NEW GUINEA AREA LANGUAGES AND LANGUAGE STUDY
Vol. 2

AUSTRONESIAN LANGUAGES

S.A. Wurm, ed.

DEDICATION

The Austronesian languages of the New Guinea area of which
the great majority is spoken in coastal and insular areas
of Papua New Guinea have with a number of notable exceptions,
received relatively less attention by linguists working in
New Guinea area languages than the non-Austronesian (or Papuan)
languages. The present large volume is the first compre-
hensive and scholarly study of these languages as a whole
and thereby fills an important and badly felt gap. I, the
Governor-General of Papua New Guinea, welcome the appearance
of this important work by a number of linguists who have a
long tradition of working in the Austronesian languages of
Papua New Guinea and am happy to see the attention that is
given to these particular languages of our country.

(JOHN GUISE)
GOVERNOR-GENERAL

PORT MORESBY.

24th March, 1976

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SPECIAL DEDICATION TO THE SECOND VOLUME

For thousands of years as the sun set, and darkness descended upon this land, men women and children of all ages gathered around smoky fires and the cooking pots. It was story time and the respected elders would speak about our ancestors, of battles won and lost, of relatives, friends, a marriage to be arranged and bride price to be settled. The spoken word was listened to and respected.

Time, education, and independence have had little effect upon this age old tradition. The spoken word from an elder has more effect than the writings of a young university graduate. Time and change has however broken down the barriers between people of different language groups. Inter-marriage had its effects on language - a new word creeps in here and there and the language is the richer for it.

For many years anthropologists, sociologists, botanists and linguists have been trying unceasingly to relate the cultures and traditions, plants and languages of the differ-ent peoples of the Pacific basin in order to answer one perplexing question - from where do the people of Papua New Guinea originally come?
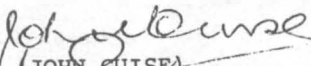
As a humble citizen, I am concerned that with so many changes brought about by western education and developments of all latitudes, our cultures and traditions change. I am happy, as the Governor-General, to welcome the efforts of so many linguists who have had long association with the people of Papua New Guinea and who write with authority on the different languages of this nation.

This work, the second of a set of three, concerns itself with the Austronesian languages which are a special feature of this country's diverse cultures and my language and my wife's language are part of it.

> Am aramana etanaina ma paina kauei. Da am vivira
> ma am volagota alolom amamam, ma am melagai babada
> auwari ina mae kaua. Taui nota ravai.

> *Look after the paths of your knowledge so that*
> *your respect and loyalty towards your mothers,*
> *fathers and your village leaders will remain good.*
> *They are wise people.*

(Language of John Guise's people in the Weraura and Maramatana areas - Milne Bay Province)

JOHN GUISE
GOVERNOR-GENERAL

PORT MORESBY.

24th March, 1976

PREFACE

The manuscripts now appearing in print as the contents of the three large volumes which constitute the present reference work on New Guinea linguistics from a general point of view and bear the overall title *New Guinea Area Languages and Language Study* were originally solicited by Professor Thomas A. Sebeok and S.A. Wurm on the initiative of the former in his capacity as General Editor of the series *Current Trends in the Language Sciences* published by Mouton Publishers, The Hague, Netherlands. Professor Sebeok was the first to conceive the idea of the publication of a set of volumes in that series under the editorship of S.A. Wurm with the overall title *Current Trends in the Study of New Guinea Area Languages*.

After the manuscripts had been delivered to Professor Sebeok by mid-1974, and through him to Mouton Publishers, and accepted by the latter, Professor Sebeok resigned from the editorship of the series *Current Trends in the Language Sciences*. In negotiations between S.A. Wurm and Mouton Publishers over the fate of the series in general and the New Guinea area volumes in particular, it became clear that the very large overall size of the envisaged New Guinea area volumes was expected to cause serious difficulties for the prospective publisher under prevailing circumstances, and their publication was likely to suffer quite substantial delays.

This would have resulted in the withholding of much unique information from the interested public for a long time, not to mention the frustrations of the numerous authors who would have not seen the results of their work appear in print within a reasonable time as parts of a large reference work. At the same time, the highly topical and changing nature of much of the subject matter treated in the volumes would possibly have made some of their contents obsolete by the time of the eventual publication which would have been most unfortunate.

In view of this situation, other potential avenues for a speedy publication of the manuscripts in the form of a set of three to four large

volumes were explored and it proved possible to arrange for their reasonably quick publication, in three large volumes, in the book series (Series C) of the serial publication *Pacific Linguistics* issued through the Department of Linguistics in the School of Pacific Studies of the Australian National University in Canberra.

This seemed all the more appropriate in view of the fact that most of the contents of volume I, *Papuan Languages and the New Guinea Linguistic Scene* in particular, and some of those of volumes II and III, constituted the results of up to one and a half decades of intensive research work by linguists associated in one form or another with the Department of Linguistics of the School of Pacific Studies of the Australian National University, with these volumes presenting the overall results of their research for the first time in a comprehensive form in the framework of a detailed compendium.

In addition, the choice of these publication channels had the advantage that quite a number of language and related maps could be added to those originally envisaged for the volumes, thus considerably enhancing their overall value.

The technical tasks of copy-editing and indexing were carried out in the Department of Linguistics. The editor would like to express his heartfelt thanks to his colleagues and staff for the help given him by them in his efforts to see the volumes through the press, and in particular, his thanks are due, for volume II, to his varitypist Jeanette Coombes, who carried out the lengthy and exacting task of setting up the hundreds of printing pages with her usual skill and devotion under the able supervision of Sue Tys, Linguistics Assistant in the Department who at the same time did the lion's share of the setting up herself.

Also, the editor would like to give his thanks to his staff, especially Lois Carrington, Senior Research Assistant in the Department for so ably carrying out the lengthy and arduous task of preparing the voluminous index for volume II. Lois Carrington also played a major role in standardising formats throughout the volume.

Again, his thanks go to the Linguistics Officer of the Department, Hilda Leach, for her dealing very ably and resourcefully with the many technical aspects and problems of guiding the three large volumes through the pre-printing, printing and finishing stages and for efficiently supervising their further handling which, on the distribution side, has been most efficiently handled by Miriam Curnow in her capacity of Publications Distribution Officer.

He also expresses his thanks to the Department of Human Geography for its wonderful co-operation in making its cartographic facilities available. Most especially he wants to thank the excellent cartographers

themselves who, especially Keith Mitchell, but also Ian Heyward and Leo Pancino, spent many hours in producing the numerous highly detailed maps in the volumes, with Hans Gunther giving very valuable advice and allotting the various tasks in a most efficient manner.

Very importantly, the editor's thanks go out to our numerous friends in Papua New Guinea, Irian Jaya, the Solomon Islands and the New Guinea area as a whole who have been our helpers and teachers in our long painstaking work in their languages and who also made our work possible in their countries in many other ways, notably as members of local administrations and governments.

The editor also wishes to voice his thanks to the Australian National University for the co-operation and facilities given and made available to him and his Department and rendering practicable the publication of these imposing volumes for which, on the technical side, the printers in the University, as well as Patria Printers and Adriatic Bookbinders deserve high praise.

He would like to give his thanks to Sir John Crawford who was Director of the School of Pacific Studies when the New Guinea Project now resulting in the publication of these three volumes made its start, and who later as Vice-Chancellor and now as Chancellor has maintained his interest in our work. He also thanks the successive Directors of the School, Professors Oscar Spate, Anthony Low and Wang Gung Wu, for their continued interest in our work and their support.

Last, but not least, the editor's thanks go out to all the numerous contributors to the volumes, whose work in compiling the many chapters and mostly many years' research preceding the writing down of their final results has made the appearance of these three volumes possible.

S.A. Wurm

SUMMARY TABLE OF CONTENTS

INTRODUCTION

    The present three-volume work *New Guinea Area Languages and Language Study* constitutes a detailed reference work and compendium giving concise information on as large a range as possible of matters and problems concerning the languages, and their study, of the New Guinea area. In spite of the spectacular size of the volumes, many aspects of this vast field of study had to remain unmentioned or could only be briefly and cursorily referred to: a situation unfortunately quite unavoidable when dealing with a part of the world in which about one-fifth of all the languages of the world is concentrated: languages which have, with few exceptions, been receiving intensive attention by a still comparatively very small number of linguists only during the last fifteen to twenty years.

    In spite of this, it is hoped that the volumes may fulfil the purpose for which they have been compiled. In the devising of the nature and style of their contents, it was kept very much in mind that the volumes might not only be referred to by linguists specialising in New Guinea area languages or by professional linguists at home in other language areas and wishing to familiarise themselves with aspects of the New Guinea linguistic scene, but also, and perhaps very much so, by non-linguists wishing to learn, for one reason or another, something about language problems in the New Guinea area. Research workers such as anthropologists, prehistorians, Pacific historians, human geographers and others come to mind, but very much also persons whose interests lie in the practical application of the results of scientific study, such as educationalists, administrators, missionaries, policy makers of various kinds and orientations, and others. For the benefit of such persons, the information provided has very largely been couched in terms which, it is hoped, may be intelligible and useful for readers without much training in linguistics and/or language study, though very elementary methods of presentation have been avoided.

The work consists of three volumes which are as follows:

Volume I: *Papuan Languages and the New Guinea Linguistic Scene.*
Volume II: *Austronesian Languages.*
Volume III: *Language, Culture, Society, and the Modern World.*

While the three volumes constitute a whole and together deal with the language questions of the New Guinea area in the light of their basic diversity and from different points of view, each volume stands on its own in being concerned with a particular set of problems largely independently from the contents of the other two volumes. In the light of this, Volume I first offers a general summary discussion of the indigenous language situation in the New Guinea area and highlights the distribution and situation of the two types of indigenous languages: Austronesian and Papuan. This is followed by a detailed discussion of the Papuan (or non-Austronesian) languages: the history of research into them, their general classification problems and their nature, the various major and minor phyla of Papuan languages (and the isolates), with detailed information on the geographical locations of their constituent groups, their internal classification and salient characteristics, and possible wider connections of Papuan languages. The volume concludes with a discussion of Papuan linguistic prehistory and assumed past language migrations in the New Guinea area.

Volume II begins with a presentation of the general picture of the Austronesian languages of the New Guinea area, and is followed by a detailed survey of the history of research in these languages by areas. A description of the general features of New Guinea area Austronesian languages comes next, as well as discussions of individual Austronesian groups in the area. The final part of the volume deals with the problem of Austronesian and Papuan "mixed" languages.

Volume III begins with treatments of some aspects of language in culture, the distribution of cultural vocabulary, kinship terminology in a linguistic setting, special languages, lexicography and language change. Then follow studies of features of non-verbal communication, and discussions of multilingualism, writing vernaculars and vernacular literacy, and language policies. Next comes a very detailed presentation of various lingue franche such as New Guinea Pidgin, Hiri Motu, English and Missionary lingue franche, and of the various problems and questions connected with them including teaching in them. This is followed by discussions of vernacular education, of intrusive languages other than English, and of problems of translation and interpretation. Language planning and engineering is touched upon afterwards, and the volume

concludes with a review of the institutional framework of the study of New Guinea area languages in the world.

The contents of the three volumes are divided into seven divisions which are further subdivided into a total of thirty-two parts containing the individual chapters of which the three volumes contain one hundred and forty. If a Division contains only a single chapter (see Divisions 1. and 3. in volume 1) or two closely connected chapters (see Division 6. in volume III), the establishment of "Parts" has been avoided. In several instances, chapters dealing with a specific sub-set of problems within a Part have been combined as a group of chapters under a major common heading (e.g. in volume I, chapters 2.6.1. and 2.6.2. under 2.6., 2.8.1. and 2.8.2. under 2.8.; in volume III, chapters 7.4.5.1.-13. under 7.4.5.). Boxing of such a chapter group within a chapter group has also been resorted to: in volume III, chapters 7.4.1.1.-6. constitute a chapter group under 7.4.1., but 7.4.1.4. itself is a major common heading for (sub-)chapters 7.4.1.4.1.-6.

Numbering of Divisions, Parts, Chapters, and within the latter, of sections, sub-sections and major paragraphs has been extensively resorted to to permit easy cross-referencing. The numbers run consecutively through the three volumes. Referencing within the three individual volumes is done through the quoting of the respective Division-Part-Chapter-etc. numbers, e.g. a reference from chapter 2.5. in volume I to a section in chapter 2.7. in the same volume will appear as for instance, 2.7.2.2.6. References across volumes are accompanied by the Roman volume number placed before them in parentheses, e.g. a reference from a chapter in volume I to one in volume III takes the shape of, for instance (III) 7.9.8.

The set-up of each of the three volumes is as follows: it begins with the preface which is almost the same for all the volumes. This is followed by a summary table of contents which contains only the titles of Divisions, Parts and Chapters, and this in turn by the Introduction which is again the same for all the volumes except for the list of the journals and the codes denoting the titles of the journals referred to in the bibliographies contained in them. After this, a very detailed table of contents is given which also shows the contents of the individual chapters in terms of the sections, sub-sections etc. within them. Maps contained in individual chapters are predominantly listed towards the end of the table of contents sections relating to those chapters, unless they are maps illustrating the contents of a very specific section or sub-section within a chapter.

The main text of the volume begins immediately after the detailed table of contents, and is followed by three comprehensive indexes, one of the names of languages and language groups occurring in the volume, one of authors and other personal names, and one of other names such as geographical names. The indexes are preceded by short biographies of the contributors to the volume.

Footnotes referred to by consecutive numbers within individual chapters have mostly been placed as "Notes" at the end of the chapters containing them. Only some have been put at the bottom of pages as footnotes if this seemed advisable to the editor, e.g. if such a footnote referred to a feature in a table and was deemed essential for the understanding of a particular point of the information included in it.

Each chapter is accompanied by its own bibliography - this seemed to be preferable to having one very large comprehensive bibliography at the end of each volume, in spite of the resulting considerable repetitiveness of the individual chapter bibliographies. The titles of most of the journals mentioned in the bibliographies have been quoted in coded forms, and an alphabetical list of the relevant codes and of the journals whose titles have not been coded, has been given in the introduction to each volume with the necessary explanations. The codes employed are the ones commonly used in linguistic studies and correspond to those employed in the volumes of the *International Linguistic Bibliography*.

This list of the titles and title codes of journals referred to in volume II is as follows:

AEB	*Anthropos Ethnologische Bibliothek*. Münster in Westfalen.
AmA	*American Anthropologist*. American Anthropological Association. Washington, D.C.
American Philosophical Society Memoirs	*American Philosophical Society. Memoirs*. Philadelphia.
AnL	*Anthropological Linguistics*. Indiana University, Bloomington, Indiana.
AnnLat	*Annali del Pontificio Museo Missionario Etnologico già Lateranensi*. Vatican City.

Anthropological Forum	*Anthropological Forum.* University of Western Australia, Perth.
Anthropos	*Anthropos. International Review of Ethnology and Linguistics.* Anthropos-Institut, Freiburg, Switzerland.
Antiquity	*Antiquity. A Quarterly Review of Archaeology.* Antiquity Trust. Cambridge, England.
Antiquity and Survival	*Antiquity and Survival. An International Review of Traditional Art and Culture.* The Hague.
ArchR	*Archiv für Religionswissenschaft.* (Heidelberger Akademie der Wissenschaften; Religionswissenschaftliche Gesellschaft, Stockholm.) Leipzig; Freiburg i.B.
AuÜ	*Afrika und Übersee. Sprachen, Kulturen.* (Folge der Zeitschrift für Eingeborenensprachen.) Berlin.
Baessler-Archiv	*Baessler-Archiv. Beiträge zur Völkerkunde.* Berlin.
BICUAER	*Bulletin of the International Committee on Urgent Anthropological and Ethnological Research.* International Union of Anthropological and Ethnological Sciences, Vienna.
BijdrTLV	*Bijdragen tot de Taal-, Land- en Volkenkunde.* Koninklijk Instituut voor Taal-, Land- en Volkenkunde, The Hague.
BSOAS	*Bulletin of the School of Oriental and African Studies.* University of London.
BT	*The Bible Translator.* (Periodical for the Assistance of Bible Translators.) London.

CAnthr	Current Anthropology. A World Journal of the Sciences of Man. Chicago.
DKB	Deutsches Kolonialblatt. Berlin.
DKZ	Deutsche Kolonialzeitung. Berlin.
EAVS	Einzelbeiträge zur allgemeinen und vergleichenden Sprachwissenschaft. Leipzig.
EBNG	An Ethnographic Bibliography of New Guinea. 3 vols. 1968. Department of Anthropology and Sociology, Australian National University.
FE	Folia Ethno-glossica. Hamburg.
Folklore	Folk-Lore. A Quarterly Review of Myth, Tradition, Institution, and Custom. The Folk-Lore Society, London.
Geographica Helvetica	Geographica Helvetica. Zürich.
Globus	Globus (Petermanns Geographische Mitteilungen). Brunswick.
IAE	Internationales Archiv für Ethnographie. Leiden.
IJAL	International Journal of American Linguistics. Baltimore.
Indonesië	Indonesië (Tijdschrift gewijd aan het indonesisch cultuurgebied). The Hague.
IUPAL	Indiana University Publications in Anthropology and Linguistics. Bloomington, Indiana.
JATB	Journal d'Agriculture Tropicale et de Botanique Appliquée. Paris.
JPH	The Journal of Pacific History. Department of Pacific History, Australian National University.

JPS	*The Journal of the Polynesian Society.* Wellington, New Zealand.
JRAI	*Journal of the Royal Anthropological Institute of Great Britain and Ireland.* London.
JSOc	*Journal de la Société des Océanistes.* Paris.
Kivung	*Kivung. (Journal of the Linguistic Society of Papua New Guinea.)* Port Moresby.
Kovave	*Kovave. Journal of New Guinea Literature.* Milton, Jacaranda Press.
Lg	*Language. Journal of the Linguistic Society of America.* Baltimore.
Lingua	*Lingua. International Review of General Linguistics.* Amsterdam.
LPosn	*Lingua Posnaniensis.* Posen.
MAGW	*Mitteilungen der Anthropologischen Gesellschaft Wien.* Vienna.
Man	*Man. A Record of Anthropological Science.* London.
MBA	*Micro-Bibliotheca Anthropos.* Anthropos Institut, Freiburg, Switzerland.
MDS	*Mitteilungen aus den Deutschen Schutzgebieten.* Berlin.
MPhon	*Le Maître Phonétique. Organe de l'Association Phonétique Internationale.* London.
MSOS	*Mitteilungen des Seminars für Orientalische Sprachen.* Berlin.
NGS	*Nieuw Guinea Studiën.* The Hague.

NKWL	*Nachrichten aus dem Kaiser Wilhelm's Land.* Berlin.
Notes on Translation	*Notes on Translation.* Wycliffe Bible Translators, Santa Ana, California.
Oceania	*Oceania.* A journal devoted to the study of the native peoples of Australia, New Guinea and the islands of the Pacific Ocean. University of Sydney.
OL	*Oceanic Linguistics.* The University Press of Hawaii, Honolulu.
OLM	*Oceania Linguistic Monographs.* Sydney.
PL, PL(LCC)	*Pacific Linguistics.* Department of Linguistics, Research School of Pacific Studies, Australian National University, Canberra. (Originally, *Linguistic Circle of Canberra Publications.*)
PL, A	*Pacific Linguistics,* Series A: Occasional Papers.
PL, B	*Pacific Linguistics,* Series B: Monographs.
PL, C	*Pacific Linguistics,* Series C: Books.
PL, D	*Pacific Linguistics,* Series D: Special Publications.
PM	*Petermanns Geographische Mitteilungen.* Gotha. See *Globus.*
TBG	*Tijdschrift voor Indische Taal-, Land- en Volkenkunde/Madjalah untuk Ilmu bahasa, ilmu bumi dan kebudajaan Indonesia.* Lembaga kebudajaan Indonesia. Djakarta. (Formerly: Bataviaasch genootschap van kunsten en wetenschappen. Batavia.)
Te Reo	*Te Reo.* Proceedings of the Linguistic Society of New Zealand, Auckland.

TNG	*Tijdschrift Nieuw Guinea.* The Hague.
Transactions of the Royal Society of South Australia	*Transactions of the Royal Society of South Australia.* Adelaide.
VBG	*Verhandelingen van het Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen.* Batavia and The Hague.
VKI	*Verhandelingen van het Koninklijk Instituut voor Taal-, Land- en Volkenkunde.* The Hague.
VKNA	*Verhandelingen van de Koninklijke Nederlandse Akademie van Wetenschappen, afdeeling Letterkunde.* Amsterdam.
VSISUH	*Veröffentlichungen des Seminars für Indonesische und Südseesprachen der Universität Hamburg.* Berlin.
WPLUH	*Working Papers in Linguistics.* Department of Linguistics, University of Hawaii, Honolulu.
WPNGL	*Workpapers in Papua New Guinea Languages.* Summer Institute of Linguistics, Ukarumpa.
WZKM	*Wiener Zeitschrift für die Kunde des Morgenlandes.* Vienna.
ZAOS	*Zeitschrift für Afrikanische, Ozeanische und Ostasiatische Sprachen.* Berlin. (Formerly: *Zeitschrift für Afrikanische und Ozeanische Sprachen.*)
ZES	*Zeitschrift für Eingeborenen-Sprachen.* Berlin.
ZEthn	*Zeitschrift für Ethnologie. Organ der Deutschen Gesellschaft für Völkerkunde.* Brunswick.
ZKS	*Zeitschrift für Kolonialsprachen.* Berlin.

4.1.0. GENERAL PICTURE OF AUSTRONESIAN LANGUAGES, NEW GUINEA AREA

A. Capell

LIST OF ABBREVIATIONS

The following abbreviations are used in this chapter:

AN	Austronesian
BN	Biak-Numfor
BOM	Bomberai (Peninsula)
D	Demonstrative
IN	Indonesian
N	Noun
NAN	Non-Austronesian
NEC	North-Eastern Coast languages of South-Eastern Papua
NG	New Guinea
NGAN	New Guinea Austronesian
PAN	Proto-Austronesian
PCC	Papuan Central Cluster
PEO	Proto-Eastern-Oceanic
PHC	Proto-North Hebridean-Central Pacific languages
PN	Polynesian
POC	Proto-Oceanic
PTC	Papuan Tip Cluster
SEP	South-Eastern Papua
SOV	Subject-Object-Verb
SVO	Subject-Verb-Object
VK	Vogelkop (Peninsula)
VKAN	Vogelkop (Peninsula) Austronesian
WAN	Western Austronesian
WNG	West New Guinea
WPP	West Papuan Phylum

4.1.0. PRELIMINARY ORIENTATION

This chapter takes up and extends one contributed by the same author to *Current Trends in Linguistics*, vol.8; *Linguistics in Oceania* (1971) under the title of 'The Austronesian Languages of Australian New Guinea'. References to it will be to Capell 1971 followed by the page number.

Whatever the original form of the general Austronesian hypothesis may prove to be, the New Guinea Austronesian (NGAN) languages show at least two subgroups clearly among themselves. At least typologically, there is a dichotomy within the island of New Guinea and its dependencies as regards the kinds of Austronesian (AN) languages spoken there.

All the AN languages of New Guinea are coastal, except in the areas of Madang and the Markham Valley in the north, Yule Island and its hinterland, and the Rigo Area east of Port Moresby, in the south, and the mainland section of the Milne Bay Province in the east. In each case there has been considerable penetration inland. Thus the languages have a surface indication of being immigrant rather than indigenous. One group of these languages has the normal AN syntactical order of SVO, and uses prepositions in the relator-axis phrase; the other has the common (but not universal) Non-Austronesian (NAN) order SOV and uses postpositions in the relator-axis phrase. While this is a surface order as regards the arrangement of subject, verb and object, it is of rather deeper nature in the use of postpositions as against prepositions.

For practical purposes it seems desirable to mark these two subgroups AN_1 and AN_2 respectively. These two classes then are:

> AN_1 :   Languages with SVO and prepositions
>
> AN_2 :   Languages with SOV and postpositions[1]

Map I shows the distribution of the two subgroups within Papua New Guinea as a whole. In this map, West New Guinea (Irian Barat, Irian Jaya) is not included; in the earlier work only Papua New Guinea was considered except for occasional references. The West New Guinea map will be given later (4.1.3.2.).

The two subgroups may first be very briefly illustrated. The sentence: *The man planted a tree in the middle of the garden* takes on the following forms:

AN_1 language: Tuna (Rabaul area of New Britain):

a   tutana i   ga   oe   ra davai livuan ta ta   uma
the man   vp. past plant a   tree middle at the garden
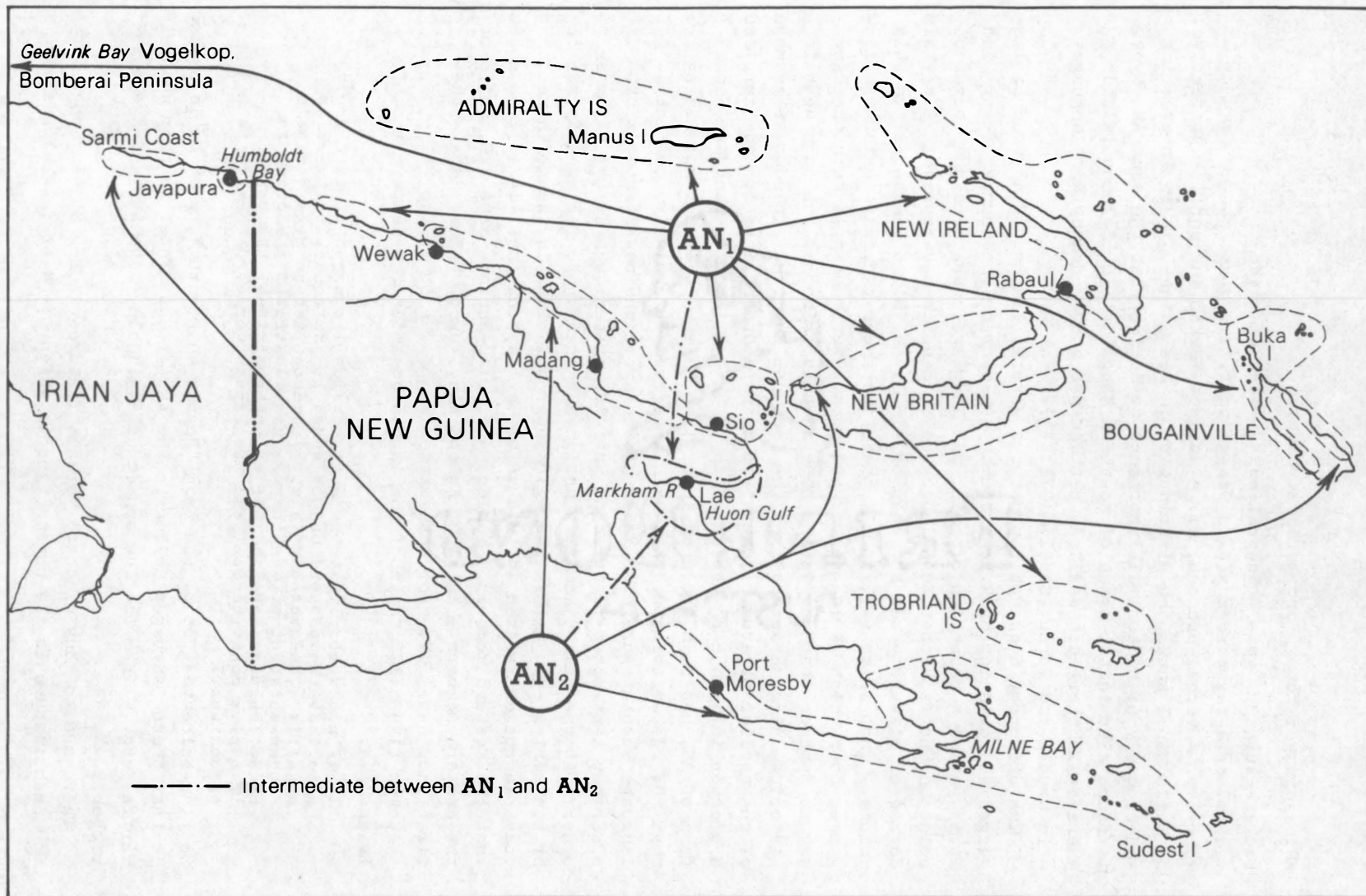
MAP I: AUSTRONESIAN LANGUAGES, PAPUA NEW GUINEA

AN$_2$ language: Motu (Port Moresby, Papua):

tau ese au-na   imea   bogarai-na-i vada e   hado
man sm. *tree-the garden middle-its-at* perf. vp. *plant*

where vp. = verbal pronoun, sm. = subject marker and perf. = perfective.

