.2a-i;
- (iv) between subjects and AuxSR's: 8.1.34.0a-d;
8.1.40.0b;
- (v) between subjects and mode elements: see examples illustrating PS rule 8.1.37-42;
- (vi) singularity of MOOD[SR]: 8.1.30.2a, b.

9.1.6 Negative Shift (<8.1.4)T9.1.6 SD: # X^{NEG}Y^{COMP}[Z<Spec>] Sub^{UNU} # (<8.1.9;

1 2 3 4 5 6 7 8 9 T9.1.4a)

SC: 1 2 ∅ 4 5 6+3 7 8+3 9

Conditions (i) X, Z ≠ null;

(ii) Y = null or non-null.

This rule provides a terminal string for later morpheme realization rules (MR10.4-5) to interpret Spec+NEG...UNU+NEG as the discontinuous negative bene...gene, as for example in:

(9.1.6a) da-ike nanuka Spec+NEG[bene] da UNU+NEG

I-SPEC NANUKA NOT I

[unu-gene]; da-ike tomu-re da unu.

BE NOT I-SPEC TOMU-SPEC I BE

'I'm not Nanuka; I'm Tomu.'

(9.1.6b) ahu-ke simbu ata-navate Spec+NEG[bene];

HE-SPEC CHIMBU MAN-LIKE NOT

ahu-ke koiari ata-varo.¹

HE-SPEC KOIARI MAN-SPEC

'He's not a Chimbu (man); he's a Koiari.'

1

Note that in this example UNU+NEG does not occur. This seems to be an allowable optional deletion in this type of sentence.

A similar T rule to that of T9.1.6 above also seems to be relevant to certain verbal sentences such as the following, which have been observed but which have not been studied in detail:

(9.1.6c) ogotana-Spec+NEG[bene] da ote-NEG[gene]; uma
 OGOTANA NOT I GOING NOT ; ROAD
vaita-va-ge da otima.
 A(NOTHER)-TO-SPEC I GOING
 'It's not to Ogotana I'm going; I'm going in
 another direction.'

9.1.7 Deletion of ahu + UNU (Cf. Section 8.1.9.3)

T9.1.7 SD: # X<sup>Sub[ahu]^{UNU} #
 1 2 3 4
 SC: 1 2 ∅ 4</sup>

Condition: X ≠ null.

This rule accounts for the fact that ahu+unu never occurs in surface sentences. The following example illustrates how T rule T9.1.7 applies:

(9.1.7a)

SD: #NOM[NP[mata eke-rE]] maiteka-vahE ahu UNU #
 LAND THAT-SPEC GOOD-SPEC IT BE
 SC: # mata eke-rE maiteka-vahE ∅ ∅ #
 LAND THAT-SPEC GOOD-SPEC

giving the following phonological string after morpheme realization and morphophonemic rules have applied:

mata ekere maitekavaho. 'That land is good.'

Other examples are:

(9.1.7b) eke-re bi veitoka-vaho.

THAT-SPEC SPEAR POINT-SPEC

'That's the spear's point.'

(9.1.7c) da ihike-re imisi-ro.

MY NAME-SPEC IMISI-SPEC

'My name is Imisi.'

(9.1.7d) mayakonika-vahe a-ni-go.

YELLOW-SPEC YOU-FOR-SPEC

'(The) yellow (one) is for you.'

(9.1.7e) ahu yage-he-go.

HIS HOUSE-AT-SPEC

'(He's) at home.'

9.1.9 Deletion of Second Person Subjects from Imperatives

9.1.9 SD: # NOM^YImper #

1 2 3 4 5

SC: 1 ∅ 3 4 5

Condition: (i) Y = null or non-null;

(ii) NOM dominates an N

with the features

[+pro, ±sg, -1st,...]

The following example illustrates the application of this rule:

(9.1.9a) SD: # NOM [a-ike a] ote! #
 YOU-SPEC YOU GO
 SC: # \emptyset ote! #
 GO
 'Go!'

Other examples are:

(9.1.9b) otiyahe! '(You(pl.)) go!'
 (9.1.9c) orovo! 'Come!'
 (9.1.9d) oroviyahe! '(You(pl.)) come!'

9.1.8 Deletion of ahu and yabu as Objects

T9.1.8 SD: # X^VP[...NP{ahu
yabu}] (NP) V] #
 1 2 3 4 5 6
 SC: 1 2 \emptyset 4 5 6

Condition: X \neq null.

This rule deletes 3rd person pronominal Objects ahu and yabu from sentences. These elements are unnecessary in surface sentences since the grammatical information which they provide is contained in the Object Referent of the Verb. Consider, for example:

(9.1.8a) da V[ere OR[-va]-nu].

I SEE (SG.) PAST

'I saw it/him/her.'

(9.1.8b) da V[ere OR[-geiyahei]-nu].

I SEE (PL.) PAST

'I saw them.'

9.1.10 Obligatory Shift of inau (Cf. PS rule 8.1.39)

T9.1.10 SD: # NOM^PP[...SubjA^inau] #

1 2 3 4 5

SC: 1 2+4 3 ∅ 5

This rule shifts the grammatical formative inau 'perhaps' to a position following the subject. See example 8.1.39.2b.

9.1.11 Obligatory Shift of (nema)(beu)(beta)

(Cf. PS rule 8.1.39)

T9.1.11 SD: # NOM^PP[...SubjB^X] #

1 2 3 4 5

SC: 1 2+4 3 ∅ 5

Condition: X = (nema)(beu)(beta)

at least one of
which is chosen in
PS rule 8.1.39.

- (ii) 2(NP) includes Spec;
- (iii) the NP dominating S
is not itself dominated
by LOC

This rule is the source of not only some relative clauses in Koiari but also of Predicative Adjective Premodifiers of N and certain nominal compounds. Thus this rule will be followed by two further rules T9.2.2.1 and T9.2.4.1 which will operate on the output of T9.2.1.1. Firstly, however, the following example illustrates how T rule T9.2.1.1 applies:

(9.2.1.1a) Given the matrix sentence:

#S# ata-rE ahu da erevanu #
MAN-SPEC HE ME SAW

'(the) (S_{Rel}) man saw me.' [where S_{Rel} stands for
the embedded S which is
to be relativized]

and the embedded sentence:

S: # ata-rE ahu orovoniare-rE #
MAN-SPEC HE WAS COMING-SPEC

'(the) man was coming.'

Then the effect of applying T rule T9.2.1.1 to these sentences is (using the same numbers as in the structural index):

(9.2.1.1c) da-ike S[kairaki uyare] ata-vare da unu.

I-SPEC KAILAKI STAYING MAN-SPEC I BE

'I'm (the) man who is staying at Kailaki.'

(9.2.1.1d) S[ahu orovoniare] hedu-ve-re da ekenani

HE WAS COMING TALK-POS-SPEC I NOW

oko roima.

THIS SAYING

'I am now telling (the) story about his coming.'

Note that in this last example a possessive rule is involved which requires that the S be marked [+human] to make the correct form of the possessive case (-ve) on hedu. The source sentence for this last example is also uncertain. It is probably 'they say he was coming' in which the Koiari for 'they say' would be hedu-rava.

(9.2.1.1e) S[ahu gorogovaniare] oho-vare yabu vahanua.

IT WAS SICK PIG-SPEC THEY KILLED IT

'They killed (the) pig which was sick.'

(9.2.1.1f) S[ahu misinari voiniare] ata-vare orovima.

HE MISSIONARY BECAME MAN-SPEC COMING

'(The) man who became a missionary (=pastor) is coming.'

(9.2.1.2b) da orovonu-ge no-ne S[vadibe mata kiare]

I COME-AND(DS) WE-SPEC+q WHAT WORK DOING

kiriheno?

WILL DO?

'When I come what work'll we do?'

(9.2.1.2c) nuhe vaubu-ge S[da yome bidivaniare]

YESTERDAY NIGHT-SPEC I RAT SHOT

vami-ke-ro.

YOUNG-POS-SPEC

'That's (the) young of (the) rat I shot

last night.'

9.2.2 Nominal Compounds

9.2.2.1 Nominal Compounds Derived from Predicates (Cf. PS rule 8.1.21)

If VP dominates Pred (8.1.21-22) in T rule T9.2.1.1 then a further structural change can be specified. In the following rule the SD refers to the output of T9.2.1.1:

T9.2.2.1 SD: ...X¹Pred²Y³N⁴...

1 2 3 4

SC: ∅ 2 ∅ 4

Conditions: (i) X, Y ≠ null;

(ii) Pred. = N.

- Conditions: (i) 11(N) is nondistinct from 7(NP);
- (ii) Compounding seems to be limited to two embeddings;
- (iii) 2(NP) dominates only N which cannot be a human noun.

This rule provides such compounds as:

- (9.2.2.2a) (i) imi vate 'sugar-cane skin.'
SUGARCANE SKIN
- (ii) idi hana hobita 'rubbish consisting of
TREE LEAF RUBBISH tree leaves'
- (iii) aea voto 'the noise of a drum'
DRUM SOUND
- (iv) hava tavo 'the red juice of a betelnut'
BETELNUT BLOOD
- (v) subu gini 'the prickle of the Subu
SUBU PRICKLE tree'
- (vi) ni garasi¹ 'spectacles' (<English)
EYE GLASS

Note that T9.2.2.2a is similar to T9.2.3.1. Without the restrictions placed on T9.2.2.2a T9.2.3.1 would

1

Alternatively the source sentence for this may be '(the) glass is for (the) eyes' in which case Trule T9.2.2.2b would apply.

- (iii) amu evi #evi-re amu-ni-go # evi-
 MILK TOOTH TOOTH-SPEC MILK-FOR-SPEC TOOTH
 'milk tooth' #'(the) tooth is for milk#tooth...

9.2.3 Possessive Constructions

9.2.3.0 Possessive constructions are derived from embedded sentences in the expansion of NP (8.1.25).

The source sentences for these constructions are those containing COMP[Accomp]^UNU (8.1.9).¹ T rule T9.2.3.1 (Genitive) then applies to these source sentences to provide a structure containing N^Pos. Optional T rule T9.2.3.2 may then operate on this structure to generate possessive forms corresponding to English 'mine, yours, Nanuka's, the pig's....' This rule merely deletes the N in the structure N^Pos. Later morpheme realization

1

Note that there is no source sentence for inherently possessed nouns (see discussion 8.2.1.6; and also Anderson (1968:311) who questions the validity of deriving all possessives in English from relative clauses containing 'have', since there are certain nouns in English, such as kinship terms like 'mother' which must always be possessed -- a case akin to Koiari). However, inherently possessed nouns may still manifest N in T rule T9.2.3.1. It is also of interest to note that in Koiari have (possession) is otherwise expressed by be + with, viz. AccomP + UNU. As has already been pointed out in Section 7.3.1 above Fillmore has proposed that have in English is really the phonological manifestation of be + with.

rule MR10.10 provides phonological interpretations of Pos and changes the form of the specifier on the possessed N to rE in certain cases.

T9.2.3.1 Genitive Transformation¹

SD: NP[#NOM[NP<Spec>Sub]^COMP[Accomp[NP^Accom]]] UNU#N...]

	1	2	3	4	5	6	7	8	9	10	11...
SC:	∅	2	∅	∅	∅	∅	∅	∅	∅	∅	11+ Pos...

Condition: 11(N) is nondistinct from 7(NP).