While Map I shows the distribution in New Guinea, it is interesting
and probably of historical importance to notice that the same AN$_2$ type
is found also in two areas of southern Bougainville, Solomon Islands,
where again there are small AN settlements surrounded by NAN languages
- in Uruava and Torau (Capell 1971:244).

The dichotomy does not represent a genetic feature of a group of lan-
guages all pointing back to a common ancestor or one source of any kind.
It is rather a retention of prior NAN language characters and serves to
point up the fact that NGAN languages so denominated represent a certain
degree of mixture - see the chapter 4.5.1. on "Mixed Languages" in this
volume. That is to say, in all these instances there are prior NAN lan-
guages over which AN languages have been superimposed in much the same
way as Romance characteristics have been superimposed (through certain
historical circumstances) over the Teutonic English. In some areas more
of the earlier stratum has survived than in others, or, it has exercised
a greater influence on the shape in which the incoming language, some
form of AN, has been accepted in a given case. It is not surprising
that SOV clause structure has been preserved irregularly, or that a
language such as Adzera or Yabêm has accepted the new stratum's SVO
order but kept other features of the old stratum such as D + N phrase
order. At the same time it is noticeable that these features appear in
broken series even within a single subgroup. Thus in the north-west
coast languages treated in this volume by Laycock (see 4.4.9.), he notes
that the western members - Tumleo, Ali, Ulau-Suain - have SVO, while of
the eastern members - Kairiru, Kaiep, Kis, Wogeo, Manam, Sepa - the
first four have SOV. For that matter so do the other two.

Cowan (1953b:177) says of the languages about the eastern end of
Irian Jaya:

> It is noteworthy that the Austronesian languages of this area
> also show the pronoun object added to the conjugated verb as
> a suffix. Undoubtedly this phenomenon must be regarded as a
> Papuan substratum... Other Papuan substratum phenomena in
> those languages are the use of postpositions, the Papuan
> 'genitive construction' and the Papuan word-order which is
> predominant.

Setting aside the use of the term "Papuan substratum", what he is saying
is that these languages belong to the AN$_2$ group. Those farther west -
Tarfia, etc. - from the few sentences available, have SVO and are more
probably AN$_1$.

There are so many of these 'areal' features in New Guinea languages.
One such feature is the phrase type in which D + N (*this man*) assumes

the form D + N + d, where d represents a defining suffix of the noun,
usually na (singular), si (plural) - basically pronouns of AN origin.
The Papuan Tip Cluster languages show this usage, not indeed universally,
but in a specially interesting manner in their mainland members. For
example, Wedau rava, *a man* > rava-na, *the definite man*, wei ravana, *this
man*, wei ravai, *these men*. Other languages such as Mukawa show the same
process. This usage has obviously come from a common innovation, though
it is impossible to say where it began, and the AN elements have been put
in the 'original' sequence of N + D (rava-na), and treated as a single
compound, preceded by the NAN demonstrative wei. In Mukawa, niko pipiya,
this man, does not have the singular marker, but niko(si) pipiyisi *these
men*, has the pluraliser -si used with the noun and optionally with the
demonstrative before it. The system is not quite so well digested as
in Wedau.

It is also possible that this usage may give a key to the forms of
the elaborate noun-classing characterising the Kiriwina subgroup of the
Papuan Tip Cluster (PTC). In Kiriwina matauna is *the, he,* which can be
construed as ma tau-na, *this person, he,* plural ma tau-si-na, *this person*
plural-definite, *they*. The feminine minana, *she* would then stand for
m-ina-na, *this female* (originally *mother*) definite. Again makwaisina
vavagi, *those deeds* would stand for ma kwai-si-na where ma is demon-
strative, kwai marks the class, and -si-na the plural definite. For
examples and lists see Capell 1969:60ff where, however, the present
analysis is not suggested. If there is no definition, as in vaigua
kwai-ketoki kwai-lima, *valuables small-baskets five* (Malinowski), the
class markers appear but the definers do not. In NAN languages such as
Monumbo the class markers are found, but the AN definers were never
adopted.

AN$_2$ languages often give the appearance of being imperfectly Austro-
nesian. Such a language as Gedaged (now called Bel) near Madang is one
such. Mager's Dictionary (Mager 1952) shows a considerable number of
the words to be AN in origin, and even though some of the suggestions
made in the Dictionary may be incorrect, there is still a considerable
AN content. Moreover the pronouns are clearly AN, including the prefixes
of subject and the suffixes of object. The possessive prefixes to
'inalienable' nouns are also clearly AN. But apart from the pronoun
marking, the verb has a very NAN character. It has 'sentence medial
forms', which characterise many of the Trans-New Guinea Phylum languages
(see (I)2.5.2.3.2.) and also some other languages of the New Guinea area.
Even here some of the elements used are probably (in a few cases plainly)
AN, but they are used in ways that are quite un-AN. The sentence struc-
ture is syntactically NAN, using both SOV order and postpositions.

Articles are lacking, and many other features that are common to NAN languages are present in Bel. In fact, it would have been quite easy to use Bel rather than Maisin as an example in chapter 4.5.1. on "Mixed Languages".

4.1.1. LANGUAGE GROUPS IN IRIAN JAYA AND PAPUA NEW GUINEA

This section refers, of course, only to the Austronesian languages of the island, along with its dependencies including Papua New Guinea Solomon islands. Details will be found in the present volume concerning the individual groups (4.4.1.-4.4.1.0.). Based largely in lexicostatistical studies, New Guinea and its neighbourhood appears to show a possible division into the following groups:

West New Guinea (Irian Jaya):
    Geelvink Bay west: Biak-Numfor
    Geelvink Bay Islands: Yapen languages
    Geelvink Bay east: Waropen, Môr, etc.
    Northern Coast west: languages of the Sarmi coast district
    Northern Coast east: languages about Hollandia district; Ormu
        and Tobati

East New Guinea (Papua New Guinea):
    Sepik area: A: Sera-Sisano - Tumleo - Ali - Ulau-Suain.
                 B: Kairiru - Kaiep - Kis - Wogeo - Manam - Sepa.
    Madang area: A (west): Meseman, (centre) Belan, Astrolaban,
        (east) Vitiazan.
    Siassi: Adzera - Buang - Hote - Yamap - Yabêm - Tami, etc.
    Papuan Tip Cluster (PTC): north-east mainland (Wedau-Mukawa, etc.)
        - islands west (Fergusson, Duau, Tubetube) - islands east except
        Rossel - southern coast (Suau area) east of Orangerie Bay.
    Papuan Central Cluster (PCC): from Orangerie Bay to Yule Island,
        with a subdivision between Hula and languages west of it.
    New Ireland: the whole island (except Panaras (NAN)) and eastern
        end of New Britain; subdivisions: western New Ireland, islands
        off New Ireland, southern New Ireland and Rabaul area of New
        Britain.
    New Britain: Families suggested by Chowning (1969): Kimbe,
        Bariai, Arawe, Lamogai, Whiteman, Mengen, Tomoip.
    Bougainville: Buka and northern Bougainville - eastern and
        south-western Bougainville.
There are Polynesian languages spoken on Nukuria, Tau-u and Nukumanu, as well as Luangiua in the Bougainville area.
    These subdivisions turn out to be in large part geographical groupings

which incidentally happen to be also linguistic subgroups. This is not
really to be wondered at, if the history behind them is to be regarded
as the history of a series of settlements made by AN speakers wherever
they could get a foothold in regions already populated by NAN speakers
- this applied chiefly to the New Guinea mainland. The movements would
have been chiefly from west to east, but no doubt there have been return
voyages and settlements and there certainly has been much continued
intercourse over large areas, especially under conditions of such trad-
ing expeditions as took place in the Vitiaz Straits and elsewhere. That
this is the story will not be generally denied; the controversies concern
the manner of the movements. Did they spring from various parts of an
already occupied Western Austronesia, or direct (even if at different
times) from a now unknown AN homeland? This matter will be discussed
in Part 4.3. 'The Nature of Austronesian Languages of the New Guinea
Area'.

The second theory has many difficulties, although it is the one fa-
voured at the time of writing. It presupposes a 'Proto-Oceanic' stage
of Proto-Austronesian followed by a Proto-eastern-Austronesian: see
writings by A. Pawley in Bibliography. Pawley has demonstrated what
seems to be a PEO area, and the substantial forms shown by the languages
at this stage. But other areas of the Pacific do not conform to the PEO
pattern, and New Guinea is one of these. The many details of the theory
are suggested in Part 4.3.; the present chapter sets out what might be
regarded as the AN language-type or types that came into the New Guinea
area alone.

4.1.2. PROTO-EASTERN OCEANIC (PEO) AND NEW GUINEA AUSTRONESIAN (NGAN) GRAMMAR: COMPARISONS AND CONTRASTS

4.1.2.1. *INTRODUCTION*

The division into AN_1 and AN_2 has been discussed in the preceding
section; it will be used as a basis in this part of the chapter, but
little will be said about the syntactic structure of the languages at
this point. The basic features of morphology will be discussed first,
because in these lie the main differences between them. Phonology will
be given a small section later; this, too, is largely influenced in New
Guinea by NAN factors which have an effect on the shape of words, but
not on their origins or grammatical forms.

4.1.2.2. *GRAMMATICAL CATEGORIES IN NEW GUINEA AUSTRONESIAN*

4.1.2.2.0. Introductory Remarks

In morphology certain categories are found in most of the area.
Independent noun markers sometimes exist, such as those generally re-
ferred to as 'articles'. They are not definite articles in the European
sense, but serve to mark the word as a noun for grammatical purposes.
In some cases, especially PTC languages, there are endings that mark
the noun as such, and in some languages there are noun classes. In PTC
and Madang areas these often involve congruence with other parts of the
sentence - noun and adjective or verb have to agree in class; in some
again the agreement is limited to numerals. In Manus and a few other
regions there are 'numeral classes' which mark the regions especially;
in Kiriwina the adjectives as well as the numeral are involved.

Articles and noun markers of other kinds will be dealt with first;
noun class as a whole will for convenience sake be coupled with this
discussion.

4.1.2.2.1. Articles and Noun Markers

Of the syntactic markers commonly called articles, PEO *na usually
precedes the noun: *na vanua, *the land*. While this is very general in
Pawley's PEO area, it is not common in NGAN. Most frequently there is
either no article at all (as in Manam) or an article of some other form.
In Tuna (Tolai, Kuanua) there is a initially, ra under government. As
there is no regular n > r change, this ra does not stand for *na.

In certain of the AN_2 languages there is a suffixed na which functions
as an article, but is only singular, being replaced by a plural suffix
otherwise. It seems to be phonologically PEO *na but not functionally
so. In Motu tau, *man* may be made definite with na as tauna, *the man*.
The NEC coast shows a similar use: Wedau rava, Mukawa pipiyə, *man*. The
former (but not the latter) can be made definite: rava-na, *the man*, and
with a demonstrative: wei ravana, *this man*, but Mukawa niko pipiya. In
the plural: Wedau ravai, *the men*; wei ravai, *these men*. Mukawa allows
nikosi pipiyisi but does not insist on it. This -na is homologous with
the possessive -na, 3rd person sg. (of which -i, -si are the plurals,
their) and may indeed actually be this suffix, rather than an article.

In the comparatively few cases where articles occur - chiefly the New
Ireland Group, they are not *na but either a or another vowel; e is not
uncommon. In some areas noun classes exist marked by different articles;
Petats and Buka in general follow this principal, and in Lihir a number
of noun classes are so marked. In Tangga, a is used with specified
words only - and this is true in some other areas, that only certain

words take an article. Words with possessive suffixes take no article
in Tangga: temaŋ, *my father*; fel, *house* is similar: fel ke temaŋ, *my
father's house*. In some cases the addition of a marks not article but
plural. This polarity of the a is found also in other areas. This a
takes a form aN, i.e. the addition of a homorganic nasal: aN biŋ (pho-
netically am biŋ) *day*. Plurality is illustrated in fel, *house* > plural
aN fel; aN man, *bird* > plural man. There also exist specialised plural
markers: tala fel, *houses*, taŋa tualik, *a number of brothers*.

   In Lihir, on the other hand, noun classing appears, indicated by
change of article: a is a general singular; e is personal; i is used
before names of animals and plants, or in naming an individual of a
kind, as in i limoŋ, *one of my hands*; lo marks a dual number, bor a
limited plural as in lo zik, *two children*; bor wayen, *(some) women*;
buet, three or a limited plural; la a larger plural, a e a general
plural, as in a e makil, *the people*, a e tot, *the stones*.

   The vowel morphemes a or e are used as articles in various dialects
of South New Britain, and the change of article for class reappears in
Buka. On the whole, then, na is uncommon in the NGAN.

   Mention should also be made of the ligative ŋa which plays a large
part in Western AN (WAN), especially the northern languages, and occurs
also in the Tuna group, where it serves in various morphophonemic forms
to link noun and adjectives: with the Spanish loanword santo, *holy*, the
Tagalog Bible is called Aŋ maŋa santo-ŋ kasulatan, *the+plural+holy+ŋa+
writing*. Although this form is not widespread in NGAN as a living
particle, it often occurs petrified in the numeral ten, based on an
original *esa-ŋa-puluh.

   In western New Guinea, Windesi shows an article which is postposed -
or suffixed - to the noun, by means of which a plural can be shown: the
basic suffix is -pa-. Cowan (1955) treats this as -pai but if the -i
is treated as the singular marker a regular pattern emerges. Thus
dian-pa-i, *the fish*, dian-pa-si, *the fishes* and a dual dian-pa-sanu,
the two fishes. This language also has an indefinite article, -pesi,
as in dian-pesi, *a fish*, and this can be made into a dual: dian-pesi-
sanu, *two fishes* (any two, not *the* two). This is unusual, but the
marking of a plural by suffixing -si, *they* to a noun is found also in
Numfor: snu:n-si, *men, the men*. In Numfor itself there is a suffixed
-a, ia which emphasises and defines the noun: wos-a, *the word*, isna-ia,
the light, murid-si-a, *his disciples*, but it is doubtful whether this
can be linked with the PAN *a(ŋ). As the latter is suffixed in some IN
languages (Brandstetter 1916:102) such identification is possible.

4.1.2.2.2. Pronominal Systems

4.1.2.2.2.0. *General Remarks*

Pronominal systems are important in NGAN as they are in most languages. In Pawley 1972 a Table of PEO pronouns is given. The same set is valid over much of WAN also. In WAN, however, dual and trial pronouns appear only in the eastern part of what is now Indonesia. Along with this limitation goes a certain variation in the morphemes of the 3rd person plural. In PEO these are basically *na > inia, ia, and *da > kida, respectively. In eastern WAN the i and si subgroup is broken by areas in which *ia and *sira appear as free pronouns, but na/da are preposed to the verb as subjects, and in islands close to New Guinea i/si replace these. In NGAN, the i/si forms are general. As compared with PEO therefore, there is a New Guinea subgroup whose pronominal markers of 3rd person plural are i/si and these are diagnostic.

The pronouns of NGAN are assignable to a set of approximately the following forms:

	Singular	Plural
1st incl.		*kita
1st excl.	*aku, *aya	*kami
2nd	*kaw	*kamu
3rd	*iya	*siDa

where D is used to indicate a variation between d and r, not a retroflex D as in PAN spellings.

For South-Eastern Papua (SEP), there is a fairly fully documented discussion of pronouns in Capell 1943:203-31. This indicates that in this part of New Guinea there are three sets of pronouns to be found, not all of which have correlates in PEO or WAN. There are (1) those which are clear descendants of WAN types, and these occur in Suau and the south-eastern Islands chiefly (PTC) and also, in different phonemic shapes, in the west of the southern Papua region (PCC). (2) 'Cross type pronouns', in which pronominal suffixes are added to a stem which means *person* or *body*: Bunama tau-gu, Wedau tau-∅, and Dobu 'abo'a-gu, *I*; (3) pronouns based entirely on a demonstrative basis, tau-, *person*: these are mainland (North-East Coast) and Laughlan Islands. Here many of the details are similar to those of PEO, but in a survey wider than that of Capell 1943, other types appear also, especially 1st sg. forms based on aya. This, as an alternative form for *aku, is found in Eastern Indonesia, e.g. Seran, South Halmahera and the surrounding islands, also in Numfor and other parts of the Vogelkop: Anceaux (1961, word No. 245) displays a variation between jau and aya, and his own note states

rightly: "although these words are obviously related, they cannot, as
such be reduced to Dempwolff's Austronesian *aku; one would rather be
inclined to assume a basic pattern *ia(ku)". Although true as far as
it goes, this statement does not go quite far enough, because it does
not account for forms without a final u such as Irarutu ya, dya, Kurudu
aya, Waropen ya (also ra - of interest in Choiseul much farther to the
east), Numfor aya. The *nau forms so common in PEO regions appear in
Tobati nehu, Ormu nau, which seems to be about their farthest west, for
Tarfia has duk and Sobei yau. This yau in various forms then appears
along most of the north of New Guinea: Admiralty Islands yo, Tuna yau,
etc. A variant *aya has therefore been added to the preceding Table of
NGAN pronouns.

It is the third person, however, which is diagnostic for NGAN.
Anceaux's lists (1961) give singular i < *iya and plural si, isi, ki <
*siDa, with three that look like petrified trials: Papuma soru, Pom
tioru, Marau hioru, to which should be added Windesi sentoru, *they three*
and Numfor sko *si + telu. Waropen ki arises from a local sound change
and is not directly relatable to south-eastern Solomon Islands (Malaita)
forms such as kira, *they*.

The presence of dual and a few relics of a trial number is of interest.
These - at least the dual - are normal in eastern Oceanic, but do not
appear very widely in WAN. In fact they seem to have originated in the
western area: Watubela kam-lua, *you two* is an example that appears in
one of Riedel's texts (Riedel 1886), and it is most unfortunate that in-
formation from the Moluccan regions is so scarce even now. One important
point that suggests that a regular dual was still in the course of devel-
opment when the AN languages reached this area is the different forms
they assume in different areas. In Manam, dual and trial markers are
added to the end of the verb, not to the pronoun (Capell 1971:290). In
SEP, duals and trials are composite still in a very obvious way, and are
not marked as pronoun subject of the verb. Dobu has si-te-rua, *they two*,
and NEC and the islands about Dobu have similar composite forms.

Certain of the northern languages of New Guinea have developed a
plural that is historically a quadruple, *we-four*, ending in -t, which
Ray rightly identified with the final consonant of *empat, *four*. In
Tuna da-t, *we* (incl.) represents *kinda-empat. The islands off New
Ireland also show such forms (Capell 1971:261-3), and they reappear,
as the statements there show, in the Nggao of southern Ysabel (British
Solomon Islands) and Tanna of Southern New Hebrides. The spacing be-
tween them is considerable but the sequence is quite clear. Their rela-
tionship to the PEO stage of the language still needs explaining. In
a few languages the trial number took the value of a limited plural, as

it does, for instance in Fijian kenda-tou < *kinda-telu.

As one moves from western Indonesia eastwards the grammatical struc-
ture of the languages changes. Some of the eastern features have been
discussed by Stresemann (1927) and by Capell (1944). The development
of a dual number - and presumably the trial would have been subsequent
to and modelled on this - in the east, that was mentioned earlier, is
largely an eastern feature. Where Watubela shows kamlua, *you two*,
Pawley (1972) established *kamudua for PEO. The argument concerning
the origin of Melanesian from eastern Indonesia is an old one: see
Schmidt (1899a and b) and subsequent work by Cowan (1949-50, 1951-52).
There seems to be considerable support for it, and study of eastern
Indonesia is urgently overdue. While it is true that words of AN origin
are found in Oceanic forms, for instance, in Leti and Kissar, such that
no Oceanic forms farther east could actually be derived from them, yet
it may certainly be said that the Oceanic languages developed from the
same form of roots as are today found in the eastern archipelagoes, and
the grammatical forms of the eastern Indonesian languages are too much
like those of the eastern Oceanic to be chance resemblances.

4.1.2.2.2.1. *Possession and Possessive Classes*

The classification of nouns into different groups according to their
nature in order to express possession is a feature of PEO (Pawley 1972:
33-4) which is of importance in New Guinea also. Both differ from the
Polynesian (PN) system and to a certain extent from each other also.
There are two major classes, which are represented almost everywhere in
the AN language area: some nouns take a possessive suffix added directly
to the stem, others add it not to the stem but to a particle placed
usually before it. The one exception seems to be Buru, in the Molucca
region, where direct addition of a possessive ending to a noun stem
does not take place. This language will be mentioned again below.
Examples of direct suffixation are Motu tama-gu, *father-my* and Wedau
ama-u, which has the same formation. Pawley treats these as having
zero linkage (N + ∅), but this seems unnecessary, because in WAN it is
the usual method and it is only in Celebes and eastwards that the use
of independent possessive markers begins. Bare'e can say pale-ku, *my
house*, but also anu:ku pale. This also will be discussed below, but
pale-ku and Malay rumah-ku represent the normal western system, so that
it is not really a case of the omission of a marker, giving -∅, but the
development of methods not used earlier.

The direct addition nouns will be called here Class I; they are
generally, although not quite happily, called 'inalienable' nouns,
involving parts of the body, parts of wholes and usually kinship terms

(or some of these), representing possessions that are permanent: one's head is such (Wedau kola-u) but it may be a head taken from somebody else in war, and then it takes the independent forms au kola, or *my leg* as against *my leg (of chicken or pork which I am eating)*. My relatives are 'inalienable': they may disown me, but they cannot cease to be relatives.

The exact coverage of these classes is different from language to language, and there are marginal cases, e.g. *name* may be inalienable or alienable. All the 'alienable' nouns form the second class, (here called Class II), marked by an independent stem to which the personal possessive suffixes are added.

This Class II was in PEO elaborated in many languages on a semantic basis:

IIA: General possession, of any kind except inalienable and the sub-divisions mentioned below. The stem is *na- and will be discussed below.

IIB: Nouns primarily representing foodstuffs, and some others that concern the 'owner' closely but are not actually 'owned' by him, e.g. Fijian na no-na i talanoa, *his story*, which he tells of himself; but na ke-na i talanoa, *his story*, told by others about him. The scope of the extension of the 'food' class in this way varies in different regions; it s marker is *ka-, from PAN *kaen, *eat*. This subdivision is normal but not universal in NGAN. Some-times phonetic change causes it to disappear, e.g. Wedau ana numa, *his house*, also ana lam, *his food*, because k is often lost in Wedau. Mukawa has ana yove and kana kam.

IIC   Some, but noticeably fewer languages, distinguish a class that is basically things to drink, marked by *ma-, PAN *inum, *drink*. Pawley (1973:52) regards IIC as POC, but it seems to miss out NGAN entirely, so that it does not seem to be of this type. More-over, it does not appear in WAN so far as information goes.

IID: Sporadically other classes are found, especially one of partic-ularly valued possessions, and some languages, especially in Micronesia, are rich in further subdivisions, but none of these are found in NGAN except possibly *bula (*npula?) which in the northern New Hebrides, e.g. Mota pula-, indicates specially valued goods, such as pigs. This is reported from Nada or Budibud (Laughlan Islands) but used as an auxiliary noun without suffixes: to-gu bula mwila, *my banana*. This has long been a neglected lan-guage, and the form is not mentioned in Lithgow's treatment of SEP in the present volume (4.4.10.).

In NGAN there is always a distinction between I and II, but not
always between IIA and IIB, while IIC and IID (apart from Budibud) do
not appear.

The West New Guinea languages need special mention because they have
not been included in the earlier contribution (Capell 1971) and because
they depart quite noticeably from those farther east. Apart from those
of the Vogelkop, information is very patchy and more research is called
for among them. The present remarks are therefore only summary, al-
though a fuller account is given than for other areas, by reason of the
lack of available material.

Class I possessives (suffixed to N stems) are mostly present. In
Numfor they often take on special forms with considerable morphophonemic
changes (Anceaux 1961:13-6). Class II does not have the subdivisions
among its members that appear in eastern New Guinea, but the markers are
made up of two parts, of which the first indicates the person, and the
second the number of items possessed: rum yeda, *my house*; rum yena, *my
houses*. With nouns the plural is marked by the addition of -si (3rd
person plural pronoun): snu:n-si, *men*. The expression of a genitive
relation between nouns allows of more complication and will be mentioned
later.

For Windesi-Wandammen, reference should be made to Cowan (1955:49-50).
The suffixes of Class I are dying out and are rarely used; Class II
forms are commonly employed, and these are based on a root ne-, obviously
akin to *na-, but capable of appearing as verb, sen-ne, *they possess*.

The other languages of the south-west coast were treated briefly by
Cowan (1953a) but information is very scarce. Kaitero, Arguni, Sekar,
etc. also have a clear AN content but they prefix possessives instead
of suffixing them, and this is a NAN feature. In some regards Arguni
invites comparison with Manggarai and Ngad'a on Flores (see 4.5.1.2.2.1.2.)
and not only in these areas, but in that *aku becomes in Ngad'a djao
and in Arguni Bay dja, *I* - it belongs apparently to the *aja series,
not to the *aku series, but the change of j to dj is shared by both
groups.

On the east side of Geelvink Bay, Waropen stands apart from the common
AN patterning of possessives (Held 1942a) and may be left aside for the
present purpose. The few examples Cowan (1953a:6) can quote for Môr show
a phrase structure N + pronoun which again is not AN even, though there
is a very clear AN content in the language.

In the north coast languages, Tarfia (a SOV language) has a NAN pos-
sessive system: duk, *I* > duk ni mama, *my father*; ik ni karfau, *your
child*; i ni kayap, *his house*. Yet even here there are traces of an AN
suffixing system along Class I lines, for Cowan (1953b:172) quotes also

(ik ni) tama-m, *your father*; i ni tama-ni, *his father*. He recognises
the use of postpositions in this language (as AN$_2$ type) but also hazards
the suggestion that ni may actually be the AN *-nja transferred to other
uses, and quotes duk Hollandia-i na wa, *I Hollandia-to I go* and i kayap
te a wa, *he house-from he came*. Sobei forms possessives by placing be
after a pronoun and the phrase then precedes the noun: e be tani, *his
body*, yet Cowan notes that as in Tarfia suffixes are also found, e.g.
tani-ʔ, *my body*, tani-m, *your body*, tendir, *our bodies*, tendi-m, *your
bodies* and tendi, *their bodies*.

In the eastern languages, Ormu and Tobati show kinship. Tobati again
has two usages: tema-x, *my father*; (nunu) tema-nune, *your father*, or a
single pronoun before the noun neh(u) rum, *my house*; neh temi *my father*
(Cowan 1953b:168). Ormu has the same variations: nau, *I*, but nexu
tamaxu, *my father*; otherwise a ni form as in o-ni natu, *your child*, but
tube-nja nubure, *the chief's counsellor*.