1

Note that in this rule the symbol Pos is introduced. According to the theory of TG 'transformations cannot introduce meaning-bearing elements' (Aspects, p.132) since they otherwise affect the semantic interpretation of sentences. In this instance Pos is not a new symbol in this sense. It is somewhat akin to the introduction of the 'new phonetic element self' (Aspects, p.146) by the erasure transformation in reflexivization in English. The conclusion which Chomsky comes to on the same page is that 'no morphological material (in this case, self) can be introduced into a configuration dominated by S once the cycle of transformations¹ rules has already completed its application to this configuration [although] there are a few examples that seem to conflict with this analysis'. Pos is not introduced before the cycle of transformations is complete and therefore legitimate in this sense. Pos, in fact, really stands for the semantic information expressed in the source sentence, viz. that something possesses something else. Accordingly Pos does not affect the semantic interpretation of outputs to the Genitive rule since this information is already contained in the source sentence.

Note that Trule T9.2.3.1 is recursive and will provide expansions of the form:

(9.2.3.1d) nanuka mame mame ohe
 NANUKA FATHER+Pos FATHER+Pos PIG+Pos
 'Nanuka's father's father's pig.'

T9.2.3.2 (Optional) Noun Deletion in Possessive Constructions

The following rule applies to the output of T9.2.3.1 optionally:

SD: ...NP^N^Pos...

1 2 3

SC: 1 \emptyset 3

This rule is the source of such Koiari expressions as:

(9.2.3.2a) da-yete¹ (as in eke-re dayete-ro, say).
 I-Pos THAT-SPEC MINE-SPEC
 'mine' 'That's mine.'

(9.2.3.2b) nanuka-yete
 NANUKA-Pos
 'Nanuka's'

1

yete fluctuates freely with ye.

9.2.4 Pre-N Modification

9.2.4.1 Predicative Adjective Premodifiers of Nouns (Cf. PS rule 8.1.21)

If VP dominates PredAdjP (8.1.21 and 8.1.28) in T rule T9.2.1.1 then a further structural change can be specified. In the following rule the SD refers to the output of T9.2.1.1:

T9.2.4.1 SD: ...X¹PredAdjP²Y³N⁴...

1 2 3 4

SC: ∅ 2 ∅ 4

Condition: X, Y ≠ null.

This rule has the effect of deleting everything except the PredAdjP which thus becomes preposed to N. Thus by this rule example 9.2.1.1e becomes:

(9.2.4.1a) gorogo oho-vare yabu vahanua.

SICK PIG-SPEC THEY KILLED IT

'They killed (the) sick pig.'

Other examples of Predicative Adjective Premodifiers are:

(9.2.4.1b) homoberebe ata 'angry man'

(9.2.4.1c) karikari ata 'frenzied man'

(9.2.4.1d) nihero ata 'happy man'

(9.2.4.1e) gimagi ata 'adulterer'

(9.2.4.1f) sikuru vami 'school boy' (<English)

9.2.4.2 Premodifiers Derived from Locatives (Cf. PS rules 8.1.9; 8.1.12; 8.1.14; 8.1.15)

If PP dominates an Adverbial Phrase of Location (whose head noun is a geographical location proper name) and if VP dominates the verb root u 'to stay' in T rule T9.2.1.1 then a further structural change can be specified. In the following rule the SD refers to the output of T9.2.1.1 in which the conditions just given hold:

T9.2.4.2 SD: ...X¹AdvP²Y³N⁴...

1 2 3 4

SC: ∅ 2 ∅ 4

Condition: (i) X ≠ null;

(ii) Y = null or non-null.

This rule has the effect of deleting everything except the AdvP which thus becomes preposed to N. Thus by this rule example 9.2.1.1c becomes:

(9.2.4.2e) kairaki ata-vare da unu.

KAILAKI MAN-SPEC I BE

'I'm (a) Kailaki (village) man.'

Other examples are:

(9.2.4.2b)	<u>ogotana</u>	<u>ata</u>	'Ogotana man' ¹
(9.2.4.2c)	<u>koiari</u>	<u>ata</u>	'Koiari man'
(9.2.4.2d)	<u>simbu</u>	<u>ata</u>	'Chimbu man'

9.2.4.3 It is relevant at this point to note that no conditions have been imposed on the ordering of embedding rules supplying Relative Clauses, Predicative Adjectives, or Nominal Compounds. In a more complete grammar certain restrictions would have to be imposed since order is important for all types of Pre-N modification. Thus, although I have never recorded an expression such as that which follows informants ordered the given elements in the following way when pressed to combine them in a 'maximum' expansion:

S_{Rel} + 'sick' + 'Koiari' + 'missionary' + 'man'

Finally, note that two or more relative clauses do not occur in sequence.

9.2.5 Post-N Modification

9.2.5.0 Post-N modifiers are derived from embedded sentences in the expansion of NP(8.1.25). The source sentences for these constructions and those containing COMP[AdjP]^UNU (Cf. PS rules 8.1.9 and 8.1.13).

1

Note that nao ata 'foreigner, European' (<Motu nao 'foreigner') does not seem to be derived in the same way. I am unable to suggest a source sentence for this at the moment.

T9.2.5

SD: NP[#NOM[NP^Sub]^COMP[AdjP]^UNU# N...]

1 2 3 4 5 6 7...

SC: ∅ ∅ ∅ ∅ ∅ ∅ 7+4...

Condition: 2(NP) is nondistinct from
7(N).

This rule provides for such examples as:

(9.2.5a)

	<u>Result</u>	<	<u>Source Sentence</u>
(i)	<u>vami misuka</u>		# <u>vami-re misuka-vaho</u> # <u>vami...</u>
	BOY SMALL		BOY-SPEC SMALL-SPEC BOY
	'(the) smallboy'		
(ii)	<u>ata kaekae</u>		# <u>ata-re kaekae-vaho</u> # <u>ata...</u>
	MAN WHITE		MAN-SPEC WHITE-SPEC MAN
	'(the) white man'		
(iii)	<u>mata keare</u>		# <u>mata-re keare-vaho</u> # <u>mata...</u>
	WORK BIG		WORK-SPEC BIG-SPEC WORK
	'(the) big work'		

9.2.6 Time and Location Adverbials Involving Embedded Sentences (Cf. PS rules 8.1.11 and 8.1.15 respectively)

T9.2.6 ...#NOM^PP[...VP[...Mode[IndicB^re]]]#{Loc} ...
{Time}

1 2 3 4 5 6...

SC: ∅ 2 3 ∅ ∅ 6...

(9.2.6e) S[da vaukiare] Loc[-he]-ge a-ikene
 I WORKING -AT-SPEC YOU-SPEC+q
vadibe-vane kirihe-ne a ua?
 WHAT-SPEC+q DO+FUT-SPEC+q YOU BE

'What will you do while/where I am working?'

Note that no distinction is generally made between Time and Location adverbials involving embedded sentences in Koiari. The semantic distinction between the two seems to depend on other elements in the sentence or on extralinguistic context which the speakers know. Only two examples have been observed in which a distinction has been made explicitly (Cf. Section 9.2.1.0):

(9.2.6f) maiovo eke-re otime ahu
 GIRL THAT-SPEC GO+AND(SS) SHE
vogeravime S[iyagare] gabu-va iyagume ahu
 HIDING+AND(SS) BATHING PLACE-AT BATHE+AND(SS) SHE
 [Motu loan]
neinaka vateke bokovi maiamanu.
 MOTHER SKIN+Pos BROKE+AND(SS) PUT (IT) DOWN

'That girl went and secretly bathed at her bathing place and took off her mother's skin and put it (on the ground).'

(9.2.6g) S[ahu dobivare doho-ke-he-ge] ahu

HE DROPPING PLACE-POS-AT-SPEC HE

heina maiamanu.

SNARE PUT (IT) DOWN

'He (the lizard) put the snare in his (the bird's) landing place.'

9.2.7 Purpose Adverbals from Embedded Sentences (Cf. PS rules 8.1.9; 8.1.12; 8.1.19)

9.2.8.0 Purpose Adverbals (PUR) are derived from embedded sentences containing VP (Cf. PS rule 8.1.9). These adverbals are either unmarked, or are marked by -ha, according as VP does or does not dominate the desiderative marker 'Want' respectively. Thus two structural indices are required for Purpose Adverbals. However, since these adverbals always occur immediately preceding the verb (V) of the matrix clause an introductory rule is required to shift PUR to the appropriate position. Hence this section consists of two rules, the second of which consists of two parts corresponding to the two structural indices described above.

T9.2.7.1 PUR Shift

SD: S[NOM^PP[...PUR^VP[X^V]]]

1 2 3 4

SC: 1 ∅ 3 2+4

Condition: X = null or non-null.

T9.2.7.2a Purpose Adverbials Marked by -ha
(Cf. PS rule 8.1.19)SD: PUR[#NOM^PP[...VP[...Mode]]]# -ha

1 2 3 4 5

SC: ∅ ∅ ∅ ∅ 5

Conditions: (i) Subjects of matrix
and embedded sentences
identical;(ii) VP does not dominate
Want.

The following example illustrates how T rules

T9.2.7.1 and T9.2.7.2a apply:

(9.2.7.0a) Given the matrix sentence:

S[NOM[da-ike da] PUR orovonu].

I-SPEC I PUR CAME

then T9.2.7.1 should apply to shift PUR to immediately
before the verb orovonu, but since PUR is already in
that position no change is required.

Suppose, however, that the sentence to be embedded is:

PUR[#NOM[da-ike da] a-ni hedu kibe VP[...roi^Mode]#-ha]
 I-SPEC I YOU-TO TALK A LITTLE SAY -TO

then T9.2.7.2a applies and provides the following string (since the subjects of the matrix and embedded sentence are identical, viz. da-ike da):

∅ ∅ ∅ ∅ a-ni hedu kibe roi ∅ -ha
 YOU-TO TALK A LITTLE SAY -TO

After morphophonemic rules have applied the output is in the following phonological form:

daike da ani hedu kibe roiha orovonu.

I+SPEC I YOU+TO TALK A LITTLE SAY+TO CAME

'I came in order to talk to you a little.'

Another example of a surface sentence to which these same T rules have applied is given in 8.1.19Ja.

T9.2.7.2b Purpose Adverbals Containing 'Want' (Cf. PS rule 8.1.30)

SD: PUR[#NOM^PP[...VP[...V[...Want[riheni <gE>^AuxSR]^Mode]]]#]

	1	2		3		4	5	6
SC(i):	∅	∅		3		∅	∅	∅
SC(ii):	∅	2		3		∅	∅	∅

Condition: If the subjects of the matrix and embedded sentences are identical then SC(i) holds, otherwise SC(ii).

Examples corresponding to SC(i) and SC(ii) have already been given in 8.1.19.1c and d; and 8.1.19.1e respectively.

9.2.8 Conjoing with $-\underline{I}\langle \underline{me} \rangle$, $-\underline{E}\langle \underline{ge} \rangle$, and $-\underline{Yata}\langle \underline{ge} \rangle$
(Cf. Sections 8.1.1; 8.2.22)

T9.2.8	SD:	#	(PreS)	#	S	[X^Y]	#	Conj^S	#
		1	2	3	4	5	6	7	8 9
	SC:	1	2	∅	4	∅	∅	7	8 9

Conditions: (i) $X \neq \text{null}$;

(ii) Y contains Mode
[IndicA] or Mode
[Imper[Immed]].

Then (a) if the subjects of the conjuncts are nondistinct either $-\underline{I}\langle \underline{me} \rangle$ or $-\underline{Yata}\langle \underline{ge} \rangle$ will be selected by the lexical rules. However, the semantic interpretation of surface sentences containing these will be different in that the latter expresses the semantic information that the first action is definitely completed before the second is begun,¹ while the former is less definite. The following examples illustrate surface sentences whose derivations have involved the above rule.

1

The same semantic information can be expressed by choosing the optional expansion $V\text{root}^{\wedge}SR^{\wedge}OR$ in PS rule 8.1.30.

- (9.2.8a) S[eke-ateki-nabe a ki] Conj[-me]
 THAT-LIKE-SPEC+UNCERT YOU DO+AND SS
 [a kurevarihe-re a ua!]
 YOU FALL DOWN+FUT-SPEC YOU BE

'You act like that and you'll fall down!'

- (9.2.8b) S[oho-re rovi] Conj[-me] S[ahu da
 PIG-SPEC CAME+AND SS HE ME
 iyabavanu.]
 FRIGHTENED

'(The) pig came and frightened me.'

- (9.2.8c) S[mo] Conj[-I] S[da momi!]
 GET AND(SS) ME GIVE

'Get (it) and give (it) to me!'

Note that this example would actually be said: mi da momi! and this will be the form realized after the relevant morphophonemic rules (cf. M11.7) have applied to the string in 9.2.8c.

- (9.2.8d) S[vadibe-vane a ki] Conj[-mene] S[a da
 WHAT-SPEC+q YOU DO+AND SS+q YOU ME
 vohi] Conj[-me] S[orovonua?]
 SEARCH+AND SS CAME

'Why did you come looking for me?' (Lit. 'What are you doing that you come looking for me?')

- (9.2.8e) S[...yabi ti] Conj[-me]S[yabu beravi]
 THEY GO+AND SS THEY ASK
 Conj[-ata] S[oti] Conj[-me] S[yabu ahu
 AND(SS) GO+AND SS THEY HIS
yage-he gurahe Conj[-ge] S[mamaka-
 HOUSE-AT SIT+SR(PL.)+AND DS FATHER-
vahe...].
 SPEC

'...they went and when they had asked him they
 went and sat down at his house and his father...'

- (9.2.8f) S[e] Conj[-ru-ge] S[ahu ekemoye
 THAT -BECAUSE OF-DS HE THAT
i-tinivi] Conj[-ata-ge] S[ahu babahu]
 EAT-COMPLETE -AND-SS HE TORE
 Conj[-I] S[dobivanu].
 AND(SS) DROPPED DOWN

'Because of that (action which had been performed
 earlier) he ate the lot and tore it (the net bag
 that he was confined in) and dropped down.'

- (9.2.8g) S[ahu aea igau mi] Conj[-ata-ge] S[ahu
 HE DRUM ONE GOT -AND-SS HE
otinu].
 WENT

'When he had got one drum he went.'

(b) if the subjects of the conjuncts in T9.2.8 are distinct then the conjunction -E<ge> will be selected by the lexical rules. The following examples illustrate surface sentences whose derivations have involved the above rule:

(9.2.8h) S[maruba-vare i] Conj[-ege] S[ahu
FLYING-FOX-SPEC EAT -AND(DS) IT
ruka-ra-vi] Conj[-I] S[dobiyanu].
BREAK-STATIVE SR(SG.) -AND(SS) DROPPED DOWN
'(The) flying-fox ate it (the tree fruit) and it
broke off and dropped down.'

(9.2.8i) S[sinabada-vare orov] Conj[-ege]
SINABADA-SPEC COME -AND(DS)
S[bou-raruhi] Conj[-me] S[yabu nema ahu-ni
GATHER-SR(PL.) -AND(SS) THEY THEM HER-TO
hedu roi-hava].
TALK SAY-MIGHT

'When Sinabada comes they might gather together
and talk to her (i.e., have a meeting with her).'

9.2.8.1 For sentences conjoined by -E<ge> ene will be introduced following -E<ge> for all person-numbers other than 2nd if the conjunct following -E<ge> is in the imperative mode (see Section 8.1.38.5). This condition

also applies to T rules T9.2.9, T9.2.11, and T9.2.12 (for $\underline{-U}\langle\text{me}\rangle$, $\underline{-U}\langle\text{ge}\rangle$). See example 8.1.38.5a.

9.2.8.2 Note that T rule T9.2.8 allows for unrestricted conjoining such that sentences in Koiari may be quite long. When the verb root oti 'to go' is repeated several times by this rule the semantic information of 'until' is expressed. Consider:

(9.2.8k) S[...eke-ateki-ge ahu ki] Conj[-me] S[ahu
 THAT-LIKE-SPEC HE DO -AND(SS) HE
oti] Conj[-I] S[oti] Conj[-I] S[oti] Conj[-I]
 GO -AND(SS) GO -AND(SS) GO -AND(SS)
 S[oti] Conj[-Ime] S[ahu vadu vanivaniva mi] Conj[-me]
 GO -AND(SS) HE TARO HOT GOT+AND -SS
 S[ahu hurumanu].

HE BROKE IT UP

'He kept doing that until he got (the) hot taro and broke it up.'

9.2.9 Conjoining with $\underline{-E}\langle\text{ge}\rangle$ (Cf. Sections 8.1.1; 8.2.22)

T9.2.9 SD: # (PreS) # S[X^Y] # Conj^S #
 1 2 3 4 5 6 7 8 9
 SC: 1 2 \emptyset 4 5 \emptyset 7 8 9

- Conditions: (i) $X \neq$ null;
 (ii) Y contains Mode [IndicA[past^punct]];
 (iii) the subjects of the conjuncts are distinct.

Only the conjunction $-E\langle ge \rangle$ will be selected by the lexical rules for the structure index specified in this T rule. The following examples illustrate surface sentences whose derivations have involved the above T rule:

(9.2.9a) S[da toe-re vami maiamanu] Conj[-ge]
 MY DOG-SPEC YOUNG PUT-past^punct -AND(DS)

S[da nema igau-igau ya mo-hei-hima].

I THEN ONE-ONE YOU(PL.) GIVE-OR(PL.)-MIGHT

'When my dog gives birth to her pups I might give you(pl.) one each then.'

(9.2.9b) S[ahu orovonu] Conj[-ge] S[da
 HE COME-past^punct -AND(DS) I

subitana otarihero].

SUBITANA WILL GO

'When he comes I'll go to Subitana.'

- (9.2.9c) S[maeka-vahe gorogova-nu] Conj[-ge]
 DAUGHTER-SPEC SICK-past^punct -AND(DS)
 S[ahu bebe orovonu].
 HE NOT CAME

'His daughter was sick and he did not come.'

- (9.2.9d) S[yabu-ne oho mi ma-nu]
 THEY-SPEC+q PIG MEAT GET-past^punct
 Conj[-gene] S[a-ne irihe-ne
 -AND(DS)+q YOU-SPEC+q WILL EAT-SPEC+q
a ua?]
 YOU BE

'When they get (the) pig meat will you eat it?'

9.2.10 Conjunction with -Yebene...-Ye (Cf. Sections
 8.1.1; 8.2.22)

T9.2.10(i)

SD: # (PreS) # S[X^Y] # Conj^S[Z^Y] #
 1 2 3 4 5 6 7 8 9 10
 SC: 1 2 ∅ 4 ∅ 6 7 8 ∅ 10

Conditions (i) X, Y ≠ null;

(ii) Y contains Mode[IndicA].

(iii) n ≠ 1 in PS rule 8.1.1.

The discontinuous conjunction -Yebene...-Ye will be selected by the lexical rules (since it is the only

lexical entry amongst the conjunctions which has the selectional feature [+ requires changes in both conjuncts]). Another rule is required however to shift -Ye to its correct position. This rule is:

T9.2.10(ii) SD: # X^Conj[-yebene...-Ye] Y #
 1 2 3 4 5 6
 SC: 1 2 3 ∅ 5+4 6

Condition: X,Y ≠ null.

The following examples illustrate surface sentences whose derivations have involved the T rule T9.2.10(i) and T9.2.10(ii).

(9.2.10a) S[da orovi] Conj[-yebene] S[da a-ni roi]
 I COME -IF I YOU-TO SAY
 Conj[-ye].
 -IF

'If I had come I would have spoken to you.'

(9.2.10b) S[a u] Conj[-yebene] S[da vauki] Conj [-ye].
 YOU STAY -IF I WORK -IF

'If you had stayed I would have worked.'

(9.2.10c) S[a roi] Conj[-yebene] S[yabu uhuiami] Conj[-ye].
 YOU SAY -IF THEY HEAR -IF

'If you speak they'll understand.'

Note that the semantic interpretations given here are those that seem to fit the circumstances in which the sentences were observed. I have been unable to obtain sentences containing this conjunction which have different tense or aspects formally marked.

9.2.11 Conjoining with $-U\langle me \rangle$, $-U\langle ge \rangle$ and $-l$.
(Cf. Sections 8.1.1; 8.2.22)

T9.2.11

SD: # (PreS) # S[X^Y] # Conj^S #

1 2 3 4 5 6 7 8 9

SC: 1 2 \emptyset 4 5 \emptyset 7 8 9

Conditions: (i) $X \neq \text{null}$;

(ii) Y contains Mode
[IndicB].

Then if the subjects of the conjuncts are nondistinct the two conjunctions $-U\langle me \rangle$ and $-l$ will be selected by the lexical rules; and conversely if the subjects are distinct then the conjunctions $-U\langle ge \rangle$ and $-l$ will be selected. The difference between these conjunctions semantically is that $-U\langle me \rangle$ and $-U\langle ge \rangle$ express reason while $-l$ expresses simultaneity of action. The following examples illustrate surface sentences whose derivations have involved the above T rule.

(9.2.11a) S[...ahu otiniarere] Conj[-é] S[goarebari-
 HE WAS GOING AND GOAREBARI
 (people)

yabe vami] Conj[-me] S[yabu inua].

-SPEC KILL -AND(SS) THEY ATE

'He was going (down there) and the Goarebari
 people killed and ate him.'

(9.2.11b) S[da-ike tene oko roiarere] Conj[-é]

I-SPEC STORY THIS SAYING AND

S[vadurabada tene-ve-re da oko roima].

VUDURUBADA STORY-POS-SPEC I THIS SAYING

'I am telling this story and it is Vudurubada's
 story that I am telling.'

(9.2.11c) S[muraba-vare aea vamiarere] Conj[-é]

FLYING-FOX-SPEC DRUM IS HITTING AND

aea-vahe votovi] Conj[-me] S[ahu "bo bo bo

DRUM-SPEC CALLING -AND(SS) IT BO BO BO

bo", tovonu].

BO SAID

'(The) flying-fox was hitting (the) drum and it
 was making (the) noise, "bo bo bo bo".'

- (9.2.11d) S[muramura¹ i-kunuku-vahi-gare
 WHISKEY EAT-ALWAYS-LY-REPET
 Conj[-guge] S[ahu kinake komara
 -SPEC+BECAUSE+SPEC(DS) HIS HEAD+Pos BAD
voinu] Conj[-ge] S[ahu moeka yovanu].
 BECAME -AND(DS) HE SON CHASED

'Because he was always drinking whiskey he became drunk (lit. his head became bad) and chased his son.'

- (9.2.11e) S[da orovi-yavehite] Conj[-ru-me]
 I COME NOT -SPEC+BECAUSE-SPEC(SS)
 S[da a-ni roiyavehite-ro].
 I YOU-TO TALK+NOT - SPEC

'Because I did not come I did not talk to you.'