While these languages need much more study, they still seem to have
AN possessive constructions grafted on to NAN constructions at an earlier
time. Nothing more can be said of them in the present space.

The genitive construction in all these languages tends to be the *head
its hair* type that was called by Dutch scholars the 'reversed genitive'.
This will be mentioned below as occasion calls for it, especially in
areas where it does not apply. Actually the possessive in this situa-
tion is suffixed to the second noun: Adriani and Kruyt (1911-12) quote
Sula sun fulu-n, *mouth hair-its, moustache*, as a type. This construction
is common in NGAN and in non-AN languages of the island also. In Numfor,
for instance, bin romgun bieda, *woman child her, the woman's child*. In
this language variations for number of owners and number of objects owned
can be made:

(1)   bin suru romgun bie-su: *women two children their-two*
      bin kior romgun bie-si: *women three children their*
for variation of possessor, and for variation of possessed;
(2)   malaekat Manseren Ala bie-da: *God's angel*
      malaekat Manseren Ala bie-su: *God's two angels*
      malaekat Manseren Ala bie-si: *God's angels*
for variation of possessed only. The marking of the noun plural by means
of a third person pronoun after it is found also in Malaita in the Solomon
Islands: hira, kira and (in Lau) ki are placed after a noun to mark the
plural. The point of interest is that this is a PEO group of languages,
not the presumably Proto-Oceanic (POC) that occurs in New Guinea and
eastern Indonesia.

The marker of Class IIA in NGAN seems to be generally an AN feature,
na-, but it is geographically rather scattered. It is commonest in the

AN₁ languages in the north; in the south a- or e- are common in PTC and PCC groups. In the far west, Windesi has ne-, a variant of na-, and no-, another variant, reaches out to Fiji as a component of PEO. In Windesi, no-mu anio, *your house* shows it. The point of interest is that it is found also in WAN as far west as Celebes. It was already suggested by S.H. Ray that the origin of this possession marker is to be found in Central Celebes (and ultimately PAN) anu *something, what's its name*. In Bare'e one may say pale-ku, *my hand* and this is the normal usage in WAN farther west: all nouns may take suffixes, not only those of 'inalienable possession'. But one may also say in Bare'e anu:ku pale, *my hand* rather more emphatically. It would seem to be at this point that the Class II type originated, although its functions as applicable to certain nouns developed only later. In eastern IN, Buli of South Halmahera has ja boboko-k, *my head*, inalienable, but it also has ja ni-k ebai, *my house*, and further it has developed the food possessive (IIB) as in ja na-k piŋe, *my rice*. From this point on the distinction between Class IIA and Class IIB is developed, although Class IIC does not appear as yet.

Buli has no suffixed forms: all are mediated as in jau na-u numa, *my house*. The syntactic feature of placing the full pronoun before the compound in the phrase is also eastern IN, and is found in NAN languages of New Guinea itself, even in the eastern half of the island. See Capell 1943:225-6 for numerous examples of suffixed possessives in NAN languages of New Guinea: Amele, Ono, Kuman and others are deduced as examples. In these there is no subdivision – all nouns take the same set of markers. The combination of cardinal pronoun and possessive before the noun does not seem to be Papuan, but, as shown here, it extends from eastern IN to SEP among the AN languages. It is not a PEO feature, nor can it properly be regarded as a POC feature, but is apparently an NGAN local development.

4.1.2.2.3. The Verb

4.1.2.2.3.0. *General Remarks*

The treatment of the verb here will be based on that given in Capell 1969.   What Pawley (1972) calls morphological transformations will be treated first, then aspect, mood, tense and person will be dealt with.

> In general, the term <u>root</u> is applicable to the simplest form in which the verb can occur: e.g. Motu <u>gini</u>, 'stand'. The term <u>base</u> is applicable to a form in which an element is added, which then in turn functions as root to which other elements are added. Thus Motu, <u>gini</u>, 'stand' > <u>ha-gini</u>, 'cause to stand'; each may take the imperfective marker -mu, as <u>ginimu</u>, <u>haginimu</u>. As one says <u>baina gini</u>, 'I shall stand', so one says <u>baina ha-gini-a</u>

> 'I shall make him stand'; <u>ha-gini-</u> now functions as a base,
> i.e. a root to which further morphemes may be added. (Capell
> 1969:48).

A further quotation from the following paragraph of the same work may be
added:

> In general, the AN verb is used in a root form, subject to
> few changes. The changes are (a) production of a transitive
> from an intransitive form: Tuna reverses the process and
> often produces an intransitive from a transitive by partial
> reduplication: <u>kul</u>, 'buy (it)',><u>kukul</u>, 'buy, go shopping'····
>
>   The common derivative forms usable in the above manner as
> bases in AN languages [of New Guinea] are: (1) causative
> (2) reciprocal (3) reflexive.

The following paragraphs will deal with two of these derived forms
(causative and reciprocal) in which some sort of transformation of the
root itself (producing a base) is involved.

4.1.2.2.3.1. *Morphological Transformations*

   (1) Causatives are marked in AN by prefix of either *pa- or *paka-.
Pawley finds the former to be the normal PEO prefix, and it is more
common in NGAN than the longer form. The latter, however occurs in
Manam as aka:aka-kauri, *to fill*, akarere, *urge* < rere, *wish, like*. De-
rivatives of *pa- are normal in NGAN, but some languages have neither,
and tend to use free morphemes to express a causative. Thus Yabêm has
ɛŋ kekeŋ ae kasa tau, *he makes me I-lie down, he makes me lie down*,
which contrasts strongly with Wedau e vivi-matave-ni-u, *he makes lie
down me*, in which vivi- reduplication of vi-, causative, marks continued
action, -ni- marks transitivity, and -u is the pronoun object. When
derivatives of the AN prefixes occur, there is generally no distinction
between AN_1 and AN_2 languages, except perhaps that they are more often
missing from AN_2 type than from AN_1. In Dobu, the transitive form of
a verb can be used to make a causative function: i ʔeʔeno, *he lies down*,
i ʔeʔeno-igu, *he makes me lie down*, rather like English *lie down* and
lay down.

   Exceptional situations are found in the far western languages, so
far as these are documented. In Windesi, a prefix on-, marks the caus-
ative: Cowan treats this as an abbreviation of one, *make*. That this is
so appears from the fact that the object follows the prefix and the sub-
ject precedes it: it might almost be better to treat it as a separate
verb: dontatuan, *it makes us kneel* is really d-on-ta tuan, *it-makes-us
kneel*. Moreover Cowan remarks that these forms are often intensive,
rather than causative, and quotes malaikat sen-som Sjen na rora, ma
siniontu tata tant-on-som i kota, *the angels praise the Lord in heaven,
and we men praise Him too*.

In Numfor, however, there are instances of ak- as a causative prefix,
e.g. marisen, *be happy*, akmarisen, *make rejoice*, but more frequently,
be- is prefixed to the verb, abbreviation of befa, *make*, or a synonym,
fru:r, is used in the same way as verbs *to make* elsewhere.

For the languages of the north coast there is no evidence in the
available material, unless Tobati kabuni, *extinguish* can be equated
with a PAN root buni, *hide* and ka- regarded as the prefix, as it is by
Kern (1900).

(11) Reciprocity is expressed in PAN by a prefix *baɣi- which appears
very widely in Oceania as bar-, vei-, hai-. In Tuna it appears in two
forms, vara-, prefixed to verb stems, as varagire, *see each other* < gire,
see him, and bar- prefixed to nouns indicating relationship. The former
usage is found again in the western Solomon Islands, e.g. Roviana, as
vari-, in variavosa, *talk to each other*, and is indeed a productive form
used with verbs whose roots are not AN, as in varizame, *talk to each
other*. In the former example, although avosa seems to represent Numfor
wos, Fijian vosa, and in so many other places that it must be at least
a POC root which is not yet recognised in the word-lists. The usage of
bar- with relationship terms appears in Tuna bar-tamana, *father and son*,
and this is recognised as a PEO usage also. Apart from the Tuna area,
however, it does not seem to occur in New Guinea. More frequently the
prefix in these languages is limited to use with verbs, occurring as
vei-, fe-, or he-; in Motu he-, but in combination with a simultaneous
suffix -heheni: he-duru-heheni, *to help each other*. This -heheni looks
like a partial reduplication of -heni-a, *give*, a form of -pani, for which
see Pawley (1972:38). If he- is used without the -heheni, its meanings
vary considerably and do not fit the definition 'reciprocal' very well.

There is much variation in the occurrence of *baɣi- in NGAN. In some
cases it does not occur at all; e.g. Bel places nug after the verb;
Yabêm makes a special use of tauŋ. In Dobu e- is prefixed to some verbs,
and this seems to represent a form of the PAN prefix, but even in Dobu
there are other ways of showing reciprocity. In SEP, Wedau makes some
use of vi- in a reciprocal sense as well as in the causative. This means
that two AN roots, *pa- and *baɣi, have coincided phonemically; but Wedau
can also place viviri, after the verb, but it can also mean *around* and
represents a different PAN root. Mukawa boneya, after the verb, is cer-
tainly a different root. In Suau, however, the PAN reciprocal prefix
occurs only spasmodically in NGAN - chiefly in the island regions,
though not universally there, and perhaps most clearly on southern
coast and neighbouring islands. In both Motu and Wedau, the causative
and reciprocal prefixes seem to have become homonyms, as well as receiv-
ing a number of special usages that did not originally belong to either.

The far west is again insufficiently documented; Cowan does not seem to have any prefix in Windesi, and the translations have circumlocutions, such as se kabio babera so siat, *they said to each other*, in which babera is *each other*. Numfor shows s'awos-jae si, *they say to each other*, which again is not in the AN sequence.

It is interesting to note that the reciprocal prefix seems practically to have missed out South Halmahera also, for Maan (1951:72) can find only one example of fai- with teta, *like, same as* so that faiteta means *to be like each other*; buk si'lu tasine faitetai, *these two books are like each other*. In Buli also the reciprocal has fallen together with the causative, and both have become fa-, in the reciprocal sense often with reduplication of the verb: fadupdupiŋ, *to meet each other*.

4.1.2.2.3.2. *Tense, Mood and Aspect*

Within the morphology of the verb, tense, mood and aspect are important to the present study, but it is not easy to keep them separate. What will be indicated by one of them in one language may be indicated by another in another language.

With regard to the verb, Pawley (1972:42) says that tense-aspect markers in PEO include e, non-past, indefinite; i future; ∅, plus imperative intonation on a verb base, may show hortatives; and on page 48 he gives a table of preverbial particles. There is another which he does not mention on the earlier page, *ma for Proto-North Hebridean-Central Pacific languages (PHC), which is a non-future, generally northern New Hebrides but with occurrences in two Fiji dialects, and in Baki and Tasiko of Epi.

The NGAN picture is very different. There is more detailed indication of tense, especially in the PTC area mainland languages (north-east coast), the Motu section of PCC, and the Madang languages. In some cases inflectional forms such as partial reduplication are found. Some languages, such as Dobu, and Motu, give more expression to aspect than to tense. In fact this is an area where NGAN has more or less gone its own way, to the degree that one suspects considerable substratum effects. For an overall survey see Capell 1969:47-53; 1971:330-333, where these features are treated in some detail for languages apart from the western NG group.

A rough division may be made between several subgroups:

1. Languages that rely on an adverbial marker to indicate details of tense and aspect, using one set of preverbal person markers throughout. The western NG languages tend to do this, although some are imperfectly known structurally - but as far as information goes these seem to have similar systems.

  2. Languages which mark tense, etc. rather vaguely; the particle e
may occur in these as part of the verbal phrase, and there is little
detailed expression of tense, aspect or mood. The Admiralty Islands
languages tend this way, although e does not figure largely among these.

  3. Languages which mark detail frequently not marked in PEO, and
use either a variety of particles or internal inflection as the means.
Motu and Dobu illustrate this type, as well as the Bel group about
Madang. Some of these have almost a Papuan system of suffixes marking
tense, mood or aspect, although person of actor is marked by prefixes –
in this they differ from NAN languages in general. See Capell 1969:
51-3.

  Limitations of space make it impossible to illustrate all these types
in detail, and in any case sufficient detail is given in the statements
referred to above. Only certain points can be picked out here. In
passing, it may be remarked that the fairly wide use of na as a future
marker (which farther east includes Fijian) might almost have justified
a place in Pawley's list as much as i in PEO.

  The bulk of the stress in NG languages is laid on the person and
number of actors; time is generally subordinated (except in the groups
mentioned earlier), manner and aspect are of second importance, espec-
ially in the north-coast languages of West New Guinea and the Sepik
coast of eastern New Guinea. In the Vogelkop languages and Waropen,
2nd and 3rd singular markers u, i may be infixed in the verb; otherwise
the person markers precede the stem, and non-present tense is marked by
a particle, e.g. Numfor, past is shown by kwa:r after the verb, future
by inari before it. It is interesting to note that in the AN languages
of Timor exactly the same thing happens: past tense is marked by a par-
ticle after the verb and future by one before it (Capell 1944:40).
Psychologically this may point to a need to announce an intention in
advance but state an act completed after it is done. In Windesi, 'apart
from certain verbal prefixes that may be said to indicate certain aspects,
the verb does not change for tense, aspect or mood' (Cowan 1955:52).
Cowan's earlier work (1953b) also shows indication of tense by adverbs
in Sobei and Tarfia: Tarfia note duk na-wa, *yesterday I I-went*; tomte
duk na-wa, *tomorrow I I-go*. In Ormu, however, some tense suffixes appear,
but the language needs further study: ra mai, *they come*; ra mai-re, *they-
come-will*; mai-nje, *come!* Tobati uses -nti for *a sort of future* (1953b:
166), -(a)t, hortative and either future or imperfective: nehu wi, *I go*;
nehu wiat (wunt), imperfective; nehu wiati, future. These languages do
not conform to PEO patterning, nor, for that matter, to any other Oceanic
type very clearly.

  The small islands off New Ireland use quite a multitude of particles

to define the verb in various ways. So, na as a future appears in Lihir
and carries on (with interruptions) through Tuna to Fiji. Lihir marks
past by sa and ko, Tangga does it partly by sam or sau (though this is
more truly perfective aspect than a tense); se in Lihir is a "particle
of real happenings", te is stative (sa pe:te, *it is good*); de future and
imperative (Tabar te, ta) and a number of others. Tangga presents a
rather complicated interplay of action, state and time forms, which also
have little in common with AN, although the person markers are quite
clearly AN (Capell 1971:259-63).

    The Admiralty Islands do show some variations among themselves but
tend to be simpler than the New Ireland area. A marker ga, *past* is found
in Musau and in Tuna, and Tangga gi is probably to be linked with it.
Buka again presents a different type of conjugation altogether and unique
in the AN field: it is illustrated in Capell 1971:276-7 and is also
mentioned elsewhere in this volume in Part 4.3. The AN languages of
Bougainville (Banoni, Torau, Uruava, etc.) again do not fit the PEO type.
In Teop na is not a future but a present marker, and the past is marked
by pa (1971:281-2).

    In summary it may be said that although individual PEO forms occur in
NGAN, the NG verbs do not fall into the patterns of aspect, mood and tense
suggested for PEO. Capell's outline (1969:50-53) makes this fully clear.
His final note in that section may be repeated here as part of the gen-
eral summary:

> The general feature of the AN languages seems to be that
> farther west along the north coast of New Guinea, the
> simpler the morphological structure of the verb - and this
> applies to the island groups as well as the mainland. In
> the far west, Biak (Numfor) and Windesi present practically
> no complications, and sentences in these languages represent
> propositions reduced to the lowest terms of simplicity...
> This is true for practically all between Manam and Biak,
> except for Waropen.

4.1.2.2.3.3. *Person Marking*

    It is in the indication of person of subject and pronoun object that
the NGAN languages come nearest to the general Oceanic model. Most use
a shortened form (or root form) of pronoun to indicate person, and spe-
cial importance rests, for reasons already mentioned, in the 3rd person
singular and plural, i and si. The only departure from POC systems is
provided by languages which do not distinguish cardinal and verb pronoun,
and these are mostly those of the Admiralty Islands. In the Sabon dia-
lect, for instance, one finds pronouns in the singular yo, wo, and i and
the verb *put* appears as yo dowi, wo dowi, i dowi. Here, however, there
is not absolute uniformity, for Meier (1907) gives as the verb *go*, yo u

tokai, oi a tokai, i tokai where only the 3rd person lacks a verbal pro-
noun - although the entire plural still lacks them.

(a) Subject Markers

In NGAN the entire Table of pronouns given by Pawley (1972:39) for
PEO can be paralleled for NGAN in general, but there is often less dif-
ference between subject and object forms than in PEO.

In NGAN it can sometimes happen that a subject marker of this kind is
not required if the subject of the sentence is a noun. Thus in Sio, yâ
kana, *fire burns*. This happens, however, only if the subject is a gener-
ic term such as *fire*. More commonly, both in Sio and many other lan-
guages, the A = B type sentence is thus treated if the predicate is a
noun. In Wedau wei orotona amau, *this man (is) my father* - a pronoun
subject in this clause type is often acceptable under the same condi-
tions: tauna amau, *he (is) my father*. But such languages may distinguish
between equational sentences and descriptive sentences, in that the lat-
ter require a subject marker. Wedau shows am kovoɣa i rata, *your pay is
large*, as against wei am kovoɣa, *this (is) your pay*, and the adjectival
phrase am kovoɣa ratana, *your great pay*. Only in this instance ɣaeɣaena
would be used as rata cannot be made adjectival. In a PEO language this
clause distinction also may be made, e.g. Nggela, iɣoe na dalengu, *you
(are) my son*; te sule na tamba-mu, *is great your pay*.

Capell (1943:218-222) has discussed the forms of the SEP pronouns in
some detail, though chiefly concerned with what is here being called the
PTC languages. More recently attention has been drawn to the distinction
between languages which have the 3rd singular in na and the third plural
in la (western Indonesia for the most part) and those which have i and si
in these places as subjects (mostly eastern Indonesia). New Guinea on
the whole has the i/si forms, which are found from Seran eastwards into
the Vogelkop languages and then throughout most of New Guinea, thus dis-
tinguishing them in an important regard from the PEO group, which have
derivatives of the na/la series. The occurrence of dual and trial num-
bers is also important but will be disregarded at the moment. In NGAN
the following series are found:

3rd singular: Numfor i; Windesi i, di; Waropen i; Sobei e; Tarfia i,
             Ormu e; Tobati i.

3rd plural: Numfor si; Windesi se(n) (human), si (non-human); Waropen
           ki, Sobei ri; Tarfia di, Ormu ri/ra; Tobati ri.

Similar series continue eastwards, e.g. Sisano i/si. A notable exception
is Wogeo 3rd plural da which fits the PEO set, but its singular is e,

not na. The Madang (Belan, etc.) groups present a strange mixture of
forms: see Z'graggen in this volume (4.4.1.2.) which are rather hard to
fit into any pattern at all, but on the whole suit best the i/si group.

In the west, the entire system of short pronouns as subject markers
really ends in Celebes, like a number of other features which appear in
Oceanic, though in this case the system reappears in the islands west of
Sumatra and in some detail, including the dual number. This i/si area
belongs to the islands east of Celebes almost exclusively (Haaksma 1933,
passim). In the south-east, Tanimbar and Kei show mixed forms: na sin-
gular and ra plural for the prefixes but forms of *iya and *sira appear
as free pronouns. It is unfortunate that no verbal forms are available
from the Bomberai Peninsula AN languages (Cowan 1953a:32) regrets this
but gives u in 2nd singular in Sekar.

A certain amount of subgrouping seems possible. In the PTC area
Capell (1943:221) showed that there are small differences between these
and PTC, and the following Table may be of use:

Languages	sg:1	sg:2	sg:3	pl:1.incl.	pl:1.excl.	pl:2	pl:3
PCC west of Hood Point	a	o	e	ta	ma	o	(s)e
PTC east of Hood Point	ya, na	(k)u	i	ta	(k)a	(k)wa	ai
Siassi	na	u	i	ta	ni	a	ti
Barim	a	gu	i	ta	a	ka	ti
Sio	a	ku	i	ta	ka	ka	si
Manam	u	ku	i	ga	i	ka	di
Wogeo	o	u	e	ta		ka	da
WAN: Bare'e	ku	nu	na	ta	ka	ni	ra, na

In Makassar and Bugis suffixed pronouns also occur as both subject of
intransitive and sometimes transitive verbs; in this case the object
pronoun may precede the verb.

The first person singular shows several types, as does also 1st plural
excl., but the linkages mentioned above stand out well when WAN languages
are compared.

It is clear that if i/si languages are not part of the PEO complex,
then neither are the New Guinea languages, but the occasional occurrences
of PEO characteristics, as in Wogeo, must not be overlooked.

(b) Object Markers

Object pronouns tend to resemble possessive affixes quite closely.
A comparative Table for south-eastern Papua is given in Capell 1943:236-7.
The set given by Pawley (1972:37) as representing PEO is:

sg.	1st	-(n)au
	2nd	-ko(e)
	3rd	-a
pl.	1st incl.	-ki(n)ta
	1st excl.	-kami
	2nd	kam(i)u
	3rd	-da

In SEP the common suffixes are some form of the following:

sg.	1st	-au, -yau, -nau
	2nd	-o, -mu, -wa
	3rd	-na, -i-, -a
pl.	1st incl.	-ka, -(r)a
	1st excl.	-ma(i)
	2nd	-mi(u)
	3rd	-a, -si, -ri

In Sio a very similar set is found, but differences appear in Madang,
where Bel has

sg.	1st	-ag
	2nd	-o
	3rd	-(i)
pl.	1st incl.	-ad
	1st excl.	-ama
	2nd	-aŋ
	3rd	-din

and there are subclasses of verbs in this connection.

In western New Guinea, however, the practice is normally to use a
subject pronoun also as object, but in some cases suffixes are found
which otherwise belong to the possessive series. Defective information
on the north coast languages probably adds to the uncertainty. Cowan
(1953b) shows in Tobati intia jando-k, *he gave me*, and intiritja honj
nso sey j-and-it-ati, *that dog that whom they-gave-them-will, to whom
will they give that dog?*. Tobati also as a SOV language has postposi-
tions: ente-t, *to you*; intia-t, *to him*, etc. Capell's field notes show
some variation on this in detail but a general agreement: nɛh ndɛn rɔmxɔ,
I you see-you; nɔ'xu ma tərɛ rɔ'mi, *I snake see-it*; mata ndɔ nɔ'xu-t
rombrɔ-k, *the snake sees him*; mata nɔ'xut jə'xɛs rɔ, *the snake bit me*.
In Ormu the situation is not clear and the suffixes seem to differ, e.g.
anjonoune, *let me hear you* (nononje, *hear*). For Tarfia, Cowan shows a

separate pronoun object the same in form as the subject: kemsim duk, *call me* (1953b:173). In Sobei, however, -u, *you* and -i, *him* are documented in esim-u, *calls you* and asim-i, *calls him*; also asim-imto, *calls you* (pl.). The last looks like possibly a trial number (-to) but is not stated to be so. When Geelvink Bay is reached, Waropen shows the independent pronoun used as object: a-wu-ra, *you hold me*; ra-wu-auo, *I hold you*; sambaba iko, *enlightens us* (incl.), and Numfor behaves similarly.

Apart from these western New Guinea languages there is a fairly clear sequence of AN object forms used as suffixes, representing the basic, meaningful parts of the full cardinal pronouns. The habit of using an anticipatory pronoun object suffix before a noun object is widespread, and it does not depend on whether the syntactic order is SVO or SOV. Again, the western languages appear to lack the anticipatory forms. Motu has Ahuia lau e ita-gu, *Ahuia me he-see-me* (SOV); Sio has ku lilinzi tamata, *you baptize them the people* (SVO), similar to si-kea, *they buried him*.

In some IN languages there is much more syntactic liberty than in Oceanic languages, in that a pronoun object may precede the verb and a suffixed pronoun indicates the subject. This is possible in Makassar, as mentioned above, and a resulting sentence type would be ku cini ko, *me see you, you see me*; na suro ko, *him order you, you order him*; nu na kamasean, *he has pity on you*, however, shows both pronouns before the verb, and when this happens the first is the object. In a NAN language such as those of Northern Halmahera or New Guinea, the example would mean precisely the opposite, *you have pity on him*.

Haaksma (1933:74-5) who points out the above fact, also pointed out the transitional character of the Vogelkop Austronesian (VKAN) languages, saying:

> The AN languages of this region often exhibit marks of direct influence from the neighbouring Papuan languages, while among the members of the first group in the west no clear distinction between Indonesian and Melanesian can be observed and still more than the languages of the islands in the eastern part of the IN archipelago they show a transitional character (Haaksma 1933:172).

In these remarks Haaksma was right, and the picture is complicated not only for the reasons that he gives, but even more because the available information in the west and in New Guinea is so poor. For the languages of the islands of Waigeo, Salawati and Misool, off the west coast of New Guinea (the last in Indonesia proper before the establishment of Irian Jaya), nothing more than the official wordlist used by Cowan (1953a) exists.

4.1.3. PHONOLOGICAL QUESTIONS

4.1.3.0. *SETTING OF THE SECTION*

The purpose of this section is not to establish as it were a non-PEO phonological system (which would be a task beyond this paper) but to show how the phonological bases of an earlier language can affect an incoming language. This statement, it is true, does operate on the theory that the New Guinea Austronesian (NGAN) languages actually have come into being in this way, and the they represent *in toto* a 'mixed type' if the whole truth should be told. The special part on this subject in the present volume (see part 4.5.) has discussed features of grammar and vocabulary that have already produced opposing views among linguists as to the history of the 'mixed languages' of South-Eastern Papua, as exhibited in Maisin. This language serves as a catalyst by which the much wider range of New Guinea languages might be assessed, so that if the nature of Maisin in New Guinea (and Flores in Indonesia) is accepted as 'mixed', there would be a reassessment of New Guinea Austronesian as a whole in the light of the arguments offered.

In the chapter referred to, nothing was said about the phonologies of the languages. Maisin offers no difficulties, whether it is regarded as an AN language highly modified by NAN languages, or as a NAN language equally affected by AN languages. Maisin phonology - and the phonologies of all the surrounding languages - is simple in itself and has few special features, except that, for instance, a word cannot end in /m/. A word that would end in a bilabial, nasal or oral, must end in a velar nasal, at least in coastal Maisin, Ubir and a few other languages of the Ubir subgroup. In these a bilabial stop final becomes the corresponding nasal: PAN *tebu, *sugarcane*, becomes tom in Wedau, Mukawa, Ubir, etc.

In the present section a more complex situation is studied. An AN language with a very complex consonantal system is surveyed briefly in regard to its effects on AN words taken into it. The language is Sio (Siâ), spoken on Sio Island and on the neighbouring mainland of the Huon Peninsula. It is quite clearly an AN language of the AN_1 type, yet it has a very un-AN phonology, whose influence on the AN content may prove to be important.

4.1.3.1. *PHONOLOGY OF SIO*

This study is based chiefly on a Sio-German Dictionary by Rev. H. Wagner, itself based on prior study by Rev. M. Stolz, Mr Wagner's predecessor. This contains at the end a short sketch of grammar by Mr Stolz, rearranged and interpreted by O. Dempwolff. The work exists as a mimeographed manuscript, a copy of which came to the present writer by courtesy

of W. Milke. For comparison with the Huon Peninsula NAN languages
McElhanon 1973 has been used.