- (9.2.11f) S[a-ne ehe vaniare]
 YOU-SPEC+q WHAT'S THE MATTER
 Conj[-ru-mene] S[a
 -SPEC+BECAUSE-SPEC(SS)+q YOU
ninakorokorova?]
 CRYING+ALWAYS

'What's the matter that you're crying all the time.'
 (Lit. 'Because of what's the matter...')

¹

muramura is a Motu loan, generally used for 'medicine'.

9.2.12 Conjoining with -U⟨me⟩ and -U⟨ge⟩
 (Cf. Sections 8.1.1; 8.2.22)

T9.2.12 SD: # (PreS) # S[X^COMP^Y] # Conj^S #
 1 2 3 4 5 6 7 8 9 10
 SC: 1 2 ∅ 4 5 ∅ ∅ 8 9 10

Conditions: (i) X ≠ null;
 (ii) Y ≠ null.¹

Then if the subjects of the conjuncts are nondistinct the conjunction -U⟨me⟩ will be selected by the lexical rules; and conversely if the subjects are distinct then the conjunction -U⟨ge⟩ will be selected. The following examples illustrate surface sentences whose derivations have involved the above T rules:

(9.2.12a) S[...da-ike maiteka-mava-vahE]
 I-SPEC GOOD - VERY-SPEC
 Conj[-U-ge] S[yabu nihororava].
 -SPEC+BECAUSE-SPEC(DS) THEY HAPPY ARE
 'Because I am very good they are happy.'

This sentence will actually be said as: ... daike
maitekamavavahuge yabu nihororava. See morphophonemic
 rule M11.2.

¹

In fact Y will contain Sub...UNU by T rule T9.1.4.

(9.2.12b) S[girina mabare] Conj[-ru-ge]

GIRINA'S WIFE -SPEC+BECAUSE-SPEC(DS)

S[da bebe ihi roirihero].

I NOT NAME CALL+FUT

'Because she is Girina's wife I'll not call her name.'

(9.2.12c) S[bi-re [S[muni] Conj[-ru-ge]]

SPEAR-SPEC STONE -SPEC+BECAUSE-SPEC(DS)

ahu ava-he dobivi- saya- vahi-yavehitero].

IT TOP-AT DROP- CAREFUL-LY- NOT

'Because (the skin was) stone (the) spear did not penetrate well on top.'

(9.2.12d) S[mavi eke-re kihoyehe Conj[-gu-ge]

WOMAN THAT-SPEC THERE -SPEC+BECAUSE-SPEC(DS)

S[vadu-re vaniha-vanu].

TARO-SPEC HOT-WAS

'Because that woman was there (the) taro was hot.'

9.2.13 Quotation (Cf. PS rules 8.1.21; 8.1.24)

T9.2.13 SD: Quote[...# S* #]

1 2 3

SC: ∅ 2 ∅

This rule simply removes the boundary symbols from around quoted material. The following examples

illustrate surface sentences whose derivations have involved T rule T9.2.13. In these and other examples containing quote material the symbols "... " will be used to enclose the quotation.

(9.2.13a) ...ahu ateki roinu, "o'e" tovonu. "biae
HE THUS SAID YES SAID BIAE
regena-re da unu", tovonu.
REGENA-SPEC I BE SAID

'...he said, thus, "Yes" he said. "I am Biae Regena".'

(9.2.13b) ...yabu...roinua, "ineka, maiovo oko-re
THEY SAID MOTHER GIRL THIS-SPEC
mabata-varo" toravanua.
OLD ..WOMAN-SPEC SAID

'...they...said, "mother, this girl is an old woman".'

(9.2.13c) ...nuhe ateki roiniarero, "spepati
YESTERDAY THUS WAS SAYING SPAREPARTS
youka-vahe ma rovoniarero," tovoniare-
PLENTY-SPEC PERF WERE COMING WAS SAYING-
ru-re da...
BECAUSE-SPEC(DS) I

'...yesterday (he) was saying, "Plenty of spareparts were coming" and because he was saying (that) I...'

10.0 Morpheme Realization Rules

These rules specify the phonological form of morphemes other than those introduced lexically or as grammatical formatives in the PS rules.¹ In a more complete grammar these rules would probably be preceded and followed by certain adjustment rules to take care of certain idiosyncracies of morphemes and to prepare for the detailed phonological rules that should follow.

The following set of rules are ordered although the order imposed appears to be unimportant except for a few cases (e.g., those rules dealing with questions and with NEG).² For reader convenience rules providing realizations of UNU and verb modes are set out in paradigmatic form although most could be conflated by appropriate bracketing.

10.1 Realization of q-Tag

(<8.1.5)

MR10.1 q-Tag ---> itobeto

¹

But see Section 8.1.3.0 fn.2.

²

A more detailed treatment of phonology in generative terms may provide presently unconsidered criteria for imposing or relaxing ordering of the present rules.

10.6 Realization of Negative Imperative (<8.1.38)MR10.6a NEG...[Imper[Immed[-1st, +sg]]] ---> -IhamaMR10.6b NEG...[Imper[Immed[-1st, -sg]]] ---> -Ihava10.7 Realization of Negative Elsewhere (<8.1.4)MR10.7 NEG ---> bebe10.8 Realization of Information Question Morphemes (<8.1.6)MR10.8a Interrog + NP
[+human] ---> oine <rE> 'who'MR10.8b Interrog + NP
[-human] ---> vadibe <vanE> 'what'MR10.8c Interrog + DemP ---> ore <rE> 'which'MR10.8d Interrog + Num ---> vahuti <gE> 'how many'MR10.8e Interrog + Tword ---> vahutehe <gE> 'when'MR10.8f Interrog + Lword ---> orehe <gE> 'where'MR10.8g Interrog + M ---> ehakitaha <gE> 'how'MR10.8h Interrog + DesAdvP ---> ore ateki <gE> 'in which manner'10.9 Change in Form of Specifier for NP's Containing Pre-N Modifiers (<8.1.7.3; T9.2.1.1a)MR10.9 NP[X^N<Spec>]
[-rE] ---> NP[X^N<Spec>]
[-varE]

Condition: X ≠ null.

10.10 Possessive Case Including Changes in Form of Specifier (<8.2.1; T9.2.3.1)

MR10.10a

NP[NP^ N<Spec> + Pos] ---> NP[NP^N (whose final syllable is subtracted and whose then final vowel is changed to e) <rE>]
 [+human] [+reduce]

MR10.10b

NP[NP^ N <Spec>+Pos ---> NP[NP^N (whose final vowel is changed to e) <rE>]
 [+human] [-reduce]

MR10.10c

NP[NP^ N <Spec>+Pos ---> NP[NP^N <rE>]
 [+human] [add syllable

ve
<u>ze</u>
he
me

 NP[NP^N

ve
<u>ze</u>
he
me

 <rE>]

MR10.10d

NP[NP^ N <Spec>+Pos] ---> [NP[NP^N<Spec>]
 [-human] [-reduce]]

This rule states that there is no change in the basic form of the noun or its specifier for those inherently possessed nouns marked [-reduce] when possessed by non-human referents, e.g.,

idi adaka<vahE> '(the) tree's limb'

MR10.11d	Spec [+sg]	[<u>rE</u>]	--->	<u>rE</u>
MR10.11e	Spec [+sg]	[<u>varE</u>]	--->	<u>varE</u>
MR10.11f	Spec [+sg]	[<u>vahE</u>]	--->	<u>vahE</u>
MR10.11g	Spec [+sg]	[<u>gE</u>]	--->	<u>gE</u>
MR10.11h	Spec [+sg]	[<u>IkE</u>]	--->	<u>IkE</u>
MR10.11i	Spec [-sg]	[<u>rE</u>]	--->	<u>yabE</u>
MR10.11j	Spec [-sg]	[<u>varE</u>]	--->	<u>yabE</u>
MR10.11k	Spec [-sg]	[<u>vahE</u>]	--->	<u>yabE</u>
MR10.11l	Spec [-sg]	[<u>gE</u>]	--->	<u>yabE</u>
MR10.11m	Spec [-sg]	[<u>IkE</u>]	--->	<u>IkE</u>
MR10.11n	Spec [±sg]	[<u>me</u>]	--->	<u>me</u>
MR10.11o	Spec [±sg]	[<u>ge</u>]	--->	<u>ge</u>

10.12 Realization of Specifiers in Questions (<8.1.4.1;
8.1.5; 8.1.6)

The following rules correspond to those given in
10.11 above:

MR10.12a	IndicB[... <u>rE</u>] _[±sg] ^{+q}	--->	<u>nE</u>
----------	---	------	-----------

MR10.12b	IndicB[... <u>rE</u>] _[+sg] +q^X# --->	<u>nE</u>
MR10.12c	IndicB[... <u>rE</u>] _[-sg] +q^X# --->	<u>yahE</u>
MR10.12d	Spec [<u>rE</u>] _[+sg] --->	<u>nE</u>
MR10.12e	Spec [<u>varE</u>] _[+sg] --->	<u>vanE</u>
MR10.12f	Spec [<u>vahE</u>] _[+sg] --->	<u>vahenE</u>
MR10.12g	Spec [<u>gE</u>] _[+sg] --->	<u>genE</u>
MR10.12h	Spec [<u>IkE</u>] _[+sg] --->	<u>IkenE</u>
MR10.21i	Spec [<u>rE</u>] _[-sg] --->	<u>vanE</u>
MR10.12j	Spec [<u>varE</u>] _[-sg] --->	<u>yanE</u>
MR10.12k	Spec [<u>vahE</u>] _[-sg] --->	<u>yanE</u>
MR10.12l	Spec [<u>gE</u>] _[-sg] --->	<u>yanE</u>
MR10.12m	Spec [<u>IkE</u>] _[-sg] --->	<u>IkenE</u>
MR10.12n	Spec [<u>me</u>] _[±sg] --->	<u>mene</u>
MR10.12o	Spec [<u>ge</u>] _[±sg] --->	<u>gene</u>

Condition: X ≠ null.

10.13 Realization of Specifiers in Uncertainty Sentences

(<8.1.4)

MR10.13 UNCERT + Spec ---> nabE
 [±sg]

Conditions: (i) MR10.13 applies only once per string, unless the string contains o(ibe) 'or' in which case MR10.13 can apply once to S material on each side of 'or';

(ii) MR10.13 does not apply to Spec [me] or Spec[ge].

10.14 Realization of -Yavare in Questions (<8.1.40.1)

MR10.14 -Yavare +q ---> -Yavane
 [±sg]

10.15 Realization of Subject Referents (<8.1.35)

This section contains a repetition of information already presented in Sections 8.1.35.2a-i.

MR10.15a sr1
 [+sg] ---> [-mV]
 [-sg] [-hV]

For interpretation of the V's (vowels) in this rule see morphophonemic rule M11.6.

MR10.15c sr3
 [+sg] ---> [-va]
 [-sg] [-rava]

MR10.15d	sr4 [+sg] [-sg]	--->	[-vo] [-rava]
MR10.15e	sr5 [+sg] [-sg]	--->	[-va] [-ruhi]
MR10.15f	sr6 [+sg] [-sg]	--->	[-ti] [-ruhi]
MR10.15g	sr7 [+sg] [-sg]	--->	[-va] [-raruhi]
MR10.15h	sr8 [+sg] [-sg]	--->	[-va] [-vorava]
MR10.15i	sr9 [±sg]	--->	[∅]

10.16 Realization of Object Referents (<8.1.36)

This section contains a repetition of information already contained in Sections 8.1.36.0a-d.