The importance of this part of the chapter is to suggest the type of
background - an extreme case but none the less valuable - on to which an
AN language might be introduced. To it a second subsection is added,
looking in the opposite direction. This concerns the Vogelkop languages
of AN origin, and will be explained below in 4.1.3.2. At the back of
the present section lies the thought of a few uncertain reconstructions
such as POC */ŋm/. It may be possible to solve these questions, though
in this instance it cannot be done on New Guinea material alone. Seeing
that PAN /rumah/ *house* and /imun/ *drink*, contain /m/, why should one be-
come in Mota /imwa/ and the other /ima/? It is this problem that has led
to presupposing */ŋm/, but it is not really satisfactory. There is here
the added problem that imun has given ima, instead of *imu, and the Mota
intensive is imarag instead of a thematic *imunag.

4.1.3.1.1. The Phonemes of Sio

As given by Stolz the phonemes are as follows (his single, modified
letters being transcribed into such as used generally in Oceanic studies):
Vowels are i, e, ɛ, a, ɔ, o, u.

Consonants:	p			t	k	?
	b			d	g	
	m			n	ŋ	
	mb, kp				ŋg	
			s, z	nz	mkp	
			r, l		ɣ	

Nothing is said about phonemic length of vowels, to Dempwolff's regret.
The symbol x is here transcribed to /ɣ/ and it could be a uvular r; the
Dictionary spells it rr as in rrarrati, *tear apart*, which looks like PAN
*kaRat. Dempwolff remarks, "among the consonants x̱ is shown as weaker
than r̲, so it is here taken that x̱ is a uvular r̲ and r̲ a lingual r̲".

McElhanon (1973:5) admits a general six-vowel pattern in Huon Penin-
sula languages, in which case /ɛ/ in Sio would represent a seventh, but
in a footnote he mentions /æ/ in Wantoat. His consonant list is: p, t,
k, kp, b, d, g, gb, m, n, ŋ, w, f, y, s, z, h, l, r, which is considerably
simpler than Sio. In a footnote to page 67 he states that "in languages
other than Kube and Kâte the phonetic quality of the h̲ or g phonemes in
morphological alternation is that of [ɣ]".

Dempwolff finds four types of reference in comparison with Sio - and
most of the following paragraphs are translations from his additions to
the Dictionary:

A.   A NON-AUSTRONESIAN SUBSTRATUM

> The substratum belongs to the labiovelars, verbal combina-
> tions, distinction between generic and individual being,
> use of objective suffixes, preposing of genitive. As no
> comparative work has been done on Papuan vocabulary, no
> attempt is made here to compare Sio with Kâte, Ono, etc.

The use of object suffixes is an AN feature in point of fact.

Comparison here with McElhanon's conclusions (McElhanon 1973:59) is
interesting, for he considers the grammatical complications of the Huon
Peninsula NAN languages have developed within the family itself. Seeing
these are absent from Sio, the conclusion is more reasonable than to
suppose that Sio has lost them in the process of becoming AN.

B.   AUSTRONESIAN VOCABULARY

There are two subsections to be considered here: a general one, and
a special reference to cognation with Graged (Bel). It is convenient to
take the latter first. Dempwolff's list of comparisons with Bel is given
in full. They number 27, of which perhaps a dozen can be safely termed
AN. In phonemic form they differ very little from Bel, but the backed
vowel /â/ occurs where Bel has /a/ in jâ/ja, *fire*; lâ/la, *go*, ta or
tâ/ta, *perhaps*, nâ/nal, *appointed time*; tàŋa/taŋ, *man's basket*. Wâe/vae,
separate out; in wâŋga/voŋgu, *drum* there is a different correspondence,
which may or may not be right.

Three examples of labialised /mʷ/ appear: mʷâta/mot, *snake*, mʷou/mou,
famine. The first of these is one in which */ŋm/ has been posited for
POC, PEO. Bel voiceless /ʝ/, written z, appears as plain l (Lincoln
1973) in nola/noz, *yesterday*; pale/paze, *tread* (according to Mager 1952),
PAN *peRah, *press out*); taule/tauz, *triton horn*; but one /ʝ/ is answered
in Sio by x (= γ): wuxata/uxat, *work* (n.). These are mostly, according
to Mager, found in the Rai Coast languages and are clearly part of the
chain which links Madang and the Siassi areas.

AN vocabulary of a more general kind is listed by Dempwolff, but
comparison within the Dictionary suggests that his examination is not
complete. He lists 81 words. Some of them are considerably changed:
*danum, *water* has fallen together with *lakaw, *go*, as lâ. This 81 rep-
resents a picking from about 2200 words in the Dictionary, but proper
mathematical treatment and re-examination of the whole list is needed to
produce a reliable percentage. In any case, percentage correspondence
does not seem too high. It is noticeable that of the terms *(t)ama,
father and *(t)ina, *mother*, Sio lacks the t- in each case, although it
does not normally lose initial *t.

In all cases x (= γ) corresponds to PAN */R/, as in kaxi, *day* < *waRi.
Palatal n goes to /n/; *z to nz: *zalan, *way* > nzala, but also to /s/:

*zahat, *bad* > saka; zuRuh, *fluidity* > sulu, *be damp.*

The point of interest is that no words involving other compound con-
sonants than /mʷ/ seem to be AN at all: mgbale, *tomorrow*; mgbamgbea, *to*
cook, mwota, *small*, mgbamkpe, *dog* are specimens of words which often
have AN cognation in other languages. It is just possible that
mwoŋamwoŋa, *be good, fine of taste, as of yams* may be that PEO *mona-(k),
which Pawley is also inclined to take as *ŋmona(k), *fat*, but the medial
consonant raises difficulty here. No words under q (= kp) or beginning
with gb seem to have AN cognates - at least Dempwolff does not include
any, and only the one previously mentioned contains initial γ.

C. COMPARISON WITH YABÊM (JABÊM).

Dempwolff here writes:

> Sio has only a few words in common with Jabêm, but there are
> many parallels in the grammar such as proposing of genitive,
> along with SVO order, treatment of place markers are simple
> objects with use of verbal stems, similar treatment of some
> markers of circumstance; encapsulation of appositional sen-
> tences by demonstratives. Use of originally verbal particles
> for arrangement of sentence series with the same scheme for
> temporal sentences and a similar scheme for logical arrange-
> ment of the sentence.

These features, however, are not distinctive, and most of them are not
limited to Sio and Yabêm.

All these facts mean that Sio has not taken over anything that upsets
its basic phonemic system; its AN content is still more or less 'skin
deep', like so many of the New Guinea Austronesian languages.

Yet some points of interest remain, and are not covered by Dempwolff's
still imperfect analysis. The Dictionary is not by any means complete;
a number of words in the Scripture Reader Miti Kanaŋo are missing from
it. In the very first sentence of that Reader, the opening sentence nia
ndojo Anutu ipulia samba wa tâno wa, *in the beginning God made heaven
and earth* shows i-pull-a, *he made it*. But puli- is not in the Dictionary,
it recalls Fijian bull-a, *make or form a solid body*, Futuna-Aniwa (New
Hebrides) puli-a, *pile up*, as in the creation of the islands, while samba
is clearly related to Kâte sambâŋ, if not borrowed from it. There is
obviously much more to be done within this area yet.

4.1.3.2. *PHONOLOGIES OF THE VOGELKOP AND NORTH COAST AUSTRONESIAN*
LANGUAGES

Very little work seems to have been done on the AN languages of the
Vogelkop and north coast since the end of the last century, when Hendrik
Kern (1885, 1900) reviewed materials available and tried to establish
Oceanic connections. The absence of any concept of PAN at that time

hindered this, and the time is now ripe for further study. More infor-
mation has come to hand on the Vogelkop (VK) area, especially in the
vocabularies published by Anceaux (1961), and dictionaries of Numfor
(van Hasselt 1947) and Waropen (Held 1942a; 1942b). There is still no
dictionary of Windesi dialects, but a grammatical study by Cowan (1955)
and van Balen's (1915) materials help this out. The official Dutch
vocabularies used by Cowan (1953a; 1953b) provide some help for these
and for the Bomberai Peninsula languages. The north coast languages
have been newly studied by Grace (1971), limiting himself, however, to
vocabulary material of his own gathering.

In his analysis Grace deals with the Sarmi coast languages only; Kern
gave an analysis of Numfor and Yotafa (now called Tobati). Cowan has
provided a certain amount of new material in Ormu and Tobati in the east,
and the present writer has done some work on these languages also. Cowan
has also given attention to the Bomberai languages.

These languages present no such problem regarding unusual sound sys-
tems as appears in Sio. Their phonologies are as simple as those of the
NAN West Papuan Phylum (WPP) in general (see chapter (I) 2.10.1.). The
problem here is to explain sound changes that take place in the process
of assimilating AN lexemes, and this is particularly the case in Biak-
Numfor.

Grace's findings concern Sobei, Wakde, Masimasi, Anus, Bonggu and
Tarpia (or Tarfia) on the north coast. Cowan had called the last named
Tarfia, and Grace (1971:15) says, "Tarpia p is in fact frequently artic-
ulated as a bilabial continuant". His conclusions about these languages
are as follows:

> The evidence shows no reason to doubt that these languages
> belong to the Oceanic subgroup of Austronesian. Although
> there were, not surprisingly, a number of instances where
> it was impossible to account for the particular reflex of
> a particular Proto-Oceanic phoneme in a particular form, I
> am not aware of any cases where the explanation would ben-
> efit from recourse to Proto-Austronesian reconstruction
> rather than Proto-Oceanic. On the other hand, all of the
> array of phonological developments that characterize Proto-
> Oceanic as distinct from Proto-Austronesian appear to be
> reflected. (Grace 1971:31)

When the Vogelkop languages are considered, however, the reflexes are
often different, and it does seem better to look to PAN than to POC in
some cases, e.g. final consonants, all of which are bracketed in Grace's
lists, are frequently found in the VK languages, especially Biak-Numfor
(BN), and this would betoken a different and probably earlier origin for
these languages, as is quite intelligible from their geographical position.

The 81 words used for comparison in Grace's list are appended to this
section as Table A with their correspondences in Biak-Numfor, Wandammen
(Windesi) and Waropen.
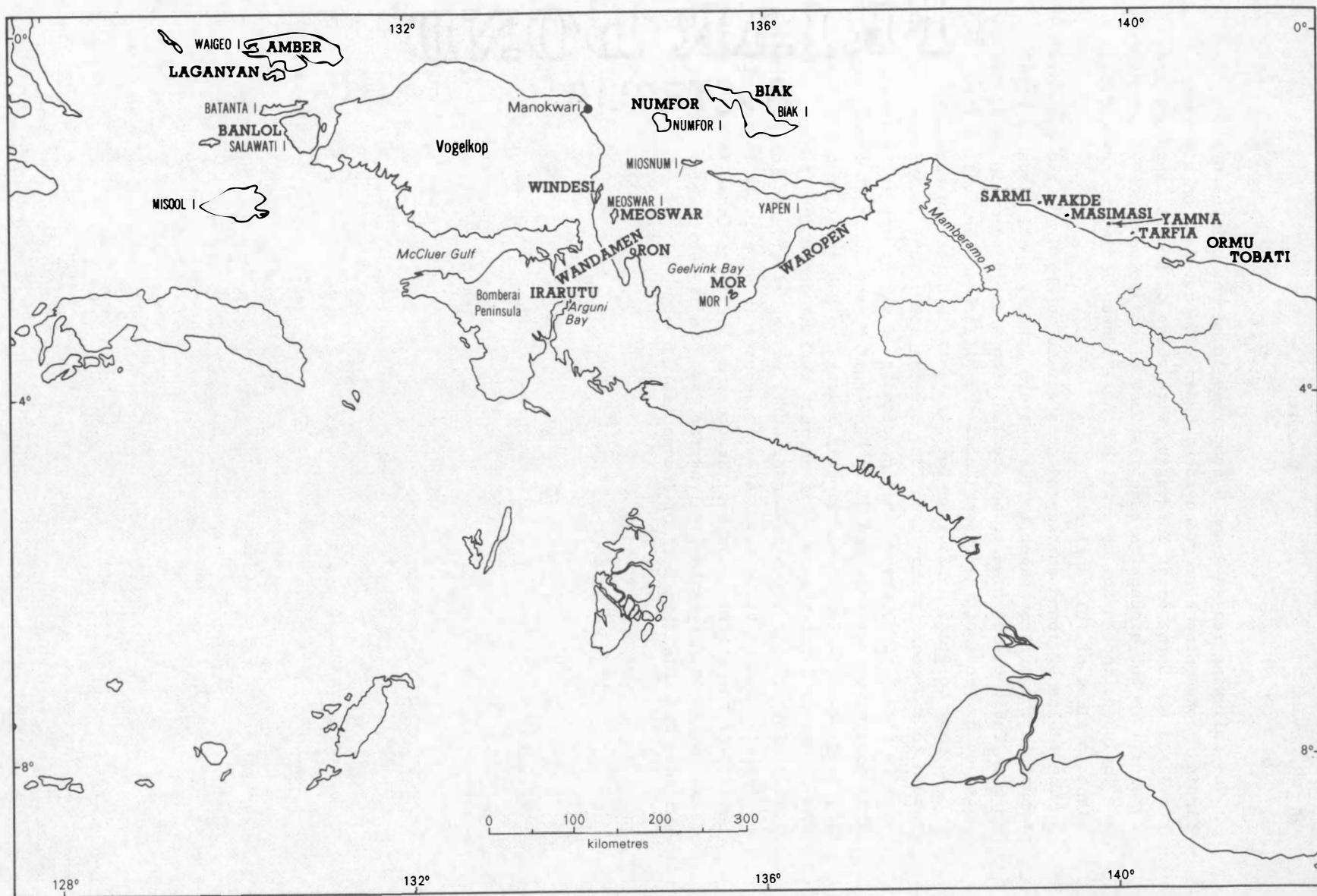
MAP II: AUSTRONESIAN LANGUAGES IN IRIAN JAYA

The following Tables A and B summarise in barest outline Grace's findings concerning correspondence between POC (not PAN, on his statement) and the Sarmi coast languages, with those of the VK languages side by side. In the discussion some features of the Bomberai (BOM) languages are included, though the material on these (Cowan 1953a) is not sufficient to allow of full analysis.

The tables of sound correspondences worked out by Grace and then extended in the present paper to the western languages are given in brief form in Table B, but need to be studied with Grace's paper in hand. Some detailed comments of the resemblances and differences are called for.

Contrary to Grace's findings for Sarmi, it is better in some cases to return to PAN roots rather then POC, because some final consonants are kept in Biak-Numfor, where final consonants of all groups are allowed. This applies to words 26 and 51 in Biak-Numfor, and 68 in Waropen. In 26, *vein*, Biak-Numfor urek obviously belongs to PAN *uRat, not POC *waRo. The change of final *-t to -k is normal; but the consonant is kept, not lost. Similarly in 51, Biak-Numfor wa:r, *water, river*, retains PAN *-R of *wayeR. Number 68, Waropen niwari, *coconut* is especially interesting because of the medial consonant: Stresemann (1927) laid down *niweR for Seran and Ambon, as against *niyuR for PAN. It is very rare to find evidence for this form east of Indonesia.

TABLE A

Correspondences between PAN, POC, Biak-Numfor, Wandammen (Windesi) and Waropen

English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
1. *fruit/seed*	buwah	pua(q)	bon	buo	-bo, -wo
2. *bird*	manuk	manuk	man	aya	mani
3. *come*	maRi	mai	ma	rama	ede
4. *cry*	taŋit'	taŋi(s)	kaněs	sai(s)	anisa
5. *ear*	taliŋa	taliŋa	kna(ram), knamin	taradir	na(ro)rei
6. *leaf*	d/ḍawen	(n)dau(n)	ram	rau	rana
7. *mountain*	gunuŋ	solo	bon	wi(s)	boira
8. *nose*	ig'uŋ	isu(ŋ)	sno-	suo	niha, niabo
9. *sand*	(h)enay	qone	yen, ka(r)yen	rubna(n)	nafa
10. *sharp, tooth*	tad'em	(ŋ)mata	amsok		
11. *skin*	kulit	kuli(t)	kef, kir	sor	uda
12. *stone*	batu	patu	karu, keru	rovuki	rewano, wai
13. *water*	ndanum, wayeR	(n)danum	dur, rur	maria	masino, rauno
14. *ye*	kamiw	kamu	mko	miat	mu

English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
15. *two*	ḍuwa	dua	suru	monu, muandu	woru (inan) nandu (an)
16. *three*	telu	telu	kior	toru	oro(inam) naŋagoro
17. *eye*	mata	mata	mga(mor)	re*	(k)ambeisi
18. *feather*	bulu	pulu	bur	baburu	wuro
19. *fire*	apuy	api	for	adia	sa
20. *hit, kill*	bunuh	punu(q)	mun	mun	muna
21. *husband*	t'awa	soa	swa-	sawa(ni)	
22. *louse*	kutu	kutu	uk	koir, (r)utu	wui
23. *man, person*	tawu+matah	ta(ŋ)mata	snun	mua(n)	mano
24. *name*	ag'an	a(n)sa(n)	sno-	sano	nasano
25. *new*	behaRu	paqoRu	babo	boa, woa	baboru
26. *rope, vein*	uRat	waRo	urek, kapurik	wair	arino

* Root PAN *dahay, *forehead*; POC *(n)da(ŋ)ma, in Waropen as re = *forehead*.

English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
27. *sew*	d'ahit	saqi(t)	sip, sasip		
28. *stab, shoot*	t'ut'uk	(n)soka	kfo	diana	
29. *woman*	(ba)binay	mapine	bin	babi(n); vinie = *wife*	bino
30. *four*	empat	pa(t)	fiak	at(e)	ako
31. *tree*	kaya	kai	ai	ai	a; ai
32. *body*		tini-	kraf	tarai (*flesh*)	dai, ado
33. *breast*	t'ut'u	susu-	sus	susu	susi
34. *who?*	t'ayi	(n)sai	iseï	tei	eno
35. *eat, meat*	kaen	kani	a:n, par	a:n	ano
36. *shoot*	panah	pana(q)	kfo	diana	ana
37. *tail*	ikuR	iku	pur(a)	kapupui	fera
38. *five*	lima	lima	rim	rim	rimo

	English	PAN	POC	Biak–Numfor	Wandammen (Windesi)	Waropen
39.	*thick*	betaḷ	matolu	kpor	bitoyar	
40.	*snake*	ulaR	(ŋ)mata	ikak	korow, tawai	(w)oro
41.	*liver*	hatay	qate	ken		niha do rana–
42.	*root*	wakaḷ	waka	rares	war	wai
43.	*adze*		paRaRa	mgan	tama	mano
44.	*mosquito*	ńamuk	namu(k)	raprap, mumes	kamumui(d)	nini
45.	*octopus*	kuRita	kuRita	sirobede	yamberawati	
46.	*pig*	babuy	(m)poRo	roman	pimuna	(aro)fo
47.	*thunder*		kuru	karadu(r)	kuruya	dora–ruru *sky–noise*
48.	*fat*	mińak	(ŋ)mona(k)	mafen, bob	m(i)ai(n)	mana
49.	*father*	(t)ama	tama	kma–	tama	daidai
50.	*to fly*	lembaw	Ropo	rob	sapop	era
51.	*river*	wayeR	wai(r)	wa:r	maria	

	English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
52.	*tooth*	ipen	nipo(n)	na(kor)	dire	(k)e(n)asa
53.	*to tie*	Raput'	paqu	fes	kaisesi	
54.	*heavy*	belat	mapa	rao		
55.	*hot, warm*	panat'	mapana(s)	same, dares	mas	siko
56.	*star*	bituhen	pituqo	mak, atarua	isberere	siwerere
57.	*vagina*	puki	puki	fi-		
58.	*ten*	esa-ŋa-puluh	saŋapuluh	samfur	sura	saguro
59.	*behind*	huḍi	mudi	warpur		furi
60.	*island*	nut'a	nusa	mios, meos	nu	nusa
61.	*twist*	biliŋ	pi(dr)i	amar, bayer		
62.	*how much?*	pig'a	pi(n)sa	beso		
63.	*hungry*	lapaR	pitolo	biser	babis	
64.	*younger brother*	(t)ag'i	ta(n)si	beknik	madjawi	

English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
65. *stick*	teken	toko(n)	akion		
66. *child*		natu	romgun		kuo
67. *sugarcane*	tebu	topu	kop	tobu	kowu
68. *coconut*	niyeR	niu(r)	srai, aimani	a(ŋ)kadi	niwari
69. *outrigger*	(saRaman)	(n)sama	adi, mandjaw	soma(n)	somano
70. *paddle*	beRsay	po(n)se	daun	bo, vo	wo (vb.)
71. *food*	paŋan	ŋaŋa	fa:n		
72. *house*	Rumah	Ru(ŋ)ma(q)	rum	anio	rum
73. *night*	beŋi	(ŋ)poŋi	rob	diru	rana, yana
74. *roof*	atep	qato(p)	os	babus, nandau	sira
75. *pandanus*	paṇḍan	pada(n)	jar, rek	utin	sapa
76. *betel(nut)*	(buwah)	(m)pua	vine, nam	reman	nana
77. *bark cloth*		malo	if (= *bark*)	rawa (= *bark*)	

English	PAN	POC	Biak-Numfor	Wandammen (Windesi)	Waropen
78. *we* (incl.)	kíta	ki(n)ta	ko	tata	iko
79. *we* (excl.)	kami	kami	(i)ŋgo	amat	ami, amo
80. *dry*	mag'a	mamasa	miais, syor	sinaya, miasa	daka
81. *bamboo*	hauḷ	qau(r)	amen		anasa
82. *hear*	deŋeR	(n)doŋo	mnaf, rower	-diawa	ria(wara)
83. *inside*	dalem	lalo	ro	na	raro, na
84. *choose*	wilit'	pili(q)	sra	doria	
85. *canoe*	waŋkaŋ	wa(ŋ)ka(ŋ)	wa(i)	wa	wa, ɣa
86. *braid rope*: see 61					
87. *bury*	tanem	yanu(m)	erak	sarai	
88. *banana*	punti	pu(n)ti	mnef, byef	(h)ui	(n)ando; ui

TABLE B

Consonant Changes from POC to Sarmi Coast and to Biak-Numfor

POC		Sarmi Group	Biak-Numfor
p	f	in all but Tarpia	f
p	b	in Sobei, Wakde	b,w
t	b	Tarpia non-high vowels	k,g
t	s	Tarpia before high vowels	s
-t	?	Tarpia before consonant of final	-
s	s	generally	s
s	t	Tarpia	-
s	h	Wakde	-
R,ld,r	r	(see comment)	r,n (naŋe < *laŋit, *sky*, by assimilation)
k	k		k,ø
m	m		m
n	n		n
n	n		n
q	ø		ø
w	w		w

A separate study of these western languages is called for; it is impossible to say all that should be said here. There are many features which differentiate Biak-Numfor from the Sarmi languages. One is the actual number of cognates of Grace's eighty-one roots which are found there, and the fact that there is no full overlap of AN material in the languages in any case. The present lists and the summary on Table B are unsatisfactory in that they need full explanation which cannot be given here.

Brief comments may be made on essential points in which these languages are differentiated from the more easterly. Windesi-Wandammen both have a final -t on the plural pronouns, and this would appear to be the final consonant of *empat, *four*, so that these languages are to be affiliated with the group, scattered as far as the New Hebrides, in which the plural formations were originally quadruples (Capell 1971:261). Biak-Numfor is not included in this feature, but Windesi definitely has it.

The change of *t to k or g is a feature of Biak-Numfor. *t becomes k if the m follows it, g if the m precedes it: *t-ama, *father* > kam-;

*mata, *eye* > mga-; in compounds of the latter: mga+ru, *tears* < *mata, *eye* + *danum, *water*; mga-wur, *eyelash* < *mata + *bulu, *hair*. The same structure appears in such seemingly NAN words as the pair mgarem, *voice* and mgaren, *sound, noise*. The word mga:n, *axe* answers to Windesi tama:n, as it should but it does not seem to be AN. The pronoun of the 2nd plural mgo looks like representing *kamu but if so it is an extraordinary reversal. Clear is mka:k, *fear* < *ma + *takut.

In quite a number of cases, even in this short vocabulary, an initial m appears where it would not be expected, and will present an amalgam of the AN verbalising prefix *ŋ with a bilabial or other plosive beginning the original stem. Examples are seen in muk < *putus, *break off*; this, however, is typically Polynesian formation, as seen, e.g., in Maori and Samoan nutu, *broken off*; others are seen in mun, *hit*, *bunuh through *mbunuh from *ŋbunuh. The word menu, *village*, represents *banuwa, *mainland*: a study of the variations of meaning in this word over the Pacific could be of interest and value; m initials are found in this area of New Guinea including part of the north coast. The word mumes, *mosquito* may possibly represent PAN *njamuk by -k > -s, and assimilation of the two nasals of the preceding syllables. Sobei shows namu regularly, and Windesi ka-mumu with a prefix.

Waropen loses AN finals as a rule (Held 1942a:18) but some are supported especially loanwords: Malay kapal, *ship* > Waropen kapari, or Dutch fiets, *bicycle* > Waropen fisi. But n and r appear as finals in nouns and verbs, and m also in verbs. In many instances a putative final is supported by -o, which is dropped when a suffix such as the article -ɣa is added, e.g., urano, *pot* < PAN *kuḍen, with suffix, uran-ɣa. At any rate, PAN roots came into Waropen with final consonants. On page 21 Held points out that many verbs hesitate between a spirant and k, as in anisa/anika, *cry*; sera/seka, *tie up*; ufa/uka, *blow*, but the group is a closed one. Even ku, *child* represents PAN *natu.

As the present chapter is only incidentally concerned with the type of phonetic detail discussed above, no attempt will be made to study vowel changes, which seem to be complicated, as Grace remarked for the Sarmi languages also. Thus Waropen ora, *sun*, is clearly PAN *ag'aw; Biak has or and Windesi wor. The vowel change here in fact occurs earlier, for it is in Buli wo:l in southern Halmahera. In fact, there is a close relationship all around the west end of New Guinea with these islands beyond New Guinea, but this cannot be discussed at this point. Thus, for instance, Buli fun, *dog* is linked with Waropen una and Windesi wona, but not with Biak-Numfor (BN) naf. Again some apparent correspondences raise difficulties, e.g., Windesi ru, *head*, BN rwu, which seem to have a connection with *ulu, but it is not clear, as BN rwa-, *hand*, links

with Windesi wara, Waropen waha, but is not PAN. There are local sub-
strata to be found. The pronoun of the list sg., BN aya, links with
Buli and East Indonesian aya, which appears in eastern New Guinea, but
seems to be found only east of Celebes: what is its relation to *aku,
with which Windesi yau is more clearly connected? The latter is POC and
present also in PEO, but is not PAN. BN bin, *woman*, does not link clearly
with Grace's POC *mapine, but with PAN *binay, with which Waropen bino
agrees, but Windesi babi(n) goes back to the reduplicated *babinay. In
Salawati, Batanta has mepine, which occurs eastward in Manam mapine.

Similarly there has not been space to relate the Bomberai Peninsula
AN forms to those of the north coast. Cowan (1953a) gives a fair amount
of vocabulary, a good deal of which looks towards BN rather than east
Geelvink areas; the change of s to k, characteristic of Waropen, is found
in Sekar, but seeing the tendency in Sarmi to change t to s and s to t,
there is probably a linkage here to be found. The short list of twenty
words given in Table C, based on materials in Cowan 1953a show varia-
tions of words - so far as they are documented - from Salawati and Waigeo,
through Numfor and Windesi into the Bomberai Peninsula area.

TABLE C

Words from Salawati, Waigeo, and the Vogelkop, compared with Bomberai Peninsula words (not necessarily AN)

English	Laganyan	Numfor	Windesi	Sekar	Arguni	Banlol	Batanta	Maya
arrow		mga:n	taman		sus			
bake	b̧lap	kun	nunu	tuni	simharha			
bird	tapiopio	man	afa	manik	mani	rim	min	mini
breast	su	sus	susu	susu	sus			
coconut	nu	sra	akadi	rur	naur	niyu	nyu	nu
cut off	kop	spa:f	kutu	mitaraya	worari			
eye	tabum	mga-	re*			tam	tan	tan
father	mam	kma-	tama-					
fire	lap	for	adia	yafe	iyaf	lap	lap	lap
fish	inen	iyen	dia:n	sair	sair			
house	um	rum	anio	ruma	ruma	nuwan	nuu	um
island	yef	mios	nu			ex	ef	yef
louse	ut	uk	rutu					
man		snu:n	mwa(n)	marara, mesia	maran, mesia	matju	matju	matu
pig		roman	pimuna			bo	bo	bo
stone		keru	requki			(a)pat	(a)patja	(a)patja
sugarcane	top	kop	tobu			top	top	top
tree	gawo	ai	ai	kai	ai	ai	ai	ga
water	waya	wa:r	durmaria	kirawar	wi:r	wei	blek	luwo
woman	pin	bin	babin	bate	popin	bin	mebin	pin

* PAN *ḑahay, *forehead*

N O T E

1. In an earlier treatment, the author used the reverse ordering: lan-
guages with SOV and postpositions were classed as AN_1 and those with SVO
and prepositions were classes as AN_2 (Capell 1969). In the second study
(Capell 1971:241 ff.) he changed to the present arrangement, but appar-
ently failed to make clear the fact of this change and caused some con-
fusion to readers. The first ordering was made when only New Guinea
languages were under consideration, and the differences of the two sub-
groups within New Guinea were the only matter of consideration. When
the whole of the AN areas were included, the SOV + postposition languages
are obviously in the minority and the reverse numbering seemed preferable.
Here the second arrangement will be maintained because the matter of dis-
cussion is the subgroup of New Guinea languages within the whole AN fam-
ily.

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P A R T   4.2.

HISTORY OF AUSTRONESIAN LINGUISTIC RESEARCH IN THE

NEW GUINEA AREA

4.2.1. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES OF THE NEW GUINEA AREA: GENERAL

George W. Grace

4.2.1.0. INTRODUCTION

This chapter is concerned with the history of our understanding of the overall linguistic situation in the New Guinea area as regards the Austronesian languages. It is possible roughly to distinguish two periods in that history. The early period may be characterised as the period of discovery. This period ended when it was possible to identify with a considerable degree of accuracy the areas in which Austronesian languages were spoken, and at least a short vocabulary was available for a representative sample of them.

The end of the period of discovery would have to be placed at somewhat different times for different parts of the New Guinea area. However, in a general way we may situate the end of the period at approximately the beginning of the 20th century.

In the subsequent period descriptive studies attained much greater depth. However, the treatment of these belongs in other chapters of this book. The present chapter will discuss the period of discovery and then various studies of a classificatory or explanatory nature which deal in a general way with the Austronesian languages of the area.

4.2.1.1. THE PERIOD OF DISCOVERY

Of the major areas in which Austronesian languages are spoken, New Guinea was the last to become known to the outside world. Sidney Ray has said (1907:284) that the first specimen of a New Guinea language to be published was the vocabulary of Numfoor-Biak published in Forrest 1779. However, Ray was speaking only of the New Guinea mainland. The Le Maire and Schouten expedition of 1615-1617 had collected short

vocabularies that have subsequently been attributed to New Ireland and
Tabar. Furthermore, I suspect that the island which they call 'Moa'
from which another very short vocabulary was obtained is actually Moar
(Wakdé) Island located just off the Sarmi Coast of Irian Jaya.

Various writers have commented that as recently as 1847 R.G. Latham
in his discussion of the linguistic relations of the 'Oceanic Blacks'
had no subsequent material from New Guinea itself (cf. Latham 1860:217-
22). However, this observation is perhaps slightly misleading. Latham,
in a paper presented in 1843 (published subsequently in Latham 1860:
191-216), provided a more detailed review of the wordlists available.
Other voyagers had passed northern New Guinea and several had put in in
New Ireland and in the Raja Ampat Islands, particularly Waigeo.

The situation in the Raja Ampat group is complicated by the fact that
(Numfoor-) Biak is spoken alongside the indigenous languages in many
places throughout the group. Several of the voyagers' accounts dis-
tinguish an indigenous language from a language belonging to strangers,
sometimes said specifically to come from New Guinea. However, as Latham
remarked (1860:195) "... the Waigioo [Waigeo] and New Guinea have been
frequently confused." He thought it possible that Forrest's vocabulary
might have been incorporated into some of the later ones. The words in
the lists probably do come from Biak and Raja Ampat languages, but the
lists seem confused and not very useful.

Latham also gives vocabularies from other sources which appear
possibly to represent languages on the west coast of the mainland of
New Guinea. However, these also are very limited, and poorly identified.

It was only with the expansion of missionary activity in the latter
part of the nineteenth century that significant quantities of information
on New Guinea languages began to become available. Gabelentz and Meyer
1882 gives a composite vocabulary of Melanesian and Micronesian languages.
Their list includes over twenty languages on the mainland of New Guinea
(most in Dutch New Guinea, now Irian Jaya) as well as a number of others
on neighbouring islands. Even though most of the languages were known
only through short vocabularies, the advance since Latham's day is
apparent.

There was one language on which the first descriptive works had already
appeared. That was the language of Numfoor Island in Geelvink Bay (cf.
Hasselt 1868, 1876a,b). Soon afterward Lawes 1885 and Schellong 1890
marked the first serious descriptive efforts on languages in British New
Guinea (Motu) and German New Guinea (Yabêm), respectively.

For some time it seemed possible that all New Guinea languages would
turn out to be Austronesian. It became known quite early (it was cer-
tainly clear after Humboldt 1836-39) that the languages of Polynesia

were related to the Indonesian languages. Ordinarily this would have
been taken to suggest the likelihood that the languages of the inter-
vening area also belonged to the same family. However, the peoples of
the intervening Melanesia-New Guinea area were believed to belong to a
different (black) race. The putative racial divergences constituted *a
priori* grounds for suspecting that corresponding linguistic divergences
might be found - i.e., that the languages (or at least the original
languages) of the blacks would be found not to be Austronesian.

However, most of the languages on which information first became
available, both in eastern Melanesia and the vicinity of New Guinea were
in fact Austronesian. Latham in his 1847 discussion found no indications
of a "fresh class of languages" (i.e., other than Austronesian) in the
Melanesia-New Guinea area.

Friedrich Müller in his survey of the languages of the world (1876-
88) set up a grouping called 'Papua-Sprachen' to which two languages
were initially assigned. These were Numfoor and Nengone (a language of
the Loyalty Islands). These 'Papuan' languages were supposed not to be
Austronesian. Of his grouping only the name 'Papuan' has survived.
Hendrik Kern (1885) showed in a detailed comparison of Numfoor with data
from other Austronesian languages that Numfoor was Austronesian. Wilhelm
Schmidt subsequently (1899) re-examined the Nengone case and concluded
that Nengone also was Austronesian.

It was at the Orientalist Congress of 1892 that Sidney Ray (Ray 1893)
finally established the existence of non-Austronesian languages in the
area. Ray was able to draw upon the rapidly accumulating information
on languages of British New Guinea to show that while some of the lan-
guages being encountered there resembled the Melanesian languages of the
islands, others were fundamentally different. Ray supposed that the
non-Austronesian languages were the original languages of New Guinea.
For them he proposed the term 'Papuan'. He retained the term 'Melanesian'
for the Austronesian languages found there as he supposed that group of
languages to have originated in insular Melanesia.

Schmidt subsequently (1900-1902) established that Papuan languages
existed alongside Austronesian languages in German New Guinea as well.

Soon after the turn of the century, the distribution of Austronesian
languages in the New Guinea area had been roughly established and at
least small collections of vocabulary had been made for a representative
sample of them. From the beginning there was little doubt that Ray had
been right in supposing the original languages of New Guinea to have
been Papuan. The contrast between the relatively homogeneous group of
Melanesian languages and the more diverse Papuan group attracted atten-
tion from the first, and the possibility that the Papuan languages would

be found to constitute more than one family was acknowledged. Thus the
breakup of Proto-Austronesian and (hence) the origin of the Austronesian
family presumably had occurred at a time when some multiplicity of
Papuan languages already existed.

Furthermore, as more information came in it became apparent that,
on the island of New Guinea itself, the majority of the languages were
Papuan, while Austronesian languages predominated in the remainder of
the area. On New Guinea, it was also observed that the Austronesian
languages were confined to areas on or near the coasts, and that there
was one extensive stretch of coast on which no Austronesian languages
at all were to be found. From approximately 100 miles north-west of
Port Moresby in British New Guinea to near Kaimana in Dutch New Guinea
none of the languages either of the mainland or the offshore islands
was Austronesian.

These facts taken together suggest that New Guinea was already gen-
erally populated by Papuan speakers at the time that Austronesian
speakers spread through the area and that the Austronesians probably
travelled along the north coast of New Guinea. The usual assumption
was that they came from the west and continued to the east.

Such was the situation at the end of the early period. As the broad
outlines of the linguistic situation became increasingly clear, descrip-
tive studies came to focus increasingly on individual languages or at
most on limited groups of languages. Such studies are more properly
treated in other chapters in this volume. However, before turning to
the explanatory attempts of the recent period, it is well to list here
a few studies from both periods which do bring together descriptive data
on languages of a wide area. Among such studies are Ray 1895, 1907,
1919, Zöller 1890, 1891, Schmidt 1900-1902, Dempwolff 1905, Capell 1943,
1954 (revised 1962), 1969, 1971, and Cowan 1953.

4.2.1.2. CLASSIFICATORY AND EXPLANATORY STUDIES

The studies to be discussed here fall into three principal types.
The first type attempts to account for the characteristics of Melanesian
languages in terms of population movements from Indonesia to Melanesia
and New Guinea. Such studies assume that (1) the Austronesian languages
of Melanesia-New Guinea (and of Oceania generally) were introduced by a
number of different movements of Indonesians into the area, (2) these
population movements came from different places in Indonesia, (3) at
the time of even the earliest such movement the differences which exist
among Indonesian languages today were already established at least for
the most part.

The second type is concerned with linguistic subgrouping, and particularly with the widely accepted hypothesis of an Oceanic subgroup and the problem of its membership.

The third type consists of several studies which distinguish a group of languages, centred on New Guinea, that have certain characteristics of word order reminiscent of Papuan languages. These studies all involve typological criteria more or less explicitly.

4.2.1.2.1. *THE SEARCH FOR MIGRATION ROUTES*

MacGregor 1897 contains a brief commentary by Sidney Ray on the origin of the Melanesian languages of British New Guinea. Ray says "...the stream of Melanesian immigration passed north of New Guinea and round the eastern end of that island to the Solomons and New Hebrides." (MacGregor 1897:100). He thought it probable that the Melanesian languages of British New Guinea represented one or more back migrations from the New Hebrides and perhaps the Solomons. In the same place he makes one of his few clear statements about the relation of the Polynesian languages to the Melanesian. He says (99), "...but it may be shown that the Samoan and Polynesian languages generally are derived from Melanesian. They are the descendants, not the ancestors."

Georg Friederici (1912, 1913) gave a sketch of the Bariai language of west New Britain and put forward a theory of Austronesian migration into Oceania. Specifically, he proposed that the principal migration originated in the vicinity of Ceram in eastern Indonesia and proceeded more or less directly to the vicinity of Rooke (Umboi) Island near the west tip of New Britain. From there it divided into three paths, one turning to northern New Britain and New Ireland, another passing south through Dampier Strait and thence eastward to the south-eastern Solomons and New Hebrides, and the third going through Vitiaz Strait southward to south-eastern Papua. The assumption seems to be that the migrant language is reflected in the most unattenuated form in Bariai and its neighbours.

Friederici believed that, of the languages of the Indonesian area, those with which Bariai showed the most significant agreements were (1) the various dialects (or languages) of Ambon and Ceram grouped under the name 'Bahasa Tanah' and (2) the languages of the Minahassa peninsula of Sulawesi. He conceded that the significant agreements with the latter were confined to vocabulary only.

As the two Indonesian groups do not appear to be particularly closely related to each other, Friederici was forced to assume that they had had a relationship in the past which is no longer apparent from their

present-day descendants. The original migrants to Melanesia, of course,
were assumed to reflect the earlier common tradition.

Friederici's evidence consists of comparing certain grammatical
features and 177 vocabulary items for eastern Indonesian languages and
languages from different parts of Melanesia. Among the grammatical
characteristics was the reversed (i.e., preposed) genitive.

At least since Brandes 1884 the preposed genitive of eastern
Indonesian and New Guinea languages has frequently been cited as an
important distinguishing characteristic of those languages. Brandes
(1884:20n) cites as examples in the so-called Bahasa Tanah of Ambon
(where mata = *eye* and wael = *water*) mata waello *tear*, but wael matanno
spring (source of water). By contrast, Malay (where mata = *eye* and
air = *water*) has air mata *tear* and mata air *spring*.

In an accompanying map, Friederici 1913 shows a line purporting to
mark the boundary of the preposed genitive. It follows approximately
the 'Brandes Line' (Brandes 1884, Stelling III) through eastern
Indonesia, then continues just north of New Guinea and New Britain
except for the Nakanai and Rabaul areas, finally turning south to pass
to the west of insular Melanesia. The question of genitive construc-
tions will appear again below.

Friederici also tentatively suggested, and indicated on the map, a
second migration coming from the Philippines or near there and proceed-
ing directly via the north coast of New Ireland to eastern Melanesia.

The publication of Friederici's hypothesis was followed very quickly
by a devastating review by A. Lafeber (1914). Lafeber asserted that
Friederici lacked competence in comparative linguistics and that, in
spite of the large masses of data he had assembled, he still did not
have sufficient knowledge of Austronesian languages. He regarded it
as established that both genitive constructions were already present in
Proto-Austronesian. He examined Friederici's vocabulary comparisons
seriatim, rejecting most. His conclusion was that there was not a
single word that linked just Barial and Ambon.

Capell 1943 is concerned with the prehistory of the Austronesian
languages of the Territory of Papua. His thesis is that in the area in
which the Austronesian languages are presently spoken there were for-
merly a small number of non-Austronesian languages. This relative
homogeneity was disrupted by the intrusion into the area of a whole
series of non-Austronesian speaking peoples and also of several dif-
ferent groups of Austronesian-speaking Indonesians.

The conclusions are based on the distribution of vocabulary and some
grammatical features in the Papuan Melanesian languages. They consist
of shared items, one set of which is attributable to Proto-Austronesian

(and assumed to have been introduced by the Indonesian immigrants), the other seen as representing the original substratum. Capell found the substratum to reflect three different languages (called 'Regional languages'). He thought that probably four different movements of Indonesians could be distinguished.

Chrétien (1956) presented a statistical analysis of some of Capell's data focussing on the substrata proposed by Capell. His analysis indicated that one of the regional languages which Capell had posited was well founded. However, for the remainder of the south-east Papuan area he found the data to be quite compatible with a substantially larger number of different substrata than Capell had proposed.

Milke 1961 undertook a statistical test of Capell's hypotheses regarding the movements of the Austronesian-speaking Indonesians. According to Capell's hypothesis there were probably four distinguishable movements. Their probable areas of origin in Indonesia were held to be, respectively, Borneo, central Celebes, the Philippines, and south-western Indonesia. Each of them, in addition to certain parts of South-eastern Papua, also was believed to have reached other parts of Oceania. The first movement had spread throughout the entire Oceanic area, the second had also reached at least the south-east Solomons, the third New Britain, New Ireland, and the central New Hebrides, and the fourth mainly Polynesia.

Milke made use of a number of languages so situated as to serve as representatives of areas from which a movement was supposed to have come or to which one had supposedly spread. The hypothesis was that, if a movement had been correctly identified, languages in its area of origin and languages in the areas it reached should show significantly more of the words attributed to the movement in question than of words attributed to other movements. The results of the test were negative. The set of words which are supposed to correspond to the different movements actually show no significant agreement in their geographical distribution. They appear simply to represent random samples of the AN vocabulary.

Capell pointed out the conflict between his assumptions and the view, expressed particularly by Otto Dempwolff (e.g., 1927:42, 1931:162, 1937:193), that the Melanesian languages belong to a single subgroup of Austronesian which does not include any Indonesian languages. He remarked (1943:268) of the latter view, "It is so radically opposed to the theory of movements or waves of migration from various parts of Indonesia that a simple choice must be made between one or the other; the two cannot exist side by side."

4.2.1.2.2. *SUBGROUPING AND THE OCEANIC HYPOTHESIS*

Dempwolff in a series of studies (cf. esp. 1920, 1924-25, 1927, 1937) had argued that the Melanesian languages could be traced back to a single Austronesian ancestor, which (since it is also the presumed ancestor of the Polynesian languages and most Micronesian languages) is now usually called 'Proto-Oceanic'. Proto-Oceanic was found to exhibit numerous sound changes as compared with Proto-Austronesian. Since no existing Indonesian languages showed the same set of changes, he concluded that Proto-Oceanic was not an individual Indonesian language, but rather an immediate descendant of Proto-Austronesian.

Since, (1) all Melanesian languages had the same ancestry and (2) the Melanesian languages were related equally to all Indonesian languages, it followed that the search for migration routes from Indonesia to Melanesia by means of linguistic affinities between particular Melanesian languages and particular Indonesian languages was futile.

The definition of an Oceanic subgroup was perhaps foreshadowed in the works of earlier scholars such as Gabelentz (1861-73) and Kern (1886). It has been accepted by a number of subsequent scholars, among them Haudricourt (e.g., 1965) and Pawley (1972, 1973). Milke 1958 and Grace 1955 accept the existence of the subgroup, attempt to define its boundaries, and propose internal subgroupings within Oceania.

It is generally agreed that the Oceanic subgroup includes all Polynesian languages, all of the languages of Micronesia except Palauan and Chamorro, and all of the Austronesian languages of the Melanesian islands and of the eastern part of New Guinea. However, it seems to be agreed that there is, somewhere in New Guinea, a boundary between Oceanic and non-Oceanic ('Indonesian') Austronesian languages. The exact location of the boundary is uncertain. It seems to be generally accepted that the languages of the west coast of New Guinea and of the Raja Ampat Islands do not belong to the Oceanic subgroup. There also appears to be general agreement that the Austronesian languages of the eastern part of Irian Jaya, the vicinity of Jayapura and the Sarmi Coast, are Oceanic (Grace 1955 was exceptional in failing to perceive that fact). The uncertainty focuses on the Geelvink Bay languages.

Milke (1958:58) argued contra Grace 1955 that the languages of Geelvink Bay, the best-known of which by far was Numfoor, should be included in the Oceanic subgroup. He gave no reason for that position except to state that it coincided with that of Kern and Dempwolff. On that point he was surely wrong. On the basis of a quick search in Kern's works, I receive the impression that, except for recognising that it was Austronesian, he reached no further conclusion as to the

linguistic position of Numfoor. The language, in maintaining the distinction between *p and *b, surely fails to qualify as Oceanic by Dempwolff's criteria, and he gives indication by his placement of it in a list of languages (Dempwolff 1924-25:224) that he does, in fact, exclude it from Oceanic.

Subsequently, Milke (1965:334) did offer a phonological argument for the inclusion of Numfoor-Biak and all other Austronesian languages of Geelvink Bay in Oceanic, namely, that they had merged all of the Proto-Austronesian palatal consonants.

From the Indonesian side, the influential language map (Esser 1938) in the *Atlas van Tropisch Nederland* puts the Austronesian languages of Geelvink Bay, along with those of the west coast of New Guinea and the Raja Ampat Islands, into a 'South Halmahera-West New Guinea Group'. Although Waropen, on the east coast of Geelvink Bay, is not mentioned by name, the map is drawn in such a fashion as to suggest the intention of including it with the other Geelvink Bay languages.

The other Austronesian languages of Irian Jaya, i.e. those of the vicinity of Jayapura and the Sarmi Coast, are labelled 'Melanesian'. Although his terms are different, it is fair to interpret Esser as having placed the Oceanic-Indonesian boundary between the Sarmi Coast and Geelvink Bay.

However, the position of Waropen in particular remains problematic. Held, in his Waropen grammar (1942), discussed at some length the ques-tion of whether Waropen is Melanesian or Indonesian. He concluded that criteria adequate to make a decision were not available. He noted (1942:32) that there is some common vocabulary found among the Geelvink Bay languages. However, he made another statement, which was slipped in without justification or elaboration, that suggests that he was not fully convinced of close genetic ties by the vocabulary that is shared by the languages of the area. He wrote (1942:7):

> It is not impossible that in time, when more material is
> available, it will be possible to draw a boundary between
> a west Geelvink Bay group (Numfoor-Biak and Wandamen-Windesi)
> and an east Geelvink Bay group (the languages of Yapen,
> especially of east and south Yapen, Kurudu, and Waropen),
> and that this boundary would at the same time divide the
> Indonesian from the Melanesian languages.

With the publication of Anceaux 1961 considerably more information is available on the languages of Yapen and on the linguistic situation in Geelvink Bay generally. However, it remains uncertain whether or not there are Oceanic languages in the area.

It should be mentioned here that a lexicostatistical classification of Austronesian languages from all parts of the Austronesian area con-ducted by Isidore Dyen failed to confirm the existence of an Oceanic

group at all. Dyen points out, in fact (1962:44), that the concentra-
tion of diverse languages in Melanesia and the facing New Guinea coast
suggests that Austronesian languages may have spread from there into
Indonesia rather than the reverse. The lexicostatistical evidence,
then, indicates that the homeland of Austronesian may have been on or
near New Guinea.

4.2.1.2.3. *CLASSIFICATIONS INVOLVING TYPOLOGICAL CRITERIA*

H.K.J. Cowan, writing at a time (1949-50) before the Oceanic
hypothesis had received much attention, discussed the criteria to be
used in determining whether Austronesian languages were to be classed
as 'Melanesian' or 'Indonesian'. That question was particularly top-
ical in Dutch New Guinea at that time. He argued that what was char-
acteristic of Melanesian languages was their having been influenced by
Papuan languages. He then proposed certain grammatical defining prop-
erties for Melanesian languages. In a subsequent paper (Cowan 1951-52)
he proposed a further narrowing to a single criterion, the preposition
of the genitive, which, he stated, was a universal characteristic of
the otherwise diverse Papuan languages and was, at the same time, con-
fined to a geographically limited group of Austronesian languages. He
accordingly proposed that the term 'Melanesian' be reserved for those
Austronesian languages which are within the area bounded by the Brandes
and Friederici Lines (see above 4.2.1.2.1.), that 'Indonesian' designate
those to the west of the Line, and 'Polynesian' be extended to include
the languages of Micronesia and those of Melanesia east and north of
the Line.

Wilhelm Milke in 1965 cautiously proposed the existence of a 'New
Guinea Cluster' consisting of the Austronesian languages of the mainland
of New Guinea (with the likely exception of those of Irian Jaya) and
the neighbouring part of New Britain. He had previously (1958) given
indications that he believed such a group to exist. Although his dis-
cussion centred on phonological and lexical comparisons, it is apparent
(cf. esp. 1965:331-2) that he was significantly influenced by the dis-
tribution of the preposed genitive. However, he included Lakalai in the
New Guinea Cluster despite its postposed genitive, which he suspected
(332) to be due to Tolai influence. The genitive position was, then,
not an all-overriding criterion.

Milke himself acknowledged that the results reached in his paper were
not conclusive with regard to the existence of a New Guinea grouping.
Chowning 1973 emphasised the differences between Lakalai and the lan-
guages of the extreme west of New Britain, and suggested that the pro-
posed boundary of Milke's group is at least highly questionable.

Capell 1969 also proposed a distinction based on word-order. In
this case he divided the languages into a group called AN_1, the defining
criterion of which was SOV word-order, and a group called AN_2 having
SVO order. Although the defining criteria are specific and limited,
Capell clearly had in mind a more general typological dichotomy, and he
discussed a number of other characteristics which tended to be associ-
ated with each type of word-order. It is apparent that AN_1 languages
are generally those within the preposed genitive area, and the AN_2 lan-
guages generally those to the north and east of the Friederici Line.
The principal differences are that various languages along the north
coast of New Guinea and all languages of New Britain are assigned to
AN_2.

In 1971 Capell reversed his terminology, so that AN_1 now designated
the SVO group. There were minor changes of detail, e.g. Bariai of west
New Britain was now, according to the text (1971:283) but not according
to the map (242), assigned to the SOV group.

Once again it seems that a single criterion fails to reproduce the
subjective classification which the classifier was striving for. I
take this to be the case from Capell's statement (1971:289), "It is true
that it [i.e., Atsera] does have a S+V+O syntactical pattern, but in
every other regard it is nearer the AN_2 group and has been included here
with them."

4.2.1.3. CONCLUSIONS

It is apparent from the foregoing discussion that the final word is
far from being said on the historical relations of the Austronesian lan-
guages of the New Guinea area or on their typological characteristics.
This chapter has not discussed the descriptive studies published on
individual languages since the turn of the century. Description is, of
course, basic to the rest. Certainly there has been progress on all
fronts during this century. However, what has been done appears quite
modest alongside what remains to do.

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4.2.2. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: SEPIK PROVINCES

D.C. Laycock

4.2.2.1. EARLY RESEARCH

Linguistic research in the Austronesian (AN) languages of the
western Madang Province, and what we may call the Sepik Coast (north-
western Papua New Guinea, from the Irian Jaya border to the mouth of
the Sepik River, and adjacent islands), does not have a long history,
nor are there many names associated with it. The early voyages, such
as those of Le Maire and Schouten, and Dumont d'Urville, which traversed
the coast, yielded no linguistic information. Such information was not
forthcoming until after the establishment of the Divine Word (SVD)
Mission on Tumleo (Tamara) Island in 1896 - an establishment to be
quickly followed by other mission stations in the area, namely, Lemieng
1898, Ali 1903, St Anna (near Aitape) 1903, and Malol 1909. (The
administrative station at Aitape was founded in 1907.) Höltker (1940-
41) cites remarks by Fr Mathias Josef Erdweg on the Tumleo language,
published in the 'Steyler Missionsbote' for 1896/97, immediately after
the founding of the mission. By 1900 something of the linguistic
picture of the Aitape (Berlinhafen) area was becoming known, so that
Schmidt (1900-1902) was able to include, in his study of the languages
of German New Guinea as then known, notes on the 'Melanesian' languages
of 'Jamir', 'Sauvein', 'Saliu', and 'Tumleo', and the 'Papuan' lan-
guages of 'Valman', 'Anal', 'Arop' and 'Varopu'. (Schmidt's data come
from Father Erdweg, who in 1901 published brief wordlists in each of
these languages.) Many of these names no longer have any validity;
'Jamir' is the Tumleo name for a mainland village then known as 'Lalêp',
'Laläp' or 'Lalap', and now called Paup; the language spoken there is
a dialect of Ali, as also is Seleo (Schmidt's 'Saliu'). 'Sauvein' is
Suain, one of two villages (the other being Ulau) speaking the language

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called (for want of a better name) Ulau-Suain. 'Tumleo' remains as the
name of one of the AN languages of the area, spoken on Tumleo Island
and (now) in two villages on the mainland, Yakoi and Raiyu. 'Arop' is
a village which speaks a dialect of the AN (not 'Papuan') language of
Sissano; 'Varopu' is the non-Austronesian (NAN) Warapu language
(variously spelt), and 'Valman' is the name of another NAN language
(Torricelli Phylum) to the east of Aitape. 'Anal' (Banyil) is said to
lie inland from the Valman villages; I have not identified the village,
but the language is the coastal dialect of Olo.