MR10.16a	or1 [+sg] [-sg]	--->	[∅] [-Yahei]
MR10.16b	or2 [+sg] [-sg]	--->	[-va] [-geiyahei]

MR10.16c or3

$$\begin{bmatrix} [+sg] \\ [-sg] \end{bmatrix} \quad \text{--->} \quad \begin{bmatrix} [-mi] \\ [-hei] \end{bmatrix}$$

MR10.16d or4

$$[\pm sg] \quad \text{--->} \quad [\emptyset]$$

10.17 Realization of Imperative Mode Suffixes (<8.1.37; 8.1.38)

MR10.17a Immediate Imperative (<8.1.38; T9.1.5b)

X^Mode[Imper[Immed]]

$$\begin{bmatrix} +1st, & +sg \\ -1st, & +sg \\ -Person, & +sg \\ +1st, & -sg \\ -1st, & -sg \\ -Person, & -sg \end{bmatrix} \quad \text{--->} \quad \begin{bmatrix} -hi \\ \emptyset \\ -\cancel{se} \\ -ri \\ -Yahe \\ -ri \end{bmatrix}$$

Condition: (i) X does not contain
 QUES (<8.1.4)
 INTERROG
 UNCERT

(ii) if X contains verb root oti
 'to go' change oti to ota.

MR10.17b Non-Immediate Imperative (<8.1.38.9)

X^Mode[Imper[Non-Immed]]

$$[-1st, +sg] \quad \text{--->} \quad -\underline{Iso}$$

10.18 Realization of Subjunctive Mode Suffixes (<8.1.37;
8.1.39)

MR10.18a Subjunctive A (<8.1.39)

Mode[Subj[SubjA]]

+1st, +sg	---	<u>-hi</u>
-1st, +sg		<u>-ha</u>
-Person, +sg	---	<u>-hi</u>
+1st, -sg		<u>-ha</u>
-1st, -sg		<u>-ha</u>
-Person, -sg		<u>-ha</u>

Condition: If the verb root to which this material is attached is oti 'to go' change oti to ota.

MR10.18b Subjunctive B (<8.1.39)

Mode[Subj[SubjB]]

+1st, +sg	---	<u>-hima</u>
-1st, +sg		<u>-hama</u>
-Person, +sg		<u>-hima</u>
+1st, -sg	---	<u>-hava</u>
-1st, -sg		<u>-hava</u>
-Person, -sg		<u>-hava</u>

Condition: As for MR10.18a.

10.19 Realization of Tense and Aspect Suffixes (<8.1.37;
8.1.40-42)

MR10.19a	past	---	<u>-ni</u>
MR10.19b	pres	---	∅
MR10.19c	fut	---	<u>-ri</u>

MR10.19d (i)

Indica[pres^ punct]

+1st, +sg	---	<u>-ma</u>
-1st, +sg		<u>-A</u>
-Person, +sg		<u>-ma</u>
+1st, -sg		<u>-A</u>
-1st, -sg		<u>-A</u>
-Person, -sg		<u>-A</u>

(ii)

Indica[past^ punct]

+1st, +sg	---	<u>-U</u>
-1st, +sg		<u>-Ua</u>
-Person, +sg		<u>-U</u>
+1st, -sg		<u>-Ua</u>
-1st, -sg		<u>-Ua</u>
-Person, -sg		<u>-Ua</u>

MR10.19e contin ---> -AreMR10.19f repet ---> -Iigare

11.0 Morphophonemic Rules

This section contains a set of roughly sketched rules which interpret morphophonemic symbols (capital variants of Koiari sounds -- see Section 7.6 -- and other symbols), specify any further obligatory phonological changes, and remove remaining boundary symbols in the terminal strings provided by the rest of the grammar. The output to this section will be in terms of the

sounds of Koiari as already outlined. Theoretically this section should provide a generative phonology based on distinctive features,¹ but this is left for later analysis.

The rules in this section apply only to 'words', which, for the purposes of this grammar have been separated by spaces (see again Section 7.6). The following conventions are employed to state positions of sounds in words:

- (i) ... (C)V indicates word final position;
- (ii) ... CV... indicates word medial position;
- (iii) (C)V... indicates word initial position.

Optional rules which apply across word boundaries and/or within words are not presented here (but see Section 5.83.32 above). The rules are ordered although order is only important for the first and last rules and for subparts of individual rules.

M11.1 - ---> \emptyset

This rule removes morpheme boundary symbols and allows the following rules to interpret sequences of sounds and symbols within words.

¹

See, for example, Chomsky and Halle (1968).

$$M11.2 \quad \dots \left\{ \begin{array}{c} \underline{e} \\ \underline{E} \\ \underline{i} \end{array} \right\} U \dots \quad \text{--->} \quad \dots \underline{u} \dots$$

This rule interprets morphophonemic changes associated with $-\underline{U}\langle \underline{me} \rangle$, $-\underline{U}\langle \underline{ge} \rangle$ (Conjunctions (Cf. T9.2.11; T9.2.12)), and $-\underline{U}$, $-\underline{Ua}$ (punctiliar aspect/person-number suffixes with past tense (Cf. MR10.19d (ii))).

$$M11.3 \quad \left[\begin{array}{c} \dots \underline{uY} \dots \\ \dots \underline{VY} \dots \\ \dots \underline{AY} \dots \end{array} \right] \quad \text{--->} \quad \left[\begin{array}{c} \dots \underline{uy} \dots \\ \dots \underline{iy} \dots \\ \dots \underline{iy} \dots \end{array} \right]$$

[where $V \neq u$]

This rule interprets morphophonemic changes associated with $-\underline{Yahei}$ (OR-MR10.16a), $-\underline{Yata}\langle \underline{ge} \rangle$ (Conjunction-T9.2.8)), $-\underline{Yebene} \dots -\underline{Ye}$ (Conjunction-T9.2.10), $-\underline{Ya}$ (introduced phonological material (8.1.30.2a fn.1)), $-\underline{Yavare}$ (specifier (8.1.40.1)), $-\underline{Yahe} \sim -\underline{Yohe}$ (imperative suffixes, 2nd plural (8.1.38.1, 8.1.38.3(c))).

$$M11.4 \quad \begin{array}{ll} \text{(i)} & \dots \underline{hA} \dots \quad \text{--->} \quad \dots \underline{a} \dots \\ \text{(ii)} & \dots \underline{VA} \quad \text{--->} \quad \dots \underline{a} \end{array}$$

These rules interpret morphophonemic symbol A in $-\underline{vahA}$ (PS rule 8.1.33), and in punctiliar aspect/person-number suffixes for present tense, respectively (Cf. MR10.19d(i)).

M11.5 (i) $\left[\begin{array}{c} \underline{iAre}... \\ \underline{uAre}... \end{array} \right] \text{ ---> } \left[\begin{array}{c} \underline{iare}... \\ \underline{uyare}... \end{array} \right]$

This subpart of rule M11.5 interprets morphophonemic changes associated with -Are (continuative suffix MR10.19e) with the verb root i 'to eat' and u 'to stay, remain'.

(ii) $\left[\begin{array}{c} \dots \underline{niAre} \dots \\ \dots \underline{CVAre} \dots \end{array} \right] \text{ ---> } \left[\begin{array}{c} \dots \underline{niare} \dots \\ \dots \underline{Care} \dots \end{array} \right]$
 [where CV \neq ni]

This subpart interprets -Are in other environments.

M11.6 $\left[\begin{array}{c} \dots \underline{emV} \dots \\ \underline{ramV} \dots \\ \dots \underline{VmV} \end{array} \right] \text{ ---> } \left[\begin{array}{c} \dots \underline{eme} \dots \\ \underline{rami} \dots \\ \dots \underline{Vma} \dots \end{array} \right]$ ($<8.1.35.2a;$
 MR10.15a)
 [where V \neq e]

M11.7 (i)

$\dots \left[\begin{array}{c} \underline{a} \\ \underline{o} \end{array} \right] \underline{Ik} \dots \text{ ---> } \dots \left[\begin{array}{c} \underline{a} \\ \underline{o} \end{array} \right] \underline{ik} \dots$

This subpart accounts for the specifiers on da, 'I', a 'you', no 'we', ya 'you(pl.)

(ii) $(\dots) \underline{uI} \dots \text{ ---> } (\dots) \underline{u} \dots$
 (iii) $(\dots) \underline{VIC} \dots \text{ ---> } (\dots) \underline{i} \dots$

[where V \neq u;
 C \neq k.]

These two subparts account for all other instances.

This rule interprets morphophonemic changes associated with IkE (Specifier (8.1.7.3)), -I<me> (Conjunction-T9.2.8), -Igare (repetitive aspect-MR10.19f), -Ihama, -Ihava (Negative imperative suffixes for 2nd singular and plural respectively-Cf. MR10.6), -Iso (non-immediate imperative-MR10.17b).

M11.8 The following subparts of this rule interpret morphophonemic changes associated with the conjunction -E<ge> (Cf. T9.2.8; T9.2.9).

$$(i) \begin{array}{|c|} \hline \underline{iEge} \\ \hline \underline{uEge} \\ \hline \end{array} \quad \text{--->} \quad \begin{array}{|c|} \hline \underline{iege} \\ \hline \underline{uyege} \\ \hline \end{array}$$

This subpart accounts for the verb root i 'to eat' and u 'to stay, remain.'

$$(ii) \left\{ \begin{array}{l} \dots \underline{nuEge} \\ \dots \underline{nuaEge} \end{array} \right\} \quad \text{--->} \quad \dots \underline{nuge}$$

This subpart accounts for conjunction with past tense punctiliar aspect indicative mode.

$$(iii) \left\{ \begin{array}{l} \dots \underline{VE} \dots \\ \dots \underline{AE} \dots \end{array} \right\} \quad \text{--->} \quad \dots \underline{e} \dots$$

This subpart accounts for all other instances.

$$M11.9 \quad \dots \underline{Vge} \quad \text{--->} \quad \dots \underline{e}$$

This rule substitutes e for the final vowel in imperative (MR10.17) and possessive constructions (8.2.1; T9.2.3; MR10.10).

12.0 BIBLIOGRAPHY

This bibliography contains:

- (a) a list of all works quoted or referred to in the text;
- (b) other selected works to which no direct reference was made but which have, at some time, been consulted and therefore form part of the background to the present study.

The following abbreviations for periodicals and institutions are used:

AA	American Anthropologist
ANZAAS	Australian and New Zealand Association for the Advancement of Science
ArchL.	Archivum Linguisticum
AL	Anthropological Linguistics
FoL	Foundations of Language
IJAL	International Journal of American Linguistics
JL	Journal of Linguistics
JPS	Journal of the Polynesian Society
Lg.	Language
O	Oceania
OL	Oceanic Linguistics

ANDERSON, John

- 1968a 'Ergative and Nominative in English', JL, 4:1-33.
- 1968b 'On the Status of "Lexical Formatives"', FoL, 4:308-19.

BACH, Emmon

- 1964a An Introduction to Transformational Grammars (New York: Holt, Rinehart, and Winston).
- 1964b 'Subcategories in Transformational Grammars'. In H. Lunt (ed.), Proceedings of the Ninth International Congress of Linguists (The Hague: Mouton).
- 1965 'On Some Recurrent Types of Transformations'. In Charles W. Kreidler (ed.), Report of the Sixteenth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.3-19.

BAR-HILLEL, Jehoshua

- 1954 'Logical Syntax and Semantics', Lg., 30:230-7.
- 1966 'On a Misapprehension of the Status of Theories in Linguistics', FoL, 2:394-9.
- 1967 'Dictionaries and Meaning Rules', FoL, 3:409-15.

BECKER, Alton L.

- 1967 'Conjoining in a Tagmemic Grammar of English'. In Edward L. Blansitt (Jr.) (ed.), Report of the Eighteenth Annual Round Table Meeting in Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.109-21.

BEE, Darlene L.

- 1965 'Usarufa: A Descriptive Grammar'. Unpublished Ph.D. dissertation, Indiana University.

BIERWISCH, Manfred

- 1967 'Some Semantic Universals of German Adjectivals', FoL, 3:1-37.

BOLINGER, Dwight L.

- 1961 'Syntactic Blends and Other Matters', Lg., 37:366-81.
- 1965 'The Atomization of Meaning', Lg., 41:555-74.
- 1967 'Adjectives in English: Attribution and Predication', Lingua, 18:1-35.

BOWERS, Frederick

- 1968 'English Complex Sentence Formation', JL, 4:83-8.

CHAFE, Wallace L.

- 1965 Review of Robert E. Longacre, Grammar Discovery Procedures: A Field Manual (The Hague: Mouton), in Lg., 41:640-7.
- 1967 Review of Jerrold J. Katz, The Philosophy of Language (New York: Harper and Row, 1966), in IJAL, 33:248-54.
- 1968 'Idiomaticity as an Anomaly in the Chomskyan Paradigm', FoL, 4:109-28.

CHATMAN, Seymour

- 1964 'English Sentence Coordination'. In A. Marckwardt (ed.), Studies in Languages and Linguistics in Honor of Charles Carpenter Fries (Ann Arbor: The English Language Institute, 1964), pp.315-34.

CHOMSKY, Noam A.

- 1955 'Semantic Considerations in Grammar'. In Ruth H. Weinstein (ed.), Report of the Sixth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.141-50, with discussion pp.151-8.

- 1957a Review of Charles F. Hockett, A Manual of Phonology (Indiana University Publications in Anthropology and Linguistics, Memoir II, 1955) in IJAL, 23: 223-34.
- 1957b Review of Roman Jakobson and Morris Halle, Fundamentals of Language (The Hague: Mouton, 1956), in IJAL, 23:234-42.
- 1957c Syntactic Structures (The Hague: Mouton).
- 1959 Review of B.F. Skinner, Verbal Behaviour (New York: Appleton-Century-Crofts, 1957), in Lg., 35:26-58. Reprinted in Fodor and Katz (1964).
- 1961 'Some Methodological Remarks on Generative Grammar', Word, 17:219-39. Reprinted in Fodor and Katz (1964).
- 1962 'A Transformational Approach to Syntax'. In A.A. Hill (ed.), Proceedings of the 1958 Conference on Problems of Linguistic Analysis in English (Austin, Texas). Reprinted in Fodor and Katz (1964).
- 1963 'Formal Properties of Grammars'. In R.D. Luce, R. Bush, and E. Galanter (eds), Handbook of Mathematical Psychology, Vol.II (New York: Wiley), pp.323-418.
- 1964 Current Issues in Linguistic Theory (The Hague: Mouton). A slightly earlier version appears in Fodor and Katz (1964). This is a revised and expanded version of a paper presented to the session 'The Logical Basis of Linguistic Theory', at the Ninth International Congress of Linguists, Cambridge, Mass., 1962. It appears under the title of the session in H. Lunt (ed.), Proceedings (The Hague: Mouton, 1964).
- 1965 Aspects of the Theory of Syntax (Cambridge, Mass.: M.I.T. Press).
- 1966a Topics in the Theory of Generative Grammar (The Hague: Mouton). Originally printed in T.A. Sobeck (ed.), Current Trends in Linguistics, Vol.III: Linguistic Theory (The Hague: Mouton), pp.1-60.

- 1966b Cartesian Linguistics: A Chapter in the History of Rationalist Thought (New York: Harper and Row).
- 1967 'Recent Contributions to the Theory of Innate Ideas', Synthese, 17:2-11.
- CHOMSKY, Noam and Morris HALLE
- 1965 'Some Controversial Questions in Phonological Theory', JL, 1:97-138.
- 1968 The Sound Pattern of English (New York: Harper and Row).
- CHOMSKY, Noam, Morris HALLE, and Fred LUKOFF
- 1956 'On Accent and Juncture in English'. In M. Halle, H. Lunt and M. Maclean (eds), For Roman Jakobson (The Hague: Mouton), pp.65-80.
- CLOSS, Elizabeth
- 1965 'Diachronic Syntax and Generative Grammar', Lg., 41:402-15.
- COHEN, Jonathan
- 1967 Review of Jerrold J. Katz, The Philosophy of Language (New York: Harper and Row, 1966), in JL, 3:163-65.
- CRYSTAL, D.
- 1966 'Specification and English Tenses', JL, 2:1-35.
- CUNNINGHAM, Margaret C.
- 1968 'Alawa Case Relationships'. Unpublished M.S., The University of Queensland.
- DIK, Simon C.
- 1967 'Some Critical Remarks on the Treatment of Morphological Structure in Transformational Generative Grammar', Lingua, 18:352-84.

1968 Coordination: Its Implications for the Theory of General Linguistics (Amsterdam: North-Holland Pub. Co.).

DINGWALL, Orr W.

1963 'Transformational Grammar: Form and Theory', Lingua, 12:233-75.

1966 'Recent Developments in Transformational Generative Grammar', Lingua, 16:292-316.

FILLMORE, Charles J.

1963 'The Position of Embedding Transformations in a Grammar', Word, 19:208-31.

1965a Indirect Object Constructions in English and the Ordering of Transformations (The Hague: Mouton). First appeared as Report No.1 1r, 1962, of the Ohio State University Research Foundation Project on Linguistic Analysis.

1965b Entailment Rules in a Semantic Theory. The Ohio State University Research Foundation Project on Linguistic Analysis, Report No.10, 60-82.

1965c On the Notion Equivalent Sentence Structure. The Ohio State University Research Foundation Project on Linguistic Analysis, Report No.11-3.

1966a 'A Proposal Concerning English Prepositions'. In F.P. Dinneen (ed.), Report of the Seventeenth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.19-33.

1966b Towards a Modern Theory of Case. The Ohio State University Research Foundation Project on Linguistic Analysis, Report No.13-1.

1966c 'Deictic Categories in the Semantics of "Come"', FoL, 2:219-27.

1968 'The Case for Case'. To appear in Emmon Bach and Robert Harms (eds), Proceedings of the Texas Symposium on Language Universals, April 13-15, 1967 (New York: Holt, Rinehart and Winston).

- FODOR, Jerry A. and Jerrold J. KATZ (eds)
 1964 The Structure of Language: Readings in the Philosophy of Language (New Jersey: Prentice-Hall).
- FRANKLIN, Karl
 1967 'Kewa Sentence Structure'. In Pacific Linguistics publications, Series A - Occasional Papers, No.13 (Canberra: The Australian National University), pp.27-59.
- FROMKIN, V.
 1968 'Speculations on Performance Models', JL, 4:47-69.
- FUDGE, E.C.
 1967 'The Nature of Phonological Primes', JL, 3:1-36.
- GLEITMAN, Lila
 1961 'Pronominals and Stress in English Conjunctions', Language Learning, 11:157-69.
 1965 'Coordinating Conjunctions in English', Lg., 41:260-94.
- CLEASON, H.A. (Jr)
 1965 Linguistics and English Grammar (New York: Holt, Rinehart and Winston).
- GREGORY, M.
 1967 'Aspects of Varieties Differentiation', JL., 3:177-99.
- HALE, Auston
 1965 'Worksheets for a First Course in Transformational Syntax'. Unpublish mimeo. (University of North Dakota: Summer Institute of Linguistics).

- 1967 'Eleven Lessons in Transformational Grammar'. Unpublished memo. (Holzhausen, West Germany: Summer Institute of Linguistics).

HALE, Kenneth

- 1965 Review of Emmon Bach, An Introduction to Transformational Grammars (New York: Holt, Rinehart and Winston, 1964), in IJAL, 31:265-70.
- 1967a Review of G.H. Matthews, Hidatsa Syntax (The Hague: Mouton, 1965), in IJAL, 33:329-41.
- 1967b 'Some Productive Rules in Lardil (Mornington Island) Syntax'. In Pacific Linguistics, Series A - Occasional Papers, No.11 (Canberra: The Australian National University), pp.63-73.
- 1967c 'Case and Voice in Some Australian Languages'. Unpublished mimeo. paper delivered at ANZAAS Congress, Melbourne.
- 1968a Review of Geoffrey N. O'Grady, Nyangumata Grammar (Oceanic Linguistic Monograph, No.9, 1964), in Lg., 44:174-81.
- 1968b Review of Patrick W. Hohepa, A Profile Generative Grammar of Maori (Indiana University Publications in Anthropology and Linguistics, Memoir 20 of the International Journal of American Linguistics, 1967), in JPS, 77:83-99.

HALL, Robert A. (Jr)

- 1965 'Fact and Fiction in Grammatical Analysis', FoL, 1:337-45.
- 1968a Review of Robert M.W. Dixon, What is Language? A New Approach to Linguistic Description (London: Longmans, 1965), in FoL, 4:87-97.
- 1968b 'Contrastive Grammar and Textbook Structure'. In James A. Alatis (ed.), Report of the Nineteenth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.; Georgetown University Press), pp.175-83.

HALLE, Morris

- 1957 'In Defense of Number Two'. In Ernst Pulgram (ed.), Studies Presented to Joshua Whatmough on his 60th Birthday (The Hague: Mouton), pp.65-72.
- 1959 The Sound Pattern of Russian (The Hague: Mouton).
- 1962 'Phonology in a Generative Grammar', Word, 18:54-72. Reprinted in Fodor and Katz (1964).
- 1963 'On Cyclically Ordered Rules in Russian'. In American Contributions to the Fifth International Congress of Slavists (The Hague: Mouton), pp.113-32.
- 1964 'On the Bases of Phonology'. In Fodor and Katz (1964), pp.324-33.

HALLIDAY, M.A.K.

- 1961 'Categories of the Theory of Grammar', Word, 17:241-92.
- 1966a 'Some Notes on "Deep" Grammar', JL, 2: 57-69.
- 1966b 'The Concept of Rank: A Reply', JL, 2: 110-9.
- 1967a 'Notes on Transitivity and Theme in English', JL, 3:37-82.
- 1967b 'Notes on Transitivity and Theme in English, Part 2', JL, 3:199-245.
- 1968 'Notes on Transitivity and Theme in English, Part 3', JL, 4:179-216.

HARMAN, Gilbert

- 1966 'About What an Adequate Grammar Could Do', FoL, 2:134-41.

HARMON, G.H.

- 1963 'Generative Grammars Without Transformation Rules', Lg., 39:597-616.

HEALEY, Phyllis M.

- 1966 Levels and Chaining in Telefol Sentences.
Linguistic Circle of Canberra Publications,
Series B - Monograph No.5 (Canberra: The
Australian National University).

HILL, Archibald A.

- 1966a 'A Re-examination of the English Articles'.
In Francis P. Dinneen (ed.), Report of the
Seventeenth Annual Round Table Meeting of
Linguistics and Language Studies (Washington,
D.C.; Georgetown University Press),
pp.217-33.
- 1966b 'Non-Grammatical Prerequisites', FoL,
2:319-37.

HILL, Kenneth C.

- 1967 'A Grammar of the Serrano Language'.
Unpublished Ph.D. dissertation, University
of California.

HOCKETT, Charles F.

- 1961 'Linguistic Elements and Their Relations',
Lg., 37:29-53.
- 1967 'Where the Tongue Slips, There Slip I'.
In To Honor Roman Jakobson (The Hague: Mouton),
pp.910-36.
- 1968 The State of the Art (The Hague: Mouton).