Most of these corrections are made in the very detailed paper on the
languages of the Berlinhafen area by Klaffl and Vormann (1905); Fr
Johann Klaffl was then stationed on Ali Island, and Fr Friedrich
Vormann at Lemieng. Klaffl contributes a fairly detailed grammar (or
rather, morphology) of Ali, as well as an extensive Ali-German and
German-Ali wordlist. He distinguishes a western and an eastern dialect
of Ali, the former spoken only on the western side of Ali Island, the
latter on Seleo and Angel Islands, and in the villages of Paup and
Yakamul. Klaffl adds thirteen pages on the 'Ulau-Suen dialect of Ali';
it seems preferable nowadays, however, to regard Ulau-Suain as a
separate language.[1] Klaffl also includes a 347-item comparative word-
list from Ali, Jakamul (Yakamul), Ulau, and Tumleo - which, incidentally,
supports taking Ulau-Suain as a separate language. The sound-corres-
pondences between these four speech-forms (three languages) are analysed
in some detail, with other AN comparisons, by Wilhelm Schmidt, within the
same general article. The rest of the reference is taken up with
material on NAN languages (Klaffl: notes on Kavu (Mountain Arapesh),
and a comparative vocabulary of Mountain Arapesh and Valman; Vormann:
Valman grammar, texts, and vocabulary - the latter contribution also
containing (page 85) a valuable list of AN loanwords in Valman).

Virtually no new data on Ali or Ulau-Suain ever appeared. A small
amount of linguistic information (mostly cultural lexical items and
some short song-texts) can be gleaned from some of the ethnographic
accounts of the area, especially Blaes (1946-49a, 1946-49b), and
Heinrich Meyer (1932-33, 1943), and Chinnery (1925). An Ali 'origin
myth' (which states the origin of Ali Island, and its villages, to be
the fairly unlikely site of Sumo, on the mainland southwest of Sissano)
is found in the New Guinea Annual Reports for 1949-50. Suain continues
to be mentioned only as a village with a penchant for cargo-cults (e.g.
Lommel 1953; a cargo-cult also occurred in Suain in 1971).

The Tumleo language was described, with fair adequacy for the time,
by Leonhard Schultze (1911), basing his data on material elicited from
a young Tumleo speaker who accompanied him on the German-Dutch border

expedition in 1910. Erdweg, who apparently spoke Tumleo, contributes
(1902) most of the ethnographic background; his material was also
published earlier by Schmidt (1899) and Parkinson (1900). The last-
named work contains some Tumleo grammatical notes, and mentions two
Tumleo dialects, 'Sapi' and 'Anopehs'. Schleiermacher (1900) also has
a few pages on Tumleo religious beliefs. Tumleo continued to be spoken
at the mission as late as 1938 (Steyler Missionsschwestern 1946-49:70);
but the mission is now abandoned.

Further west, the AN languages were less studied. Father Kirschbaum,
who was originally stationed at Malol, contributes a brief note (1910)
to the effect that the language of Malol - whose inhabitants in many
accounts of the area counted as extremely aggressive[2] - differs suffi-
ciently from that spoken in Arop, Sissano,[3] and Sarai[3] (which for
Kirschbaum form a single language group) to be counted as a separate
language: "Wohl aber weisen sie [sc. the Malol villagers] mehr nicht-
melanesische Elemente auf, als die benachbarten Stämme".[4] He says that
'Malol' is only the Tumleo word for the group, and that they call them-
selves 'Siau'. However, as Laycock (1973a) points out, Siau is also
used nowadays not only by Sissano, Arop and Malol villagers to refer
to themselves - it is in fact the Sissano word for *west* - but also by
the Aitape-based Local Government Council, which includes speakers of
many of the languages (including NAN languages) of the area among its
members. 'Siau' would be a possible name for the western subgroup of
the AN languages of the Sepik coast.

The first Sissano data (additional to the indications in Schmidt
1900-02) was published by Neuhauss (1911); he gives a list of some 93
items (or 88 if duplicates are omitted), collected by him in the
'Sissano villages'.[5] About half of the items are of little use for
comparative purposes, being highly specific and cultural (*head decoration
of cassowary feathers, necklace of black fruits*). Neuhauss spent some
time in Sissano, and had the assistance of a plantation manager and
copra trader, one Schulz (or Schultz, as he is named in a report in the
Deutsche Kolonialzeitung 1909) who is reported to have learnt a little
of the language ("der sich einiges von der Sprache der Leute angeeignet
hatte"). Neuhauss also visited Sarai, but it is uncertain whether he
collected any linguistic material there.

Georg Friederici also visited Aitape and Sissano in 1910, and includes
33 words from Sissano village scattered throughout his extensive works
on linguistic-ethnographic studies (1912) and Melanesian migrations
(1913); he also has wordlists (mainly technical terms relevant to
outrigger canoes) from the villages of Sarai, Arop, Malol, Paup, and
Yakamul, and the islands of Ali and Angel - as well as the same items in

NAN languages of the Sepik coast. He apparently collected much of the
data himself - one excellent opportunity being a four-week march from
Aitape to Lake Sentani, via the Sissano-speaking villages, Sarai,
Leitere, Vanimo, and the Sko-villages (Friederici 1910) - but not always
in situ:

> Während so auf beiden Reisen, an der Südküste und an der
> Nordküste, die an sich schon kurze Zeit nicht voll für
> geographische und ethnologische Untersuchungen ausgenutzt
> werden konnte, so gelang es doch, manches wertvolle Material
> [i.e. ethnologica?] zu sammeln, und es war später möglich,
> wenigstens das der Nordküste nachzuprüfen und zu erweitern.
> Das geschah einmal durch Polizei-Jungen der Station Eitapé,
> die zeitweise in Neu-Guinea in meiner Begleitung waren. Ich
> konnte nicht nur aus den mir durch Herrn Stationsleiter
> Rodatz gütigst zur Einsicht überlassenen Anwerbelisten ersehen,
> wo sie herstammten, sondern ich war auch vorher in dem Dorf
> eines jeden einzelnen persönlich gewesen. Es bestand also
> über ihre Heimat nicht der geringste Zweifel, und es war
> ausgeschlossen, dass durch sie dialektische Verschiedenheiten
> in meine an Ort und Stelle aufgenommenen Wörterverzeichnisse
> hineinkamen. (1912:14).

Elsewhere, however, he says (1913:36) that his 'Sēr', Sissano, Arop,
Malol and Tumleo data are taken from Schmidt (1900-02).

The issue is relevant in determining the dialect composition of his
Sissano data, and also the status of the language Sera, which is
regarded by Schmidt, Neuhauss, and Friederici as a dialect of Sissano.
As many of the items in the short lists of Neuhauss and Friederici are
identical in Sera and Sissano, it is not possible to be sure just where
they were elicited; both, however, give the Sera word for *moon* (Neuhauss:
wul, Friederici: bul) instead of the now current Sissano word sanar
(recorded by Laycock in 1970 from both Sissano and Malol villages; cf.
Tumleo sanar, Ali sǝnar). This suggests either a dialect change in the
Sissano language in the last sixty years, or else non-homogeneous lists,
with some items elicited in Sarai, or from Sera-speakers. (Other items
in Friederici's list suggest Malol dialect - e.g. ano *house*, arau *sun*,
where Sissano dialect has no, rau.)

Sera is now spoken in three villages: Sarai, Puindu, and Rainuk; the
two latter, lying between Sarai and Leitere, are not shown on maps before
about 1966, and probably represent new settlements from Sarai - espec-
ially as this village, which in 1970 had a population of only 187, is
described by Neuhauss as "das grosse Küstendorf Sia (Sera)". (Neuhauss
had come directly from Sissano, which at that time had a population of
1,000; it seems unlikely that he would describe a village as 'large'
that had a population of less than 400. However, the total Sera-speaking
population in 1970 was only 432.)

The reasons for Laycock (1973a) regarding Sera as a distinct language
are based less on data - since the wordlist obtained from Sarai village

was short - than on indigenous opinion. Villagers from both Sissano
and Sarai maintained that Sera was a language distinct from Sissano,
although both groups agreed that the Sissano language (with dialect
variations) was also spoken in Arop, Malol, and other hamlets. Social
groupings may have influenced this view; however, the data obtained by
Laycock do tend to suggest a greater linguistic distance between the
communalects spoken in Sarai and Sissano than between those spoken in
Sissano and Malol, so the distinctness of the Sera language can be
maintained. Lexical sharing is estimated to be about the 70-80% level,
or around the borderline of language and dialect.

The data from Friederici and Neuhauss on Sissano were collated and
discussed by Churchill (1916) - who, however, failed to recognise that
Arop and Malol spoke the same language, so that lists from these 'lan-
guages' are used for comparison with Sissano. Churchill attempted to
use the Sissano material for comparisons within languages that are now
called 'Oceanic', and to determine from these the direction of
'Melanesian migration'. His work is, however, linguistically naive,
and now remains of value principally as an easily accessible source of
collated data of a number of AN languages of Melanesia. An example of
his argumentation is provided by his treatment of the loss of Proto-
Oceanic (POC) *C_1 in many Oceanic languages:

> If the archetype of the stem [i.e. POC *panua 'land': Grace
> 1969] had been banua or panua there would have been no need
> for the Samoan to weaken it to fanua, for in the Polynesian
> languages we have attained to the richest development of the
> labials to be found in the Oceanic area, and it would have
> been simple for the Samoan to employ panua and for the Viti
> to employ mbanua. On the other hand, if we assume an arche-
> type anua we shall find our difficulties resolved. The more
> intimately I prosecute these minute investigations into
> primordial stems the more convinced do I become that a theory
> of mere mutation of consonants fails to account for form
> variety and the greater support do I obtain for my hypothesis
> that, in the evolution under the play of conscious intelligence
> which picks up the animal cry and by the application of con-
> sonant modulants with coefficient value transforms it into a
> medium of more or less precise communication of thought, we
> are to begin with the weaker forms, the more vocalic shapes,
> and employ such consonant possibilities as may exist to the
> particularization of a diffuse thought into a specific idea.
> (Churchill 1916:42-3).

West of the Sera-speaking villages, no more AN languages are encoun-
tered before Humboldt Bay (Jotafa or Yotafa languages), which are out-
side the area of this study. Eastwards, the languages as far as Ulau-
Suain have been discussed. The next AN language is found in the islands
often taken to be part of the 'Lesser Schouten' or 'Le Maire' Islands,
although these names apply more strictly to the islands from Wogeo
eastward.[6] The main named islands, according to the latest official

maps, are Tarawai, Walis, Buni, Karesau (Keresau), Yuo, Mushu (Muschu),
and Kairiru;[7] their population is divided between speakers of Boiken
(NAN) and Kairiru (AN). Kairiru speakers are currently found only on
Kairiru, Karesau, and Yuo Islands, and on the eastern half of Mushu,
as well as in small settlements on the mainland at Cape Pus and Wom
Peninsula; the town of Wewak (Wewak Point) was also once the site of a
Kairiru-speaking village, but the area is now a developed town. The
rest of the area is Boiken-speaking. Schmidt (1907, 1909) reports
anthropological and musicological material obtained from a Karesau-
islander who visited him in St Gabriel (Austria). The language which
appears in the song-texts is Kairiru, not Boiken, although both Kairiru
and Boiken are now spoken on the island (the former, however, predom-
inating). Boiken speakers may have been establishing themselves on the
westernmost islands, with consequent fighting, as late as the period
shortly before World War I; a report by the 'Stationschef Eitapé'
(Deutsche Kolonialzeitung 1908) describes the islands of Karesau
and Mushu as terrorising the area. Whether or not the population was
then Kairiru- or Boiken-speaking the Schmidt data from a Kairiru-
speaker have provided us with the only connected texts in the Kairiru
language.

East of Wewak, on the coast, the next AN language is that of Kaiep,
for which there are no published linguistic data, and considerable con-
fusion in naming. Gehberger (1950) lists the villages of Kaiep, Terebu
(Turupu) and Samap (Sumup) as speaking the same AN language, and this
may have once been true; however, Terebu is now divided between Kaiep
and Bungain (NAN) speakers and at least a third of the villagers of
Samap speak another NAN language (named Elepi by Laycock (1973a)).

Still further east is the AN-speaking village of Kis, located on an
inlet immediately west of Murik Lakes; again there are no published
data. North of this village, in the already-discussed 'Schouten
Islands', is spoken the AN language of Wogeo, on the islands of Wogeo
(Wokeo, Vokeo) and Koil. Again no direct linguistic data are available,
though there are many words scattered throughout the writings of the
anthropologist H. Ian Hogbin (1935a-1952, Hogbin and others 1971; see
bibliography), who carried out fieldwork on Wogeo Island. The first
published texts in Wogeo are those of Gagin (1972).

In the remaining islands of the Lesser Schouten group - Koil, Wei
(Viai), Blupblup, Kadovar, and Bam[8] - is spoken the language called Bam.
Hogbin (1935a-1952) appears to regard this as a dialect of Wogeo, but
recent field data obtained by Z'graggen show it to be a separate lan-
guage; no previous publications are available on the language.

Further east still is the island of Manam, on which a language of
the same name is spoken. Most data on Manam remains unpublished (e.g.
Böhm n.d. (now published in Böhm 1975); Gregersen 1974), but brief
wordlists and notes were published by Pöch (1907, 1908) and Werner
(1909). Capell (1962a) refers to miscellaneous notes collected by the
anthropologist Camilla Wedgwood; these are believed to draw heavily on
the data collected by the missionary Father K. Böhm, whose anthropo-
logical notes on the island have recently appeared (Böhm 1975). Some
further information, including the pronouns, is given by Z'graggen
(1971).

Even less studied are the mainland languages of Sepa and Medebur;
for the former, there are some linguistic notes (including texts) by
Schebesta (1921-22a, 1921-22b, 1932, 1938) and Höltker (1947); for the
latter, there is only a mention by Höltker (1937) that the language is
Austronesian. Both languages are listed by Z'graggen (1971).

With such a dearth of data, the AN languages of the Sepik coast and
western Madang region can hardly be said to be known; but researchers
have attempted to do the best with materials available. Ray (1919)
collates the early material on these languages, and reprints some of
the lexicon for 'Ser' (Sera), Sissano, Tumleo, Ali, Seleo (Ali language),
'Yamir' (= Paup; Ali language), Paup, Yakamul, 'Ulau-Sueng' (Ulau-Suain),
'Wokeo' (Wogeo), 'Keule' (Koil; Wogeo language), and 'Karesau' (Kairiru
language). In his listing of languages he perpetuates all of the early
confusion, and apparently introduces some new confusion of his own.
For the 'Schouten Group' he lists Wokeo, Keule, Karesau and a 'Mokmer'
listed by Friederici; comments on this grouping will be made below.
(Friederici's 'Mokmer' comes in fact from the south coast of Biak, in
the 'true' Schouten Islands of Irian Jaya; Friederici always calls the
islands here in question the 'Le Maire-Inseln'.) His second grouping
of Sepik coast languages is the 'Ali group', divided firstly into the
'Ali sub-group', consisting of Ali, Seleo, Angel, 'Lalep', 'Yamir
(Jamir)' and Paup - these last three being identical - Yakamul, Ulau,
'Sueng (Sauvein, Suein)', and, finally, 'Wokau', a village known even
then to speak the NAN language Valman. The second subgroup is the
'Tumleo subgroup', consisting of Tumleo, Ser, and Sissano - a grouping
about which there can be little dispute. But among the NAN languages
('Valman group') he includes the two Sissano-speaking villages of Arop
and Malol, as well as (correctly, this time) the Valman-speaking village
of 'Vokau (Wokau)'. In an earlier paper (1902), reviewing the work of
SVD missionaries on Valman, he takes the opportunity to reprint some of
the early grammatical data on Tumleo (from Schmidt?), and includes a
short comparative vocabulary of various languages of the New Guinea area,
including Tumleo (under the name Tamara).

Loukotka (1957) draws on the above-cited data, but often misinter-
prets them; somewhat surprisingly, for example - in view of what was
already known - he classifies Sissano (along with Sera, and the dialects
of Arop and Malol) as NAN ('langues mélanésiennes'), as he does also
Wogeo, though in neither case without reservations:

> Les dialectes du groupe Sisano sont tellement influencés par
> les langues mélanésiennes que certains auteurs les ont classés
> parmi ces langues... Deux langues présentent des affinités,
> mais très influencées par les langues mélanésiennes, sont
> parlées dans l'archipel de Schouten. C'est le Wogéo de l'île
> Roissy et le Koil ou Keule de l'île Deblois... (1957:26,28).

4.2.2.2. RESEARCH DURING THE LAST TWENTY-FIVE YEARS

The situation remained at this point - all researchers outside the
New Guinea area drawing on the references already cited - until the
linguistic survey of the south-western Pacific carried out by A. Capell
in 1950, and published in 1954. Capell elicited his own wordlists from
inhabitants of Wogeo, Suain, and Kairiru, and possibly also for other
languages covered in this account; he also had access to unpublished
data from missionaries and other long-term residents - including brief
grammatical notes on Wogeo from the anthropologist Hogbin. Nevertheless,
he is forced to draw on older material for most of the AN languages of
the Sepik coast. His map shows, as AN languages, 'Sisano', Arop, Malol,
Ali, Yakamul, Suain, Karesau, Kairiru, Mushu, Wewak, Moem, Kaiep, Wogeo,
and Koil; Kis does not appear. There is little indication of which of
these villages speak the same languages - apart from the note that "the
mainland village of Wewak and some others also speak Kairiru, and Mushu
and Karesau vary but little from it" - and no statement of subgrouping.
However, he elicited his own wordlist from 'Turupu' (Terebu; Bungain
language), and was therefore able to correct, implicitly, Gehberger's
description of the language as AN, by including it in a discussion of
NAN languages.

The revised edition of Capell's survey (1962a) includes new material
on Sepik languages supplied by Laycock after his 1959-60 survey; but as
no attempt is made to correlate this material with older sources, the
statements made are usually confusing, and often contradictory. Laycock
collected no data on AN languages, but on the basis of talks with
missionaries (among them Fr Gehberger!) suggested that 'Turupu' and
Samap were Melanesian (Capell 1962a:45). Relying on this, Capell des-
cribes 'Turupu' on the preceding page as 'Melanesian' - in defiance of
his own data, which remained (personal communication) 'stubbornly NAN'.
On the map (facing page 38) Kaiep is incorrectly shown as NAN. The map
also shows, for the first time, the AN language of Kis, as well as a

generally correct distribution of the Kairiru language (but clearly
excluding the island of Karesau). Both the correct and the incorrect
listings came from information supplied by Laycock; the linguistic map-
ping of the area was essentially completed by Laycock (1973a), but the
present chapter and 4.4.8. fill the remaining gaps.

Capell's subsequent overviews of the linguistic scene in the New
Guinea area (1962b, 1969, 1971) draw on no new data, as far as the AN
languages of the Sepik coast are concerned; but the last-cited article
does provide five words (*sun, moon, water, man, woman*) in Sissano
(Sissano and Malol dialects), Tumleo, Ulau-Suain (Suain village),
Kairiru, Wogeo, and Manam, in a comparative table including other lan-
guages and the PAN reconstructions. In this paper Capell also mentions
that in 1950 he prepared a Kairiru vocabulary which has never been
published.

The first new material in Sepik AN languages was collected by Laycock
during fieldwork in 1970-71; it consists of brief wordlists and gram-
matical materials in the languages Sera, Sissano (Sissano and Malol
dialects), Tumleo, Ali (west Ali, Paup, and Yakamul dialects), Ulau-
Suain (Suain dialect), Kairiru, Kaiep, and Kis. Laycock also copied an
Arop vocabulary (with comparable list in Warapu, also Sissano and Malol
kinship terms) of about 180 items from a Sepik District patrol report
of 10 October 1950; the collector of the lists was an Administration
Officer, John J. Murphy, and his accuracy is above the usual standard
of such lists.[9]

4.2.2.3. SUB-GROUPING OF THE LANGUAGES

On the basis of this material Laycock (1973a) attempted a subgrouping
of the languages, but this was unfortunately marred by a misprint which
transformed the 'Eastern' group into the 'Western' group, and vice
versa. In any case, the full subgrouping of the languages within the
Oceanic division of AN cannot be adequately attempted until the languages
are systematically compared with other AN languages of known subgrouping.
Friederici (1913) regarded all the languages discussed in this article -
together with others of northern New Guinea - as forming the 'Nord-
Neuguinea-Untergruppe' of his 'Barriai-Gruppe', a grouping based mainly
on the languages of New Britain, but including all the then known AN
languages of north-coast New Guinea. There is however no real evidence
of this grouping, or of the position of the Sepik coast languages within
it. A few items of the Sepik coast languages show a particular resem-
blance to characteristic Tolai words; compare west Ali terekiu, Paup
tarakeu, Tumleo talakau, Ulau-Suain terekiau *hawk* with Tolai taraqau;

or Sera pərei, Tumleo pari, west Ali wari, Paup alu, Ulau-Suain aliou
monitor lizard with Tolai palai; or Sera bail, Tumleo biel, Paup biel,
Ulau-Suain bal *pigeon* with Tolai balu. But such resemblances are obvi-
ously insufficient evidence for a subgrouping, especially when the
intervening languages have not been included in the comparison.

Grace (1955) split the Sepik coast languages into two groups, 'Sepik'
and 'Manam and Schouten Islands', at the same point of division as
Laycock's (1973) 'Western' and 'Eastern' groups; this agrees substanti-
ally with the Ray (1919) grouping cited above. Capell (1962b) lumps
all the languages here discussed - including Manam - into a 'North-west'
subgroup, extending from the 'Dutch' (now Irian Jaya) border to Bogia;
but in a later paper (1971) he divides the languages at almost the same
point as Ray, Grace, and Laycock. The languages in the western group
are 'AN$_1$' (word order SVO), and those in the eastern group are 'AN$_2$'
(word order SOV); however, Kairiru is assigned by Capell to the western
group. Laycock's data shows Kairiru to be an SOV language, except for
the usual suffixed object pronouns; note kiau rian wini *I drink water*,
yik sakwei kwoŋam *you give me tobacco*. Capell also points out that
Kairiru and Wogeo stand lexically in quite close relationship, so that
it seems that the division proposed by Grace and Laycock is justified.
(Kis falls into the western group.)

Laycock's data also suggest, on cursory examination (detailed ana-
lysis not yet having been carried out) that Sera and Sissano stand in
close, almost dialect relationship, as do, on the other hand, Ali and
Ulau-Suain, but that the lexical and grammatical similarities between
these two subgroups are not particularly close. Tumleo stands somewhat
closer to Sissano and Sera than it does to Ali and Ulau-Suain. In the
eastern group, Kairiru and Kaiep are very closely related, with Kis at
a greater distance. Insufficient material is available on Wogeo, Manam
and Sepa to be sure of just how these languages link, although Manam
and Sepa are at the language/dialect borderline in relation to each
other (Z'graggen 1971). Kis speakers contacted by Laycock believed that
their forbears had migrated to their present location from Manam, and
the belief is shared by neighbouring Murik speakers; at present the
linguistic data do not suggest this, nor a migration from the equally
close islands of Wogeo and Bam speakers.

There remains the question of the AN languages of the Sepik and
western Madang region as 'mixed languages', as claimed by Schmidt (fol-
lowing the views of Ray on languages of Papua) in his article on
'Melanesische Sprachen' (Schnee 1920:538-44):

> Bei den melanesischen Sprachen von Deutsch- und Holländisch-
> Neuguinea ist, ihrer Mischnatur entsprechend,... diese
> Possessivbezeichnung[10] vielfach in Verfall geraten; es wird

> entweder einfach das Personalpronomen selbst, entsprechend
> der allgemein dort herrschenden Voranstellung des Genitivs,
> dem Substantive vorangestellt oder aber einer Partikel
> präfigiert, wodurch eine der papuanischen ähnliche Form des
> Possessivum erzielt wird, so in Ali, Tumleo und Mafor und
> teilweise in Barriai...
>
> Zu diesen Mischsprachen gehören sämtliche melanesische
> Sprachen von Neuguinea und den vorgelagerten kleinen Inseln,
> dann das Barriai und das Kilenge in West-Neupommern, das O
> Mengen in Ost-Neupommern, das Uruava und das Torau in Süd-
> Bougainville...
>
> Die sämtlichen melanesischen Sprachen von Neuguinea, vom
> westlichen (und südlichen?) Neupommern, von Süd-Bougainville
> müssen als Mischsprachen erklärt werden, die den starken
> Einfluss benachbarter Papuasprachen erfahren haben, was sich
> besonders in der Voranstellung des Genitivs und den damit
> zusammenhängenden Erscheinungen äussert... ausserdem sind die
> meisten von ihnen charakterisiert durch das Vigesimalsystem
> beim Zahlwort und durch das Schwanken oder gänzliche Fehlen
> des Unterschiedes einer inklusiven und exklusiven Form in der
> 1. Pers. Plural des Personalpronomens.

Schmidt's criteria of preposed genitive, vigesimal (=quinary with
word for *twenty* in this context?) number system, and lack of exclusive-
inclusive distinction would not now be regarded as sufficient evidence
of a mixed language. In fact, only the last feature is common to a
significant proportion of the languages discussed in this chapter. As
regards possession, pronoun-possessors follow the noun, noun-possessors
precede it; as regards number systems, Sera and Sissano have a binary
system, whereas the remaining languages tend to have an 'imperfect
decimal' system (quinary with word for *ten*). Some support for the idea
of these languages being mixed can be found in Capell's (1962b) state-
ment that "This group is characterised by paucity of MN [=Melanesian]
content and by relative simplicity of structure"; but the 'MN content',
to judge by a comparison of the lexicon with Grace's (1969) Proto-
Oceanic finder list, is not unusually low, and shows many typical AN/
Oceanic words (Sissano tus *breast*, rain *water*, main *bird*, ai *tree*; cog-
nates run virtually throughout the group). Nor is the structure notice-
ably simpler than in other AN languages. Sissano and Sera are also
claimed by Friederici (1912:261) to be "stark mit Papua-Elementen
durchsetzt". The specific question of Sissano as a 'mixed language'
has recently (1973b) been examined by Laycock, who found little or no
support for the influence of surrounding NAN languages (principally
Warapu) on Sissano - the one strong counter-example being the binary
number system. On the contrary, Sissano was shown to have exerted con-
siderable influence on Warapu. (The article contains a Sissano and
Warapu wordlist of 175 items, with Proto-Oceanic comparisons.) More
work needs to be carried out on language contact and migration in the

region, and a good starting point is a study by Tiesler (1969-70) of all known intergroup contacts in the Sepik coast area.

When all is said and done, however, one cannot but agree with Capell's (1971) statement that "Strangely enough, very little is known about these languages in any detail; spoken by small populations, they seem to have been largely overlooked". It is perhaps time the Austronesian languages of this north-coast region were brought back into the mainstream of AN (especially Oceanic) linguistic research, for there are problems of subgrouping and migrations that are unlikely to be solved without their evidence.

N O T E S

1. Reschke (1935), with no personal experience of the area, extends the domain of Ali even further: "Es folgt zwischen 143° bis 145° ö.L. das Gebiet der Ali-Sprache, das sich in Karesau auf der westlichen Schouten-Insel und in das Suain-Ulau, Yakamul und Yuo unterteilt". This is incorrect, as is shown in this chapter below.

2. In the years before World War I there was considerable feuding between villagers of Sarai, Sissano, Arop, Malol, Warapu, Ramo, and Sumo; see e.g. Deutsche Kolonialzeitung (1909) and Neuhauss (1911).

3. Sissano is the current spelling, although Kirschbaum (and other writers) use the linguistically preferable spelling 'Sisano'. The village has also been known as Zissano, Sissanu, Aissano, and Eissano; Cheesman (1949) reports that in 1939 the German missionaries there called it 'Eisenach' (a corruption of, or the origin of, 'Aissano'?). Arop is also called Arup, and Malol, Mallol and Argrán. The village now called Sarai is usually in older accounts known as Sēr, Sser, Sia, and (occasionally) Sera. The last name is still used by the villagers to refer to themselves, and has been adopted by Laycock (1973a) as the name of the language; see below.

4. Laycock (1973a) mentions the incorporation into Malol village of an originally One-speaking group (NAN language). A report in the Deutsche Kolonialzeitung (1909) speaks of an alliance between Malol and Siaute (Olo-speaking; also NAN) to raid Aitape station and the nearby Olo-speaking village of 'Wultalul' (Pultalul). There is therefore perhaps some truth in the Kirschbaum view - but see also the discussion (below) on 'mixed languages'.

5. Sissano, Arop and Malol each consist of a number of named hamlets, with distinct community organisations, and, from report, differing dialect features.

6. These 'Schouten Islands' or 'Lesser Schouten Islands' (still shown as such on maps) are not to be confused with the better known Schouten Islands in Irian Jaya.

7. Early German sources (especially Deutsche Kolonialzeitung 1886, 1908) give the islands quite different names, which may be listed here for reference: Buni - Unei; Karesau - Pâris, Aarsau, Karsau; Yuo - Guap, Juo; Mushu - Gressien; Kairiru - d'Urville, Kairu.

8. Other names for some of the islands are: Wogeo - Roissy; Koil - Keule, Deblois; Wei - Wiei, Jacquinot; Blupblup - Rup Rup, Garnot; and Kadovar - Garuwar, Blossville.

9. The linguistic ability and interest of this officer is also evidenced by his well-known *Book of Pidgin English*, which for many years after its first appearance in 1943 was the standard practical work on New Guinea Pidgin.

10. Schmidt is speaking of noun-classes indicated by possessive markers, such as those which specify (among others) 'drinkable objects' and 'edible objects', in languages of Fiji, the Banks Islands, and elsewhere in Melanesia.

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           Madang District. PL, C19.

4.2.3. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: MADANG PROVINCE

John A. Z'graggen

4.2.3.0. INTRODUCTORY REMARKS

The Madang Province is one of the provinces of Papua and New Guinea on the north-east coast of the New Guinea mainland. Most of its languages are Papuan, but a total of sixteen Austronesian languages is found in pocket areas along the coast and on nearby islands, inland at the Gogol River and in the Upper Ramu Valley at the border of the Morobe Province.

The aim of this chapter is to give a brief account of what seems to be noteworthy in the history of research in Austronesian languages in the Madang Province. A number of authors give names, but it is sometimes doubtful if they mean a language, a dialect or a village. This has caused trouble and uncertainties for those who have listed and classified the languages. For this reason, an identification list will be given for each author who provides a list of names. In the first column are the names as given by the author. These are followed by a name in parentheses, as spelt in the Village Directory 1973. The second column gives the language identification according to the names adopted by Z'graggen (see 4.4.1. in this volume). Z'graggen carried out fieldwork in the area concerned and this enabled him to throw new light on the situation.

4.2.3.1. MIKLUKHO-MAKLAĬ

The Russian scholar N.N. Miklukho-Maklaĭ was the first European scholar to live for a long period of time (1871-72) on the north coast of New Guinea in the Astrolabe area and to collect linguistic material in a number of languages. In some publications, the eastern part of

the Astrolabe area is called the Maklaii Coast but this name is no
longer in use in the Madang area.   The Astrolabe area is referred to
by indigenes as 'Bogate' (shortened form of Bogadjim).   The Rai Coast
extends east of the area where Maklaï lived.   The Rai Coast, with its
large alang-alang grass patches, is probably the 'Alang-alang Coast'.[1]
The local word for *south-east wind* is karag, not rai, which, because of
its wide dissemination in Melanesian Pidgin in the meaning *south-east
wind*, has been claimed as the origin of the name 'Rai Coast'.   Informants
of the Astrolabe area still remember Maklaï and know exactly where he
lived.   Europeans are named the Magalays.

   Maklaï (1876, 1882, 1951) collected wordlists in the following
Austronesian languages within the Madang Province:

	Maklaï	Identification
1.	Bili-Bili (Bilbil)	Bilbil
2.	Mitebog or Mitebor (Kranket)	Gedaged
3.	Tiara (Siar)	Gedaged
4.	Rio (Riwo)	Gedaged
5.	Telyat	Biliau

4.2.3.2. ZÖLLER

   The first picture gained by the German administrators and missionaries
of the linguistic situation of their colony was one of diversity and
complexity.   Zöller thought quite the contrary.   His view was that the
more languages one compared, the more unity one discovered.   To illus-
trate his point of view Zöller (1891) compiled some 300 words in twenty-
nine languages of German New Guinea, took in six more for the sake of
comparison and added another fifteen languages of British New Guinea.
Eight of the wordlists plus some grammar notes he collected himself and
seventeen more were collected under his supervision.   Shorter wordlists
such as Maklaï's he left out, because of their brevity.

   Zöller tried to illustrate his point of view with thirty-five words
which he picked out of the comparative wordlist for closer inspection.
But eleven of his thirty-five discussed words are cultural items such as
canoe and *betel nut* and therefore cannot be used to illustrate genetic
relationships.   Furthermore he notes that the Malay word baik and the
Maori word pai for *good* are unknown in German New Guinea.   A similar
sample is the word *small*.   For the word *spear* he notices eighteen vocab-
ulary items with nine different forms in German New Guinea alone.   Zöller
also mentions many exceptions and his compilation of 300 words contains
gaps.

In spite of this, Zöller concludes that with a few exceptions, all of the 300 words included in his study prove to be similar to Malayo-Polynesian languages (388). He states that the relationship with the Polynesian languages is more obvious in the languages in the coastal area than in the hinterland. The relationship is ancient and they may well have a common origin (364).

Such a conclusion is rather surprising. His theory was later formally rejected by Schmidt (1900:355) and Hanke (1905:255ff; 1909:4). Schmidt (1900:119) found seven correspondences between Papuan and Melanesian languages in the vocabularies, and the possibility of five more, but these all constitute borrowings from the Austronesian languages. Zöller was one of the first to compare New Guinea Austronesian languages with languages outside the New Guinea area, i.e. with Malay and Polynesian. One could also give him the credit for having observed, for the first time, the existence of larger groups of interrelated Papuan languages, but this achievement is in doubt since he failed to recognise the basic difference between Papuan and Austronesian languages. His method is hardly acceptable and his wording unscientific and journalistic.

For the Madang District, Zöller lists two Austronesian languages:

Zöller	Identification
Bilibili (Bilbil)	Bilbil
Szeak-Bagili (Sek)	Gedaged

4.2.3.3. SCHMIDT

Schmidt (1900), in his summary on the linguistic situation of German New Guinea, includes the Austronesian languages of the Madang Province as they were known at that time. His description is based on missionary manuscripts of the Catholic and Lutheran Missions, and other manuscripts such as those of Maklaĭ and Zöller. Schmidt compiled a comparative wordlist of 130 items in fourteen Austronesian and fifteen Papuan languages or dialects. For Takia (Karkar) he gives an extensive description of the grammar, which is based on Rev. G. Kunze's manuscript of the Lutheran Mission.

Schmidt (1900, 1901) for the first time successfully described the nature and interrelationship of the two basic language groups for the north coast of New Guinea: Papuan and Austronesian. The Austronesian languages of the north coast of New Guinea form a special subgroup within the Austronesian (which he calls Melanesian) language group (1900:75f). He divides them into four subgroups for which he gives some linguistic evidence (1900:76ff). Group III is within the Madang area. The languages are the following:

Schmidt	Identification
Bilibili (Bilbil)	Bilbil
Mitebog (Kranket)	Gedaged
Szeak-Bagili (Sek)	Gedaged
Karkar	Takia

4.2.3.4. DEMPWOLFF

Dempwolff, initially a physician and later a well-known expert in
Austronesian linguistics, found time enough besides his duties as a
physician to study a number of languages and to collect valuable lin-
guistic material. He visited Madang twice as physician of the German
troops in 1895-97 and 1901-03. In three of the Austronesian languages
in the Madang Province he collected wordlists and text materials, and
also gave discussions of some features of grammar.

For Gedaged or Graged, Dempwolff wrote an extensive grammar which
was later translated into English and duplicated at the Lutheran Mission
Narer on Karkar Island. Besides that, he published an extensive word-
list and text materials (Dempwolff 1918-19, 1925-26, 1928-29). In
1925-26:1 he listed the villages in which Gedaged was spoken. They
spoke the same language but Dempwolff indicated that practically each
village had its own dialect and that they differed from each other in
sounds and formatives. His description of the distribution of the
dialects is not very precise. Gedaged is for Dempwolff (1925-26:2;
1931:165) a mixture of Austronesian and Papuan, as Schmidt had already
observed twenty-five years previously.

	Dempwolff	Identification
1.	Graged or Raketta (Kranket)	Gedaged
	Panitibun (Kranket)	Gedaged
	Beliau (Biliau)	Gedaged
2.	Jabob (Yabob)	Bilbil
	Bilbili (Bilbil)	Bilbil
3.	Sias (Siar)	Gedaged
	Sivo (Riwo)	Gedaged
	Segu (Sek)	Gedaged
4.	Northwest coast	Megiar and Matukar
5.	Dampier Is. or Karakara	Takia

For Megiar, Dempwolff (1925-26) included only a wordlist in his
word collection. But for Bilbil, Dempwolff (1909, 1910-11) published
considerable text materials, wordlists and grammatical notes, including
also a short wordlist of their secret language.

In his first publication in 1905, Dempwolff published numerous word-
lists and also some texts and grammar. A number of them are mentioned
only by name in Sebeok, ed. 1971, in I. Dyen's Checklist of Austronesian
Language and Dialect Names on pp.1205-57, without further attention.
It seems worthwhile to draw attention to them. The languages dealt
with are: Agomes (Hermit Is.), Kanied (Anchorite Is.), Poam (Manus Is.),
Meto I and II (French Is.), Tuom, Mantok and Sigap (all on Siassi Is.)
and Kaimaŋa (Sir George Rooke Is.).

Dempwolff (1912-13) gives a short introduction to the discovery and
description of tonemes in New Guinea languages. He became aware of this
problem for the New Guinea area upon the discovery of apparent high and
low tonemes in Nasioi by Father J. Rausch M.S.C., who was the first
investigator to be confronted with tonemes in the New Guinea area. Wurm
(1954:699) follows Rausch in classifying Nasioi as semi-tonal - but
there seems to be no recent evidence to support this view.

Schmidt in 1900 already expressed doubts on the applicability of the
traditional comparative method based on European philology to the
Austronesian languages of New Guinea. Dempwolff (1931) gives some con-
sideration to this problem which seems to be worthwhile taking into
account by a historian in Pacific linguistics.

Dempwolff's collection of stories, myths etc. is considerable and
gives a deep insight into the psychology of the Gedaged and Bilbil
people. A translation of these texts into English should prove worth-
while.

4.2.3.5. RAY

Ray, the renowned expert on the linguistic situation in British New
Guinea, provides, in his study of 1902, a list of Papuan and Austronesian
languages of the north coast, including two Austronesian languages of
the Madang Province: Gedaged and Bilbil. A comparative wordlist of ten
items in thirty-three languages is included in the study.

In another study in 1919, Ray indicates the main characteristics of
the Austronesian and Papuan languages of Northern Papua or German New
Guinea, comparing the suffixed possessive pronouns, the pronouns, con-
jugation by means of particles, the numerals and a wordlist of twenty
items. The Austronesian vocabularies of the north coast show many
agreements with the languages of Island Melanesia and British New Guinea,
but there are great differences in the Papuan vocabularies. A grouping
of the Austronesian and Papuan languages is given, but it is based on
geographical principles and no description of their characteristics is
given.

The Austronesian languages of the Madang Province are called the
Bilbil group (see 4.4.1.). There is a misunderstanding concerning the
names Hansa (Vulcan) and Manam. Werner (1909, 1911) calls Manam Island
'Hansa (Vulcan)' and it was he who collected a first wordlist of the
language. There is however no Manam village near Hatzfeldhafen. Ray
provides thirteen items for the comparison of Manam and Hansa. Three
of them differ. For *man* in his Manam language, he gives moane which,
however, is a typical word of the Pihom languages which are Papuan (see
(I) 2.8.2.2.2.3.). The language name Hansa has been dropped here.

	Bilibili group	Identification
1.	Bilbili (Bilbil)	Bilbil
2.	Mitebog (Kranket)	Gedaged
3.	Szeak, Bagili (Sek)	Gedaged
	Yrempi, Erempin (Rempi)	Rempi, Papuan, Madang group
	Matagar (Matukar)	Matukar
4.	Karkar	Takia
5.	Siar (Siar)	Gedaged
	Ragetta, Graget (Kranket)	Gedaged
6.	Sarang (Sarang)	Megiar
7.	Manam	Manam?
8.	Hansa	Manam

4.2.3.6. MAGER

Mager, a missionary of the Lutheran mission in the Madang area from
1927-1950, published a comprehensive dictionary of Gedaged including
some notes on the grammar (Mager 1952). Included in his dictionary also
are a number of words for comparison from a number of Papuan and Austro-
nesian languages in the Madang Province and outside. The Austronesian
languages are the following:

Mager	Identification
Bilibili (Bilbil)	Bilbil
Ham	Ham
Siar	Gedaged
Swit	Biliau
Takia	Takia
Zivo (Riwo)	Gedaged

4.2.3.7. CAPELL

A. Capell visited the Madang Province on his field trip in 1951-52.
The Austronesian languages of the Madang Province as known to him are

included in his survey and summary studies 1962b, 1969 and 1971.   The
village name Malangai is unknown in the Saidor area; perhaps it is
Malalamai.   Capell lists the following languages:

	Capell	Identification
1.	Manam	Manam
	Sepa, Wanami (Sepa, Wanam)	Sepa
2.	Megiar	Megiar
	Matukar	Matukar
3.	Graged (Kranket)	Gedaged
	Karkar	Takia
	Bagabag	Takia
	Sek	Gedaged
4.	Ham	Ham
5.	Mindiri	Mindiri
6.	Biliau	Biliau
	Swit	Biliau
	Sengam (*what?*)	Biliau
	Peterei (--)	Biliau
	Malangai (--)	?
	York	Neko, Papuan, Finisterre

Capell (1962a:381) links the Manam[2] language with his north-west lan-
guage group.   Manam is remarkably close to Island Melanesian (for il-
lustration see Capell 1969:48f).   The Manam dictionary shows a reasonable
proportion of Austronesian vocabulary and a good deal of it is reminis-
cent of eastern Oceanic forms and even Polynesian.   Everything about
Manam appears to be normal Austronesian except the syntax.   Transitive
suffixes of the Austronesian type are added to verbal stems just as in
Fijian and other eastern languages (for illustration see Capell 1971:
290).

The Sepa-Wanams are immigrants from Manam Island (Capell 1962b:51).

For Gedaged, or Graged, Capell gives no clear description of its dis-
tribution.   He includes all the languages which form the Belan Family:
Gedaged, Bilbil, Takia, Matukar and Megiar.   Dempwolff (see above
4.2.3.4.) had already pointed out differences and similarities between
these languages.   Based on informants' opinions, Z'graggen (1971) calls
these languages the Belan language family, which is to some extent a
single language.   In Capell's view, the grammar of Gedaged is partly
Austronesian, but the word-order is Papuan and even many of the Austro-
nesian tense forms and other grammatical elements have been adopted to
Papuan usages (Capell 1962b:52).   Gedaged is definitely an Austronesian
language, but it shares a number of non-Austronesian words with the

Papuan Nobanob dialects (Garuh, Hanseman Family, Mabuso Stock, Madang
Sub-Phylum, Trans-New Guinea Phylum), and the latter have also adopted
certain Austronesian words (Capell 1962b:53). Capell (1962b:53; 1971:
289) also discussed some grammatical features which must be regarded as
really non-Austronesian.

The Ham language located inland from the Astrolabe Bay and east of
the Gogol River, is mentioned by Capell and identified as Austronesian.

In the Rai Coast area Capell lists a number of Austronesian languages
(see the list above, No.6). A comparative wordlist of twelve items is
given for Gedaged, Ham, Mindiri, Biliau (Swit) in Capell 1962b:55 (see
also Capell 1971:246). The variation between Mindiri and Swit (Biliau)
in grammar is almost as great as in vocabulary. Swit-Biliau in many ways
approaches Gedaged, but Mindiri seems to link with Sio (farther east in
the Morobe Province) in showing a purer type of Austronesian (Capell
1962b:55f). The Mindiri possessives look almost like those in Fijian
(Capell 1962b:56; 1971:330). The Biliau pronouns are given in Capell
1971:291.

In Capell's view, the Austronesian languages of the Madang Province
as known to him belong to what he calls the New Guinea Melanesian sub-
group within the Melanesian language group (see Capell 1969:chapter 2).
They are event-dominated: they belong, in Capell 1969, to the group AN1
and in Capell 1971, to group AN2. Capell distinguishes these two groups
according to the position of the object, i.e. whether it precedes or
follows the verb. According to the writer's field notes, all of Capell's
Austronesian languages in the Madang Province belong to the group which
preposes the object to the verb. Languages farther east such as Arop
and Malalamai postpose the object.

Milke and Capell make reference to a link between the Madang Austro-
nesian languages with the Azera languages in the Markham Valley. This
possibility has yet to be systematically studied. Only the Mari lan-
guage of the Azera language family is within the Madang Province.

4.2.3.8. SCHMITZ

Schmitz (1960) describes briefly the linguistic background to his
ethno-historical study of the Huon Peninsula and also takes into account
the north-eastern part of the Madang Province. Austronesian languages
are, according to him, characterized by a prefixing and non-Austronesian
languages by a suffixing conjugation. But he is aware that this par-
ticular feature is not enough for a definite classification (28).
Schmitz distinguishes three homogeneous cultures each with its uniform
language group (40). The cultures are: A) older pre-Austronesians,

B) younger pre-Austronesians, and C) Austronesians. His division into
an older and younger pre-Austronesian culture appears to be at variance
with the picture presented by the languages of the Huon-Finisterre
(Super-)Stock which seems to be a uniform group. His linguistic data
have to be restudied. Despite its shortcomings, his view should not be
ignored entirely. Through his work, the cultures of a larger area can
now be compared with the linguistic classification.

For the Madang area, Schmitz includes a list of Austronesian lan-
guages (see below). Since most of his linguistic materials are unpub-
lished, the identification of some of his names is not possible. Rimba,
for instance, can, with the help of Aufinger's (1942-45:641f) short
wordlist, be identified as Suroi (Papuan). However, names such as Bang,
Yara, Singanon, Nanaja are not listed in the Village Directory 1973.
The villages Singorokai (pop. 521) and Malasanga (pop. 149) are in the
Morobe Province. Schmitz, like others, unfortunately does not make a
clear distinction between languages and dialects, and between language
groups and single languages.

	Schmitz	Identification
101.	Geraged	Gedaged
102.	Gorima group	Erima, Papuan, Rai Coast
103.	Rimba group	Suroi, Papuan, Rai Coast
104.	Mindiri group	Mindiri
105.	Bang	?
106.	Awarai group (Warai)	Neko, Papuan, Finisterre
107.	Biliau-Teterei group	Biliau
108.	Yeimas	Gira, Papuan, Finisterre
109.	Wab group	Wab
110.	Fangger	Dahating, Papuan, Finisterre
111.	Siassi group:	
	-Sel, Mur, Yara	Arop
	-Arop	Arop
	-Umboi Is.	See Hooley - Morobe Province
112.	Malamai (Malalamai)	Malalamai
113.	Gali group:	
	Gali	Roindji
	Roinsi (Roindji)	Roindji
	Bonkiman	Bonkiman, Papuan, Finisterre
	Singanon	?
	Nanaja	?

4.2.3.9. SALZNER

Salzner (1960), in his atlas of the languages of the Indo-Pacific, calls the Austronesian languages of the Madang Province the Gedaged-Siar group. Biliau and Malalamai are grouped with the Kelana language group. Salzner gives no description of the nature of his language groups. Nagada is a European settlement, the centre of the Kristen Pres, and not a village.

Salzner: Gedaged-Siar group	Identification
a) Rimba-Gilai-Yamat (Rimba)	Suroi, Papuan, Rai Coast
b) Bilibili (Bilbil)	Bilbil
Jabob (Yabob)	Bilbil
c) Gedaged-Siar:	
1. Siar	Gedaged
2. Gedaged (Kranket)	Gedaged
3. Belia (Biliau)	Gedaged
4. Panutibun (Kranket)	Gedaged
d) Segu group:	
1. Segu (Sek)	Gedaged
2. Ruo (Riwo)	Gedaged
3. Nagada (Kristen Pres)	--
e) Matuga(r) (Matukar)	Matukar
f) Sarang	
1. Sarang (Sarang)	Megiar
2. Makiar (Megiar)	Megiar
g) Takia group	
1. Takia (Census Division)	Takia
2. Bagabag (Island)	Takia
h) Bogia group	
1. Wanami-Sepa (Wanam, Sepa)	Sepa
2. Manam-Boisa (Islands)	Manam
3. Nubia	Awar, Papuan, Ramu
Kelana group	
Biliau	Biliau
Melmalmai (Malalamai)	Malalamai

4.2.3.10. C.F. AND F.M. VOEGELIN

C.F. and F.M. Voegelin (1964) include in their study of the languages of the world some Austronesian languages of the Madang Province. Refer- ring to Grace (1955), they list the Astrolabe Bay languages as a sub- group of the Eastern Malayo-Polynesian languages. Manam and Sepa are ungrouped.

C.F. and F.M. Voegelin

Astrolabe Bay Subgroup	Identification
1. Graged (Kranket)	Gedaged
Sek	Gedaged
Yabob	Bilbil
Karkar	Takia
Bagabag (Island)	Takia
2. Ham	Ham
3. Ganglau	Ganglau, Papuan, Rai Coast
4. Mindiri	Mindiri
5. Biliau	Biliau
6. Teterei	Biliau
7. Yamai	Biliau
8. Malangai (--)	?
9. Yoria (Yori)	Neko, Papuan, Finisterre
10. Galek	Biliau
11. Swit	Biliau
12. Yamas (Yeimas)	Gira, Papuan, Finisterre
13. Megiar	Megiar
Matukar	Matukar

Ungrouped	
1. Manam-Sepa-Wanami	Manam
2. Sepa	Sepa
Wanami (Wanam)	Sepa

4.2.3.11. CLAASSEN AND McELHANON

Claassen and McElhanon (1970) included in their pioneering study of
the languages of the Finisterre Range, the Austronesian languages in
the Saidor Sub-district. Most of the language names have been retained
as they proposed them. The Wab language could be discovered in the Wab
and Saui villages. Wab has been called Som, after the word for *what* in
that language. Songam, which also means *what,* has been replaced by
Biliau, a name which was already in use. The name Moromoringa is un-
known in the area concerned. Part of the Mur and Sel villages speak the
Arop language.

Claassen-McElhanon	Identification
1. Roindji	Roindji
2. Malalamai	Malalamai
3. Moromoringa	--
4. Sengam	Biliau
5. Mindiri	Mindiri
6. Arop	Arop
7. Wab-Saui	Wab

4.2.3.12. OTHER CONTRIBUTORS

In addition to the contributions mentioned above, some less extensive
contributions were made by other writers. Firstly, wordlists and some
notes on the Manam language were collected by Pöch (1907:150; 1908:49f)
and Werner (1909:111-3; 1911:300-5). Werner (1911:49) also gives a
language map of the Astrolabe Bay and the vicinity and hinterland of
the Madang town area which includes Austronesian and Papuan languages
as known at that time. The Austronesian languages are 1) Bilbil =
Bilibili, 2) Gedaged = Grager (Kranket), Siar, Seg (Sek) and Ruo (Riwo).
Father Böhm S.V.D. carried out some studies on the grammar of Manam and
compiled an extensive dictionary (now published as Böhm 1975).
Wedgwood's contribution to this study (see above 4.2.3.7., Note 2) has
to be restudied. It is hoped her manuscript will one day be made avail-
able for inspection. Father Schebesta S.V.D. (1921a, 1921b, 1932, 1938)
and Father Höltker S.V.D. (1947:196f) added some linguistic notes to
their studies of cultural aspects of the Manam people. Friederici
(1912) included a wordlist in his study. The Lutheran missionaries
Bergmann and Kunze (1893) published a short wordlist of Takia (Karkar)
and Gedaged (Siar). Kunze's Takia (Karkar) dictionary is published in
Schmidt (1900:41-8). Hanke (1905:255-62; 1909:115f) adds a short word-
list of Gedaged (Siar-Regetta) to his study of the Bongu language to
compare Gedaged with Papuan languages in the Astrolabe area. Hanke
also provides a map of the Papuan and Austronesian languages as known
at that time. Father Hubers S.V.D. (unpublished) compiled an extensive
Takia dictionary. Father Kaspruś S.V.D. (1942-45) published extensive
comparative wordlists of Megiar and Matukar and also included some
sentence materials. Father Aufinger S.V.D. (1939, 1950) incorporated
some valuable text materials in his studies on the Yabob-Bilbil and
Gedaged people. Aufinger (1942-45) also gives some valuable information
on the secret language of the Gedaged people, and on two Papuan lan-
guages: Suroy (Suroi, Rimba) and Nekgini (Masi-Sorang).

4.2.3.13. CONCLUDING REMARKS

The writer of this chapter is unfortunately not in a position to
incorporate Milke's, Grace's and Dyen's contributions in this study.
This study reveals little agreement between the contributors. The
number of language names increase as the publication of linguistic
material decreases. Schmidt's (1900) study is the only satisfying and
comprehensive study, bearing in mind its early date. None of the other
writers managed to list all the language names or to compare, in a
systematic way, all available materials, though this would have been

worthwhile. But to clarify the language names and to bring new light
into the linguistic situation, fieldwork was essential (see 4.4.1. in
this volume).

N O T E S

1.   Suggestion made by Reverend P. Freyberg of E.L.C.O.N.G. (Evangelical Lutheran Church of New Guinea).

2.   There is a misunderstanding with regard to the authorship of a Manam grammar and dictionary. Capell (1962b:51) writes: Manam "has been studied by the Roman Catholic Mission, and also by Miss Wedgwood, whose notes are in the present writer's possession". Capell (1971:290) mentions later a "manuscript dictionary by the late Hon. Camilla Wedgwood... Milke exploited this dictionary in his 1965 article. A manuscript grammar by Fr. K. Böhm, S.V.D., kindly made available to the writer by Milke...". "Notes" in 1962 become a "dictionary" in 1971. Milke (1965: 338) mentions only "a few terms in Wedgwood's 1933 paper* on Manam social organisation and citations from the Wedgwood MSS in Capell 1943". The present writer entrusted to Capell a copy of Fr. Böhm's manuscript while he was on a visit to the Australian National University in May 1966. Fr. Böhm (oral communication) never handed over a manuscript to Milke, but carefully watched his possession of it. Wedgwood used Fr. Böhm's manuscripts (oral communication from Fr. Böhm). Father Böhm spent twenty-five years on Manam Island and compiled an extensive dictionary and a grammar sketch of the Manam language (Böhm 1975).

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*Editor's note: 1933, 1934 papers.

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4.2.4. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: MOROBE PROVINCE

Bruce A. Hooley

4.2.4.0. INTRODUCTION

In an earlier paper (Hooley 1964b), it was stated that the history of New Guinea linguistics is a history of Christian missions in the island. This is just as true of the Morobe Province as it is of the rest of the country, and with few exceptions, most of our information about the languages of the district before the 1950s comes either directly or indirectly from missionaries. McElhanon has also pointed this out in his History of Linguistic Research in the Huon Peninsula (McElhanon 1970).