HOHEPA, Patrick W.

- 1967 A Profile Generative Grammar of Maori.
Indiana University Publications in
Anthropology and Linguistics, Memoir 20 of
the International Journal of American
Linguistics.

HOOLEY, Bruce A.

- 1962-3 'Transformations in Neomelanesian', O,
33:116-27.

HOUSEHOLDER, Fred W.

- 1961 'On Linguistic Primes'. In Sol Saporta (ed.), Psycholinguistics: A Book of Readings (New York: Holt, Rinehart and Winston), pp.15-25.
- 1965 'On Some Recent Claims in Phonological Theory', JL, 1:13-34.
- 1966 'Phonological Theory: A Brief Comment', JL, 2:99-101.

HUDDLESTON, R.

- 1967 'More on the English Comparative', JL, 3:91-103.

JACOBS, Roderick A. and Peter S. ROSENBAUM

- 1967 Grammar 1 and 2 (Boston: Ginn and Co.).

JACOBSON, Sven

- 1966 Review of Noam A. Chomsky, Aspects of the Theory of Syntax (Cambridge, Mass.: M.I.T. Press, 1965), in Linguistics, 28:111-26.

JAMES, Dorothy

- 1967 'Embedding and Coordinating Transforms in Siane', Unpublished mimeo. paper delivered at ANZAAS Congress, Melbourne.

KACHRU, Yamuna

- 1968 'The Copula in Hindi'. In John W.M. Verhaar (ed.), The Verb 'Be' and its Synonyms, pp.35-59. Foundations of Language Supplementary Series, Vol.6, Dordrecht, Holland.

KAHN, Charles H.

- 1966 'The Greek Verb "To Be" and the Concept of Being', FoL, 2:245-65.

KANDIAH, T.

- 1968 'Transformational Grammar and the Layering of Structure in Tamil', JL, 4:217-46.

KATZ, Jerrold J.

- 1964a 'Semi Sentences'. In Fodor and Katz (1964), pp.400-16.
- 1964b 'Mentalism in Linguistics', Lg., 40:124-37.
- 1966 'Mr Pfeifer on Questions of Reference', FoL, 2:241-45.
- 1967 'Recent Issues in Semantic Theory', FoL, 3:124-95.

KATZ, Jerrold J. and Jerry A. FODOR

- 1964 'The Structure of a Semantic Theory', Lg., 39:170-210.

KATZ, Jerrold J. and Paul M. POSTAL

- 1964 An Integrated Theory of Linguistic Descriptions (Cambridge, Mass.: M.I.T. Press).

KIPARSKY, Paul

- 1968 'Tense and Mood in Indo-European Syntax', FoL, 4:30-58.

KLIMA, Edward S.

- 1964a 'Negation in English'. In Fodor and Katz (1964), pp.246-323.
- 1964b 'Relatedness Between Grammatical Systems', Lg., 40:1-20.

KOUTSOUDAS, Andreas

- 1963 'The Morpheme Reconsidered', IJAL, 29: 160-71.
- 1964 'The Handling of Morphophonemic Processes in Transformational Grammars'. In Papers in Memory of G.C. Pappageotes, Special Publication V, Word, pp.28-42.
- 1966 Writing Transformational Grammars : An Introduction (New York: McGraw-Hill).
- 1968 'On Wh-words in English', JL, 4:267-73.

LAKOFF, George P.

- 1966 'On the Nature of Syntactic Irregularity'. Unpublished Ph.D. dissertation, Indiana University. Published later as Report NSF-16, Mathematical Linguistics and Automatic Translation, The Computation Laboratory of Harvard University.
- 1968 'Instrumental Adverbs and the Concept of Deep Structure', FoL, 4:4-30.

LAMB, Sydney M.

- 1967 Review of Noam A. Chomsky, Current Issues in Linguistic Theory (The Hague: Mouton, 1964), and Aspects of the Theory of Syntax (Cambridge, Mass.: M.I.T. Press, 1965), in AA, 69:411-5.

LANGACKER, Ronald W.

- 1965 'French Interrogatives: A Transformational Description', Lg., 41:587-600.
- 1968 'Observations on French Possessives', Lg., 44:51-76.

LANGENDOEN, Terence D.

- 1966 'The Syntax of English Expletive "It"'. In Francis P. Dineen (ed.), Report of the Seventeenth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.207-17.
- 1967a 'The Copula in Mundari'. In John W.M. Verhaar (ed.), The Verb 'Be' and Its Synonyms, pp.75-100. Foundations of Language Supplementary Series, Vol.1, Dordrecht, Holland.
- 1967b 'Mundari Verb Conjugation'. Linguistics, 32:39-58.

LEECH, Geoffrey N.

- 1968 'Some Assumptions in the Metatheory of Linguistics', Linguistics, 39:87-102.

LEES, Robert B.

- 1957 Review of Noam A. Chomsky, Syntactic Structures (The Hague: Mouton, 1957), in Lg., 33:375-408.
- 1960a The Grammar of English Nominalizations (The Hague: Mouton).
- 1960b 'A Multiply Ambiguous Adjectival Construction in English English'. Lg., 36:207-22.
- 1961 'Grammatical Analysis of the English Comparative Construction', Word, 17:171-85.
- 1963 'Analysis of the "Cleft Sentence" in English', Zeitschrift für Phonetik Sprachwissenschaft und Kommunikationsforschung, 16:371-88.
- 1965 'Turkish Nominalizations and a Problem of Ellipsis', FoL, 1:112-21.

LEES, Robert B. and Edward S. KLIMA

- 1966 'Rules for English Pronominalization', Lg., 39:17-29.

LOEWEKE, Eunice and Jean MAY

- 1966 'Fasu Grammar', AL, 8 (No.5): 17-33.

LOFLIN, M.D.

- 1968 'A Note on Verb Phrase Complementation', JL, 4:285-6.

LONGACRE, Robert E.

- 1964 Grammar Discovery Procedures: A Field Manual (The Hague: Mouton).
- 1967a 'Reply to Postal's Review of Grammar Discovery Procedures: A Field Manual', IJAL, 33:323-8.
- 1967b 'The Notion of Sentence'. In Edward L. Blansitt (ed.), Report of the Eighteenth Annual Round Table Meeting on Linguistics and Language Studies (Washington, D.C.: Georgetown University Press), pp.15-25.

LYONS, John

- 1967 'A Note on Possessive, Existential and Locative Sentences', FoL, 3:390-7.
- 1966a 'Towards A "Notional" Theory of the "Parts of Speech"', JL, 2:209-37.
- 1966b Review of Jerrold J. Katz and Paul M. Postal, An Integrated Theory of Linguistic Descriptions (Cambridge, Mass.: M.I.T. Press, 1964), in JL, 2: 119-27.

MARSHALL, J.C. and R.C. WALES

- 1966 'Which Syntax: A Consumer's Guide', JL, 2:181-9.

MATTHEWS, G.H.

- 1965 Hidatsa Syntax (The Hague: Mouton).

MATTHEWS, P.H.

- 1961 'Transformational Grammar', ArchL., 13: 196-209.
- 1965a 'Problems of Selection in Transformational Grammar', JL, 1:35-47.
- 1965b 'The Inflectional Component of a Word-and-Paradigm Grammar', JL, 1:139-71.
- 1966a 'Latin'. In Word Classes, Special issue of Lingua, 17:153-81.
- 1966b 'The Concept of Rank in "Neo-Firthian" Grammar', JL, 2:101-10.
- 1967 Review of Noam A. Chomsky, Aspects of the Theory of Syntax (Cambridge, Mass.: M.I.T. Press, 1965), in JL, 3:119-52.
- 1968 'Some Remarks on the Householder-Halle Controversy', JL, 4:275-84.

MORAVCSIK, J.M.E.

- 1967 'Linguistic Theory and the Philosophy of Language', FoL, 3:209-34.

McCARTHY, Joy

- 1965 'Clause Chaining in Kanite', AL, 7 (No.5); 59-70.

McCawley, James D.

- 1968 'Concerning the Base Component of a Transformational Grammar', FoL, 4:243-70.

McKaughan, Howard P.

- 1966 'Sequences of Clauses in Tairora', OL, 5 (No.1):1-12.

McKay, John C.

- 1968 'Some Generative Rules for German Time Adverbials', Lg., 44:25-50.

Patton, Thomas E.

- 1968 'Syntactic Deviance', FoL, 4:138-54.

Pawley, Andrew K.

- 1966 'The Structure of Karam: A Grammar of A New Guinea Highlands Language'. Unpublished Ph.D. dissertation, University of Auckland. New Zealand.

Pence, Alan R.

- 1965 'A Brief Kunimaipa Grammar'. Unpublished mimeo. paper. (Ukarumpa: Summer Institute of Linguistics).
- 1968 'An Analysis of Kunimaipa Pronouns', Kivung, 1:109-15.

Pilhofer, G.

- 1933 Grammatik Der Kâte-Sprache in New Guinea. Zeitschrift für Eingeborenen-Sprachen, Beihefte 14 (Berlin).

Pfeifer, David E.

- 1966 'The Question of Reference in the Writings of J.A. Fodor and J.J. Katz', FoL, 2:142-50.

Postal, Paul M.

- 1964a Constituent Structure: A Study of Contemporary Models of Syntactic Description (The Hague: Mouton).

- 1964b 'Limitations of Phrase Structure Grammars'.
In Fodor and Katz (1964), pp.137-52.
- 1964c 'Underlying and Superficial Linguistic
Structure', Harvard Educational Review, 34:
246-66. Reprinted in R.C. Oldfield (ed.),
Language (Harmondsworth: Penguin Modern
Psychology Series UPS 10, 1968).
- 1966a 'On the So-Called "Pronouns" in English'.
In F.P. Dinneen (ed.), Report of the
Seventeenth Annual Round Table Meeting on
Linguistics and Language Studies, (Washington,
D.C.: Georgetown University Press), pp.177-
207.
- 1966b 'A Note on "Understood Transitively"', IJAL,
32:90-3.
- 1966c Review of Robert E. Longacre, Grammar
Discovery Procedures: A Field Manual (The
Hague: Mouton, 1964), in IJAL, 32:93-6.
- 1966d Review of Andre Martinet, Elements of
General Linguistics (Chicago: University of
Chicago Press, 1964), in FoL, 2:151-86.
- 1968 Aspects of Phonological Theory (New York:
Harper and Row).
- REICHLING, A.
- 1961 'Principles and Methods of Syntax:
Cryptanalytical Formalism', Lingua, 10:
1-17.
- REICHLING, A. and E.M. UHLENBECK
- 1964 'Fundamentals of Syntax'. In H.G. Lunt (ed.),
Proceedings of the Ninth International
Congress of Linguists (The Hague: Mouton),
pp.166-71.
- ROBINS, R.H.
- 1967 Review of G.H. Matthews, Hidatsa Syntax
(The Hague: Mouton, 1965), in Lingua,
18:438-41.

ROSENBAUM, Peter S.

- 1967a The Grammar of English Predicate Complement Constructions (Cambridge; Mass.: M.I.T. Press).
- 1967b 'Phrase Structure Principles of English Complex Sentence Formation', JL, 3:103-19.

ROSS, John R.

- 1966 Adjectives as Noun Phrases. M.I.T. Report No.ALOO0100. Also presented as a paper to the Winter Meeting of the Linguistic Society of America, New York, December 28, 1966.
- 1967 'On the Cyclic Nature of English Pronominalization'. In To Honor Roman Jakobson (The Hague: Mouton), pp.1669-84.

SCHACHTER, P.

- 1962 Review of Robert B. Lees, Grammar of English Nominalizations (The Hague: Mouton, fourth printing, 1966), in IJAL, 28:134-45.

SCHANE, Sanford

- 1966 A Schema for Sentence Coordination (Bedford: The MITRE Corporation, Report No.MTP-10).

SEIFFERT, L.

- 1968 'Neo-Humboldtian Semantics in Perspective', JL, 4:93-109.

SMITH, Carlota

- 1961 'A Class of Complex Modifiers in English', Lg., 37:342-66.
- 1964 'Determiners and Relative Clauses in a Generative Grammar of English', Lg., 40:37-53.

STAAL, J.F.

- 1965 'Generative Syntax and Semantics', FoL, 1:133-54.
- 1966 'Analyticity', FoL, 2:67-93.

- 1967 'Some Semantic Relations between Sentoids', FoL, 3:66-89.
- 1968a '"And"', JL, 4:79-81.
- 1968b 'Meaning, Regular and Irregular', FoL, 4:182-5.
- STOCKWELL, Robert P.
- 1960 'The Place of Intonation in a Generative Grammar of English', Lg., 36:360-7.
- 1968 'Contrastive Analysis and Lapsed Time'. In James A. Alatis (ed.), Report of the Nineteenth Annual Round Table Meeting on Linguistics and Language Studies (Washington; D.C.: Georgetown University Press), pp.11-26.
- STUTTERHEIM, C.F.P.
- 1967 'Postal versus Reichling and Uhlenbeck: A Misunderstanding', FoL, 3:292-4.
- TEETER, Karl V.
- 1963 'Lexicostatistics and Genetic Relationship', Lg., 39:638-48.
- THOMAS, Owen
- 1965 Transformational Grammar and the Teacher of English (New York: Holt, Rinehart and Winston).
- THOMPSON, Richard A.
- 1968 'Transformational Theory and Semantic Analysis', JL, 4:73-8.
- THORNE, J.P.
- 1965a 'Stylistics and Generative Grammars', JL, 1:49-59.
- 1965b Review of Paul M. Postal, Constituent Structure (Bloomington: Indiana University, 1964), in JL, 1 :73-6.
- 1966 'English Imperative Sentences', JL, 2:69-78.

UHLENBECK, E.M.

- 1963 'An Appraisal of Transformation Theory',
Lingua, 12:1-18.
- 1964 Discussion in the session 'Logical Basis of
Linguistic Tjeory', in H. Lunt (ed.),
Proceedings of the Ninth International
Congress of Linguists (The Hague: Mouton),
pp.981-3.
- 1967 'Some Further Remarks on Transformational
Grammar', Lingua, 17:263-316.

VESPER, Don R.

- 1968 'A Generative Grammar of Kurukh Copula'.
In John W.M. Verhaar (ed.), The Verb 'Be'
and Its Synonyms, pp.112-48. Foundations
of Language Supplementary Series, Vol.6,
Dordrecht, Holland.

VOEGELIN, C.F. and F.M.

- 1964 'On the History of Structuralizing in
Twentieth Century America', AL, 5:12-37.
- 1967 'Passive Transformations from Non-
Transitive Bases in Hopi', IJAL, 33:276-82.

WAGNER, Heinz K.

- 1968 'Verb Phrase Complementation: A criticism',
JL, 4:89-91.

WATERHOUSE, Viola

- 1963 'Independent and Dependent Sentences',
IJAL, 29:45-54.

WEINREICH, Uriel

- 1963 'On the Semantic Structure of Language'.
In J.H. Greenberg (ed.), Universals of
Language, (Cambridge, Mass.: M.I.T. Press),
pp.114-71. In revised version (1966),
pp.142-216.

- 1966 'Explorations in Semantic Theory'. In Charles A. Ferguson (ed.), Vol.III: Theoretical Foundations, of Current Trends in Linguistics (The Hague: Mouton), pp.395-77.
- 1967 'On Arguing with Mr Katz: A Brief Rejoinder', FoL, 3:284-8.
- WELLS, R.
- 1963 'Some Neglected Opportunities in Descriptive Linguistics', AL, 5 (No.1): 38-49.
- WILSON, R.D.
- 1966 'A Criticism of Distinctive Features', JL, 2:195-206.
- YAMADA, Sae and Itsuko IGARASHI
- 1967 'Coordination in Transformational Grammar', Zeitschrift für Phonetik Sprachwissenschaft und Kommunikationsforschung, 20:143-56.
- ZATORSKI, R.
- 1967 'Early and Later Versions of the Theory of Transformational Grammar', Zeitschrift für Phonetik Sprachwissenschaft und Kommunikationsforschung, 20:259-70.
- ZIFF, Paul
- 1967 'Some Comments on Mr Harman's Confabulations', FoL, 3:403-9.
- ZIMMER, Karl E.
- 1968 Review of Noam A. Chomsky, Cartesian Linguistics: A Chapter in the History of Rationalist Thought (New York: Harper and Row, 1966), in IJAL, 34:290-303.

13.0 Appendix : Summary of Phrase-Structure Rules

8.1.0	Given:	#S*#		
8.1.1	S*	---	$\left\{ \begin{array}{l} \text{Interjection} \\ (\text{PreS})(\text{\#S\#Conj})^n \text{\#S\#} \end{array} \right\}$	(<u><8.1.0</u>) [where $n \geq 0$]
8.1.2	PreS	---	$\left\{ \begin{array}{l} \text{Reply} \\ \text{Address} \\ \text{Vocative} \end{array} \right\}$	(<u><8.1.1</u>)
8.1.3	Vocative	---	$N^{\wedge} \left\{ \begin{array}{l} \text{-e} \\ \text{-duna} \end{array} \right\}$	(<u><8.1.2</u>)
8.1.4	S	---	$\left\{ \begin{array}{l} \text{QUES} \\ \text{INTERROG} \\ \text{UNCERT} \end{array} \right\} \text{ NOM(NEG)PP}$	(<u><8.1.1</u>)
8.1.5	QUES	---	$\left\{ \begin{array}{l} \text{q-Tag} \\ \text{q} \end{array} \right\}$	(<u><8.1.4</u>)
8.1.6	INTERROG	---	Interrog ^q	(<u><8.1.4</u>)
8.1.7	NOM	---	NP ^{Sub}	(<u><8.1.4</u>)
8.1.8	Sub	---	$\left\{ \begin{array}{l} \text{ProSub} \\ \text{DemP} \end{array} \right\}$	(<u><8.1.7</u>)
8.1.9	PP	---	$(T) \left\{ \begin{array}{l} (\text{AdvP}) \text{ VP} \\ \text{COMP}^{\wedge} \text{UNU} \end{array} \right\}$	(<u><8.1.4</u>)
8.1.10	T	---	$\left\{ \begin{array}{l} \text{TimeP} \\ \text{Tword} \end{array} \right\}$	(<u><8.1.9</u>)

8.1.11	TimeP	--->	{ NP } Time { #S# }	(<8.1.10)
8.1.12	AdvP	--->	{ LOC BenP PUR InstrP DesAdvP }	(<8.1.9)
8.1.13	COMP	--->	{ NP AdjP LOC AccompP BenP SimP }	(<8.1.9)
8.1.14	LOC	--->	{ LocP } { Lword }	(<8.1.12; 8.1.13)
8.1.15	LocP	--->	{ NP } Loc { SimP } { #S# }	(<8.1.14)
8.1.16	AccompP	--->	NP^Accom	(<8.1.13)
8.1.17	BenP	--->	NP^Ben	(<8.1.12; 8.1.13)
8.1.18	SimP	--->	NP^- <u>navate</u> < <u>rE</u> >	(<8.1.13; 8.1.15)
8.1.19	PUR	--->	#S#^(- <u>ha</u>)	(<8.1.12)
8.1.20	InstrP	--->	NP^- <u>va</u> < <u>gE</u> >	(<8.1.12)

- 8.1.21 VP ---> $\left. \begin{array}{l} (\text{NP}(\text{NP})) \\ \text{Pred} \\ \text{PredAdjP} \\ \text{Quote} \end{array} \right\} \text{V}$ (<8.1.9)
- 8.1.22 V ---> Vroot(Stative) SR^OR (M) MOOD (<8.1.21)
- 8.1.23 Pred ---> $\left\{ \begin{array}{l} \text{AdjP} \\ \text{NP} \end{array} \right\}$ (<8.1.21)
- 8.1.24 Quote ---> Vroot^SR^OR (M) MOOD^#S*# (<8.1.21)
- 8.1.25 NP ---> (#S#) N (DemP)(Num)(Lim)
(<8.1.7; 8.1.11;
8.1.13; 8.1.15;
8.1.16; 8.1.17;
8.1.18; 8.1.20;
8.1.21; 8.1.23)
- 8.1.26 DemP ---> (D)Demon (<8.1.8; 8.1.25)
- 8.1.27 AdjP ---> Adj $\left(\begin{array}{l} \text{-mava} \langle \text{vahE} \rangle \\ \text{-bata} \langle \text{vahE} \rangle \\ \text{-kaye} \langle \text{rE} \rangle \end{array} \right)$ (<8.1.13;
8.1.23)
- 8.1.28 PredAdjP ---> PredAdj(Int) (<8.1.21)
- 8.1.29 DesAdvP ---> (Demon)^ ateki <gE> (<8.1.12)
- 8.1.30 MOOD ---> $\left(\begin{array}{l} \text{-tiniva} \\ \text{Vroot}^{\text{SR}^{\text{OR}}(\text{M})} \end{array} \right)$ (Want) Mode (<8.1.22;
8.1.24)

8.1.31	Want	--->	- <u>riheni</u> <gE>^AuxSR	(<8.1.30)
8.1.32	M	--->	{ M ₁ M ₂ }	(<8.1.22; 8.1.24; 8.1.30)
8.1.33	M ₁	--->	ManAdv ⁿ (Mod)- <u>vahA</u> <gE> [n = 1 or 2]	(<8.1.32)
8.1.34	M ₂	--->	ManAdv^AuxSR	(<8.1.32)
8.1.35	SR	--->	{ sr1 sr2 sr3 sr4 sr5 sr6 sr7 sr8 sr9 }	(<8.1.22; 8.1.24; 8.1.30)
8.1.36	OR	--->	{ or1 or2 or3 or4 }	(<8.1.22; 8.1.24; 8.1.30)
8.1.37	Mode	--->	{ Imper Subj Indic }	(<8.1.30)
8.1.38	Imper	--->	{ Immed Non-Immed }	(<8.1.37)
8.1.39	Subj	--->	{ SubjA (<u>inau</u>) SubjB (<u>nema</u>) (<u>beu</u>) (<u>beta</u>) }	(<8.1.37)
8.1.40	Indic	--->	{ (AuxSR) Indica IndicB (UNU) }	(<8.1.37)
8.1.41	Indica	--->	{ past } punct (<u>ma</u>) { pres }	(<8.1.40)

8.1.42 IndicB

--->

$$\left\{ \begin{array}{l} \text{fut} \\ \left\{ \begin{array}{l} \text{punct} \\ \text{contin} \\ \text{repet} \end{array} \right\} \\ \\ \left\{ \begin{array}{l} \text{pres} \\ \text{past} \end{array} \right\} \\ \left\{ \begin{array}{l} \text{contin} \\ \text{repet} \end{array} \right\} \end{array} \right\} \underline{\text{rE}}$$

(<8.1.40)