The scope of this section is restricted to the Austronesian languages of the district, but in the days of the first contacts the contrast between Austronesian and non-Austronesian languages was not clearly established. The first mention of languages which later proved to be Austronesian seems to have been in the late 1880s and early 1890s. Since there are several different areas of linguistic research which are of interest to scholars it seems best for the sake of clarity to treat these separately. It is therefore proposed in the following pages to consider research under the headings of language classification, descriptive studies, and comparative studies. Primers, readers and other materials have also been published in a number of the languages but these will not be dealt with here.

4.2.4.1. LANGUAGE CLASSIFICATION

Schellong, a doctor with the New Guinea Company, published some kinship terms from Yabêm (Schellong 1889a), and a volume on the Yabêm language which included wordlists from neighbouring languages (Schellong

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1890). About the same time Zöller, a journalist who toured the New
Guinea Company stations, published two sets of wordlists of languages
from the mainland and nearby islands. One had fifty words from each
of twenty-four languages (Zöller 1890), and the second three hundred
words from forty-six languages (Zöller 1891). Not all of these lan-
guages were Austronesian.

Schmidt (1900-02) published wordlists from several Austronesian lan-
guages: Tami, Bukaua, Yabêm, Gitua (Kelana), and Tuam (Rooke Is.).
General exploration of the area continued, but usually more attention
was paid to physical and cultural features than to the languages spoken.
Ray summed up what was known in 1919 in his 'Languages of Northern
Papua'. Two of his groups were Austronesian, one of them including
Tami, Bukaua, and Yabêm, and the other Gitua, Tuam, Mangap, and some
other languages from the islands.

When Chinnery produced his report on south New Britain and the
islands in 1926 he included vocabulary lists from some of the languages
of the Siasi Family which he had obtained from Bamler.

Little further attempt was made to list and classify the languages
until Capell carried out his survey in the early 1950s (Capell 1954,
1962). He was followed by Schmitz (1955, 1959, 1960), Loukotka (1957),
and Salzner (1960). During this period there was considerable interest
in the Austronesian languages as a whole, especially by such people as
Dyen and Grace, but their work contained only passing reference to the
Austronesian languages in the Morobe Province.

Salzner's *Sprachenatlas* published in 1960 lists a number of Austro-
nesian languages from the Morobe Province. His general grouping of
languages corresponds reasonably well to that set up later in Hooley and
McElhanon's article (1970), although there are discrepancies and it has
not been possible to identify all the language names used by him.

Much of the work carried out by Salzner, Loukotka, Schmitz and Capell
was done by sampling and by the use of previously published, and some-
times inaccurate, materials. Some of the inaccuracies were perpetuated,
with the result that it was still possible to say in 1964:

> It becomes apparent that the most urgent need for the
> Morobe District is an accurate linguistic map of the whole
> area, showing the language groups and their linguistic affin-
> ities,-- at the very least with respect to the Melanesian/
> non-Melanesian dichotomy. An indication of the relationships
> between each language group, and provision of the linguistic
> material suitable for lexicostatistical and comparative studies
> would be preferable. (Hooley 1964a).

Voegelin and Voegelin (1964:7f) gave a "Unified List of Austronesian
Languages in Melanesia". This gave little more than a list of Austro-
nesian languages in the Morobe Province with the inclusion, probably
following Capell, of two non-Austronesian languages (Momolili and Kai).

Fischer (1963) gives cognate percentages obtained by comparing Watut with Wampar, Adzera and Yabêm. He also published some short wordlists from two languages of the Buang Family and from Labu (Fischer 1966).

Harding (1967:4f, 122f) included brief mention of the languages of the islands between the Huon Peninsula and New Britain in his study of the trading system of the Vitiaz Strait. He divided the Austronesian languages there into three groups all of which would fall within the Siasi Family (see 4.4.4.7.).

During the latter part of the decade, Capell classified the Austronesian languages of the whole Papua New Guinea area, including those of the Morobe Province, into two main groups, using typological criteria (Capell 1969, 1971). His application of the criteria is not always consistent however, nor is his choice of languages to be included completely accurate (see 4.4.4.1.). Some non-Austronesian languages appear to be included in the classification, and at least one major family, the Buang, is omitted entirely.

Sankoff studied multilingualism in the Buang area in 1966 and 1967. Her thesis (Sankoff 1968) included lexicostatistical comparisons between Buang and other languages in the province. Although she lacked data from a number of languages, she carried out a thorough, reliable, analysis. Her results showed four language families which are basically the same as those later set up with somewhat more detail by the author (Hooley 1970a, 1970b, 1971; see also 4.4.4. below).

Also in the late 1960s Hooley and McElhanon, in cooperation with other colleagues of the Summer Institute of Linguistics attempted to provide a complete survey of the Morobe Province languages. The results of this work appear in other parts of this volume, (and in Hooley and McElhanon 1970; Hooley 1970a, 1971). We now have a good overall picture of the Austronesian languages in the district and their relationships to one another, but with certain areas still needing fieldwork to fill in details.

When Dyen carried out his lexicostatistical classification of the Malayopolynesian languages (Dyen 1962) he used wordlists from only four languages from the Morobe Province: Adzera, Labu, Tami and a language he calls Nubami, which may perhaps be Sipoma. These four languages had quite low critical percentages and there were no clear ties back to the rest of the Austronesian groups. Dyen concluded that the north-east New Guinea-New Britain area was a linguistically diverse one and possibly the original home of the Austronesian languages, but no unequivocal evidence has so far been brought forward, either to confirm or demolish the hypothesis.

4.2.4.2. DESCRIPTIVE STUDIES

In-depth studies of particular languages were very rare until recent years.

Of the Austronesian languages in the district, Yabêm received the most attention, and several major studies have been published. This unique status of Yabêm is due to the fact that the Lutheran Mission chose Yabêm as its lingua franca for the Austronesian (and some non-Austronesian) speaking parts of the Morobe Province, and therefore largely ignored the other languages.

The first works to appear on Yabêm were by Schellong (1890, 1905), and Schmidt (1901). Although various anthropologically oriented articles by different authors appeared from time to time after that nothing more of major linguistic importance appeared until 1917 when Zahn produced a Yabêm-German dictionary. Then followed another break until the late 1930s. In 1937 Streicher produced a German-Yabêm dictionary which is now being reworked into a Yabêm-English dictionary soon to appear in print.

Dempwolff published a grammar of Yabêm in 1939, followed by Zahn's pedagogical grammar in 1940. An English-Yabêm dictionary was later published by the Lutheran Mission (Koschade 1969), but no recent grammar of the language has appeared.

After the war, Capell and Wurm did some work in the area paying particular attention to tone. They demonstrated that tone is a phonemic feature of Yabêm, Bakaua, and Tami (Capell 1949; Wurm 1954). The author has observed that Labu also displays this feature.

Not all the work of the Lutheran missionaries was related to Yabêm, although very little of the other material was published. Stuerzenhofecker (1930a, 1930b) produced some notes on the grammar of the Wampar language (which he calls Laewomba) and a dictionary, while Stolz (n.d.) provided a dictionary of Sio. As these materials are only in manuscript form, the author has not had opportunity to see them. Stolz's work also includes a grammatical analysis of the Sio language by Dempwolff.

Bamler published some materials on Tami in the early part of the century. First to appear were notes on the grammar and a vocabulary (Bamler 1900a, 1900b), followed later in 1912 by a pedagogical description of the language.

Adzera is another language to have been studied in some depth. An early analysis of the language was carried out by Dempwolff (n.d.) and the manuscript is still in Hamburg. Later Holzknecht took up the work. He produced dictionaries of the language (Holzknecht 1960, 1967a,

1967b), but these are unfortunately still only in manuscript form.
Some of the results of his work on the phonology and grammar of the
language are now being published (Holzknecht 1974a, 1974b, 1974c).

Four other languages have been studied in greater or less detail
since the 1950s; Central Buang, Manga Buang, Patep (also Buang Family),
and the lower Watut languages (Adzera Family) (see 4.4.4. for details
of the families).

The first fieldworker to study Buang was Girard, who spent some
months in the area in the mid-fifties. Although she used some Buang words,
phrases, and stories in her articles (Girard 1956a, 1956b, 1957a, 1957b,
1959a, 1959b, 1967) she did not study the language analytically, nor
attempt to describe the phonology or grammar.

Sankoff worked chiefly in the headwater dialect of Central Buang.
Her fieldwork was carried out during 1966 and 1967 with succeeding short
visits. Her main interests were anthropological and sociolinguistic
rather than analytical and descriptive, so that she did not publish any-
thing on the structure of the language, except for a summary chapter in
her thesis (Sankoff 1968:88-106). This thesis, on multilingualism, was
a valuable contribution to our knowledge of the subject as a whole and
language usage among the Buang in particular. She has since published
further on this subject using Buang illustrative materials (Sankoff
1969, 1972a). More recently she has begun a systematic and comprehensive
study of the nature of Buang poetry as it is expressed in the oral
accompaniment to their dances. So far only preliminary unpublished
manuscripts on this topic have appeared (Sankoff 1972b, 1972c), but a
complete description is being planned.

The main descriptive linguistic study of Central Buang has been
carried out by the author and his wife, who have been engaged in field-
work in the area at various times from 1959 until the present. Various
manuscripts which have appeared from time to time have now been extended
and superseded by a fuller description of the phonology and grammar
(Hooley 1970a). Two earlier publications (Hooley 1962; 1964c) have also
been superseded in some details. Still only in manuscript form is a
description of the higher level grammatical features of sentence, para-
graph, and discourse (Hooley 1970b). Manuscript dictionaries have been
prepared, and plans are being made to publish these. The Buang-English
dictionary was prepared by Hooley, Hooley and Johnson (1973), and the
English-Buang dictionary by the author's wife (Hooley, J. 1972). Mose
Johnson, a native Buang speaker from the village of Mapos, prepared a
Buang-Tok Pisin dictionary, working from the Buang-English volume
(Johnson 1973).

The Manga Buang language is closely related to Central Buang with
approximately 70-75% cognates. It has been studied by Hardwick and
Healey of the Summer Institute of Linguistics who have prepared a dic-
tionary as well as a number of papers still in manuscript form on the
phonology and grammar of the language (Hardwick 1967, 1969, 1970;
Healey 1967a, 1967b, 1970; Hardwick and Healey 1965a, 1965b, 1966a,
1966b, 1967, 1972, 1973).

Lauck and Adams, also of the Summer Institute of Linguistics, have
just recently begun an in-depth study of Patep, part of the dialect
chain known as the Mumeng language. So far nothing has been published,
but there is already a description of the phonology, available in man-
uscript form (Adams and Lauck 1973).

The languages of the lower Watut were studied by Fischer who included
a section on them in his book *Watut* (Fischer 1963). He treats this
group as one language with a number of dialects, covering in this the
languages listed as Dangal, Maralango, Onank, and Silisili in 4.4.4. in
this volume. He does not give any cognate percentages between the
different dialects, but he includes notes on the phonology and grammar
as well as a vocabulary.

4.2.4.3. COMPARATIVE STUDIES

So far not very much has been done on comparative studies with lan-
guages of the Morobe Province, due mainly to the paucity of reliable
data.

Fischer has some comparative notes in his book *Watut* (Fischer 1963:
278ff) in which he compares the three Watut dialects with Wampar and
Adzera as well as proto-Austronesian. He includes a chart of sound
correspondences.

In his 1965 article, Milke wrote comparative notes on the Austro-
nesian languages of New Guinea in which he treats the languages as
members of the Oceanic subgroup of Austronesian. His two main points
are that the New Guinea languages constitute a specific cluster within
the Oceanic subgroup, and that they are derived from proto-Oceanic.
With reference to the Morobe Province he discusses firstly the reflexes
of *s and *z in the Yabêm and Tami languages (p.334ff) and Adzera
(p.341f). These three languages are also used in lexical comparisons
in later sections of the paper.

Capell (1971) in his Austronesian languages of Australian New Guinea
chapter, makes passing reference to Yabêm, Tami, Adzera, and other Morobe
Province languages, but he does not treat them in any detail.

Some preliminary comparative work has been attempted on Buang by
Sankoff (1968) and Hooley (1970a). Sankoff compared the two dialects of

Central Buang and Manga Buang and attempted to reconstruct proto-Buang phonemes (p.91ff). Hooley (1970a, Chapter 4) discusses the sets of correspondences for the languages and dialects of the Buang Family and attempts a reconstruction of the phonemic contrasts. Some 408 sets of cognates from nine of the Buang speech groups are given in an appendix, but no attempt has been made to reconstruct proto-Buang roots.

   Apart from these beginnings no other comparative work on the languages of the province is known to the author.

4.2.4.4. CONCLUSION

   There remains much to be discovered to complete our knowledge of the Austronesian languages of the Morobe Province. The principal needs are for more in-depth studies of individual languages, and for more careful application of the comparative method to individual languages and dialects. This in turn should permit us to make more reliable deductions concerning the relations of the various languages and families, and perhaps also to speculate more adequately on the history of the development of these different groups, their prehistory, and the way they are related to the Austronesian languages taken as a whole.

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1974b 'Morphophonemics of the Adzera Language'. *PL*, A38:13-19.

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1889b   'Das Barlum-Fest der Gegend Finschhafens (Kaiser-
          Wilhelmsland)'.   IAE 2:145-62.

1890   Die Jabim-Sprache der Finschhafener Gegend.   EAVS 7.

1905   'Weitere Mitteilungen über die Papuas (Jabim) der Gegend
          des Finschhafens in Nordost-Neu-Guinea'.   ZEthn 37:602-18.

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          ZAOS 5:345-84; 6:1-99.

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4.2.5. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: EASTERN PART OF SOUTH-EASTERN MAINLAND PAPUA

T.E. Dutton

4.2.5.1. INTRODUCTION

This chapter is concerned with that area of the Central Province of Papua between the Motu village of Kapakapa near Round Point in the west and Mugaubo Point at the eastern end of Table Bay in the east. This area is occupied by speakers of the two large Austronesian languages Sinagoro[1] and Keapara in the west, and speakers of the remnants of several small Austronesian languages in the east, hereafter referred to simply as the Magori Group after their largest member. Further details of the classification and structure of these languages is to be found in 4.4.3. of this volume.

4.2.5.2. HISTORY OF RESEARCH

4.2.5.2.1. *GENERAL HISTORICAL SURVEY*

The first specimens of any of the languages dealt with in this chapter appeared as a school lesson book *Buka Kunena Haroharo Vahaia Adipama* in the Hood Bay dialect of Keapara in 1878. Apparently - judging by the titles of both, for I have not been able to see a copy of the latter[2] - this was a parallel volume to one published the previous year in Motu containing reading lessons, an epitome of Old and New Testament history, hymns, and the Lord's Prayer.[3] Two years later Stone (1880:248-52) published a list of 130 vocabulary items from Kirapuno (now Kerepunu) east of Hood Point as part of a comparative list of words from nine 'dialects' in British New Guinea and the Torres Straits Islands.

Between 1880 and 1886, short vocabularies were collected by the Rev. J. Chalmers and the Rev. S. McFarlane. Some of these were referred to by Codrington (1885:32 fn.1) as evidence that some at least of the New

Guinea languages were Melanesian (now Austronesian). The complete
vocabularies were not published, however, until 1888, when owing to the
loss of a page in Part II the equivalents are wrongly given.[4] Corrected
lists are given in Ray (1907:479-503) who combined them with some of
his own material and that published in other sources. Lawes, W.G.
(1888) published comparative lists for Kerepunu and Aroma obtained from
college students studying in Port Moresby.

From 1889 to 1897 many vocabulary lists were published in the *Annual
Reports for British New Guinea* from Sinagoro and Keapara.[5] Some of
these were reprinted in Thomson (1892:308-15, 328).[6] In 1892 and 1895
Ray also drew on these materials to suggest a classification of the
languages of British New Guinea as Papuan and Melanesian and in 1895
also published a comparative vocabulary of all the dialects known to
him. This vocabulary included the following lists from Sinagoro and
Keapara (which he referred to as Loyalupu) and was drawn from the sources
indicated in parentheses:

Loyalupu: ⎧ Hula (MS)
(= Keapara) ⎪ Bula'a (Guise (1892))
             ⎨ Keapara (MS)
             ⎩ Kerepunu (Stone (1880); Lawes, W.G. (1888); MS)

Sinagoro: ⎧ Aroma (Lawes, W.G. (1888))
             ⎨ Sinagoro (Lawes, F.E. (1892))
             ⎩ Tarova (or Saroa) (Codrington (1885))

Similar materials also appeared in Ray (1907:479-503) with the follow-
ing additions:

          Galoma (Pearse (1896))
          Rubi (English (1898))

In 1913 Seligman published the first grammatical sketch of Sinagoro
based on "notes prepared by Dr. W.M. Strong from a short series of
sentences received from the Rev. H.P. Schlencker of the L.M.S."[7] and
on further materials supplied by S.H. Ray. Short vocabularies of the
Sinagoro and Ikoro 'tribes' were also included. Another Keapara vocab-
ulary collected at Karo (now Kalo) was published by Strong in the
Papua Annual Report for 1917-18.

Meanwhile Government attention had shifted towards the eastern end
of the mainland and increasing numbers of reports began to come in of
languages in that area. Strong published the first list for the Magori
tribe inland of Table Bay in 1919, and several years later Grist (1926)
followed this with an account of the linguistic situation of the south
coast of Papua in which he included Laua and an hitherto unmentioned

village, Ouma, in the Magori language. Subsequently Ray (1929 and 1938)
published surveys of the languages of the old Central, Eastern, and
South-Eastern Divisions of Papua. In these Ray summarized much of the
information then available but set up a Magori Group of languages con-
sisting of Magori, Laua and O'oku related to the non-Austronesian Magi
Group nearby. This classification persisted, except for some misgivings
expressed by Capell (1943:39), until 1969 when I visited the area briefly
and collected some new materials in the language. These materials were
reproduced and discussed in a long paper presented to the Linguistic
Society of Papua New Guinea in Port Moresby in August 1971[8] (Dutton
1971b). In this paper I reviewed all the materials previously recorded
for Magori and neighbouring groups (including vocabulary lists collected
by Saville, the resident London Missionary Society missionary at Mailu
Island, but never published)[9] and argued that Magori was really an
Austronesian language most closely related to Sinagoro but whose vocab-
ulary and phonology had been heavily influenced by and/or borrowed from
the non-Austronesian language Magi nearby. Historical consequences of
this view were also discussed, and suggestions made for further research.
Some of these were taken up by N.P. Thomson, then resident medical
officer for the United Church at Iruna Hospital, Magarida, and further
materials were collected by him from villagers at Laua, Labu and Nabai.
These materials confirmed the existence of the remnants of several
Austronesian languages related to Magori in this area but now represented
by only two to four speakers. Some of these results are discussed by
Thomson in a study of the dialects of Magi (Thomson 1975) where the
languages are referred to as Yoba, Bina, and Ouma. Thomson's discoveries
were so exciting that I returned to the area in 1972 to collect a wider
range of materials from the surviving members of these languages, some
results of which are discussed in 4.5.1. in this volume. No literature
has been published in any of the languages of the Magori Group.

Meanwhile back in the west, Lillian M. Short had been studying the
Keapara language at Hula where she and her husband were London Missionary
Society missionaries and was awarded an M.A. degree from Adelaide
University for her study of the grammar and phonology of this dialect
in 1939.[10] Short's study also includes notes on other dialects of
Keapara nearby. It has never been published.

Soon afterwards Capell was awarded his Ph.D. degree from London
University for a comparative study of all the Austronesian languages of
South-East Papua which was based on all previously published materials
as well as on some unpublished data.[11] In it Keapara and Sinagoro are
shown to be closely related to Motu and other Austronesian languages of
the Central Province of Papua to the west. Magori was classified, on

the basis of vocabulary, as non-Austronesian 'Mailu-type', though, as
already noted, Capell was not happy with this classification because
as he says (1943:39) "no grammar is given". This classification, how-
ever, underlies subsequent surveys of these languages by Capell.[12]

In 1966-67 I collected vocabulary lists from many villages in the
Rigo area as part of my investigation of the Koiarian Language Family.
Subsequently I published an account of the languages in that area as
Dutton 1970 in which I attempted to define Sinagoro and Keapara (as
well as other languages) more clearly. Two vocabulary lists from the
many collected were reproduced in this study as representative of these
two languages. These were from the villages of Gamore and Hula. Each
list contains over 200 items. The remaining lists will be published
with ones collected in 1969 by A. Pawley when he was Lecturer in
Linguistics at the University of Papua New Guinea, as part of Pawley
and Dutton 1976a, 1976b. Some of these lists have already been used
as evidence for Pawley 1969 and Pawley 1975. A sketch grammar and a
more detailed vocabulary of the Balawaia dialect of Sinagoro was pub-
lished by Kolia (formerly Collier) (1975) in Dutton, ed. 1975.[13]

4.2.5.2.2. *TRANSLATIONS IN SINAGORO AND KEAPARA*

Over the years the following translations have been published in
Sinagoro and Keapara.[14]

Sinagoro:

1954   *A School Primer in the Sinaugoro Language, Central District,
       Papua.* Petersham, N.S.W. London Missionary Society.

n.d.   *Mari Bukana* (Hymn Book in the Sinaugoro Language of New Guinea).
       Sydney. Australian and New Zealand Committee for the Papua
       District Committee.

Keapara (Hula dialect):

1878   *Buka kunena haroharo vahaia adipama* (First school book printed
       in language of Hood Bay, New Guinea). Sydney.

1881   *Buka lualua aloalo aia aripama* (Second school book in language
       of Hula, Hood Bay). Sydney: Lee and Ross.

1892   *Ila reea Pala Palagu na buka* (Reader and Hymns). Sydney.

1892   *Mareko na Evanelia* (Gospel of Saint Mark). Sydney. (Includes
       selections from the other Gospels and the Psalms. The first
       publication of a complete book of Scripture. Translated by
       A. Pearse of the London Missionary Society.)

1895   *Mareko na Evanelia* (Gospel of Saint Mark). Sydney. (A
       revision made by A. Pearse. This volume omits the selections
       contained in the 1892 edition.)

1895   *Mari Palagu ia na Vahanama* (Hymns). Sydney.

1899   *Iesu Keriso gena Evanelia* (The Gospels and Acts translated by
       A. Pearse). London: British and Foreign Bible Society.

1899   A small edition (250 copies) of *Saint Luke* was printed separa-
       ately for use in schools. 83pp.

n.d.   *Nahula aloalo aia pia varipa Hula kalo* (Hula Primer). Sydney.

1905   *Romans*. Sydney: London Missionary Society. (Romans,
       Ephesians, Philippians, Colossians, I John and I Corinthians
       xiii, together with Psalms lxxii and cxxi translated by A.
       Pearse.)

1912   *Another edition of Iesu Keriso gena Evanelia* (1899).

1915   Reprinted *Romans* (1905).

1949   *Gospel of Saint Matthew*. Sydney. (First publication under
       the name of Hula. Translated by Mrs Lillian Short of the
       London Missionary Society, assisted by two Hula pastors, Ila
       Tiana and Tamate Jim, and a theology student Kila Iga.)

1954   *The New Testament*. Sydney. (Translated by Mrs Lillian Short,
       assisted by Ila Tiana. The text of Saint Matthew is a reprint
       of the 1949 edition. The remainder is a first translation.)

1955   *Luke na Evanelia* (The Gospel of Saint Luke in Hula, Papua).
       Sydney: The Council of the British and Foreign Bible Society
       in Australia. (A special edition for use in schools. The
       text is that of the New Testament of 1954.)

1960   *The New Testament*. Sydney. (A reprint of the 1954 edition,
       containing corrections prepared by the Rev. Maurice Nixon of the
       London Missionary Society.)

1961   *The Gospel of Saint Luke*. Sydney. (A reprint of the 1955
       edition, incorporating the corrections made by the Rev. M.
       Nixon in the 1960 edition.)

1964   *Gospel of Saint Luke*. Sydney. (A reprint of the 1961 edition,
       with corrections.)

1964   *The New Testament*. Sydney. (The third edition of this New
       Testament, including some minor alterations made by the Rev.
       M. Nixon. For this edition the type was re-set and two maps
       included for the first time.)

N O T E S

1. Sinagoro has also been spelled Sinaugoro and Sinaugolo.

2. This was unfortunate, but regrettably, unavoidable.

3. See Lawes, W.G. (1877).

4. See Chalmers and McFarlane, in: Cust (1888).

5. Aroma and Kerepunu (compiled by W.G. Lawes, 1890); Babaka, Bono,
Gamata, Gomoredobu, Kemaia, Rigo, Saroa, Saroake, and Waburava (compiled
by F.E. Lawes, 1892); Keakalo (compiled by F.E. Lawes, 1894); Bula'a
(compiled by R. Guise, 1892); and Aliba, Kamit, Rubi, Ganimarubu, and
Galirubu (compiled by A.C. English, 1898).

6. The Kerepunu and Aroma lists (and others in tables on pp.308-15)
were compiled by W.G. Lawes, the Bula'a ones by R. Guise, and the
Sinaugolo one is unacknowledged but is probably Lawes's (1892).

7. Seligman (1913:182).

8. This paper was foreshadowed in Dutton (1971a:9) as the supporting
evidence for the statements made therein. It was to have been published
as the first monograph of *Kivung*, the Journal of the Linguistic Society
of Papua New Guinea, but for various reasons has not yet been submitted.

9. See Saville (1935).

10. At the same time, Rev. and Mrs S. Rankin were using Sinagoro in
their mission work at Saroa (inland of Rigo) but unfortunately did not
leave any records of the structure of the language.

11. Capell (1943).

12. Capell (1962, 1969).

13. This is a revised version of Koloa and Collier (1972).

14. This list was compiled from Ray (1907, 1929, 1938), Capell (1943), and the following two sources:

Anonymous   *Memorial Bible House Library of Scriptures, Canberra.*
            Canberra: The British and Foreign Bible Society.

Dance, D.G. *Oceanic Scriptures.* London: The Bible House, 1963.
            (A revision of the Oceanic Sections of the Darlow and
            Moule Historical Catalogue of Printed Bibles, with
            additions to 1962.)

Most of the books listed have not been seen by the present author.

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    1969   *A Survey of New Guinea Languages*. Sydney University Press.

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    1963   *Oceanic Scriptures*. London: The Bible House.

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District of Papua'. In: Wurm, S.A. and D.C. Laycock, eds.
Pacific Linguistic Studies in Honour of Arthur Capell.
PL, C13:879-983.

    1971a   'Languages of South-East Papua: A Preliminary Report'.
PL, A28:1-46.

1971b   Magori: Its Nature and Relationship to Other Languages of
          South-East Papua.   Paper presented to the Linguistic
          Society of Papua New Guinea, Port Moresby, in August 1971.
          Mimeographed.

1972   Field Notes: Magori and Related Groups.   Department of
          Linguistics, School of Pacific Studies, Australian National
          University, Canberra.   Manuscript.

1973   *A Checklist of Languages and Present-Day Villages of Central
          and South-East Mainland Papua*. PL, B24.

DUTTON, T.E., ed.
  1975   *Studies in Languages of Central and South-East Papua*.
           PL, C29.

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  1898   'Native Dialect Spoken by Natives from Hood's Bay to
           McFarlane's Harbour - A Partial Vocabulary of the Dialect
           Spoken by the following Inland Tribes at the back of
           Keapara and Keakaro, Hood's Bay to McFarlane Harbour - viz.,
           Rubi, Kamit, Aliba, Ganimarubu, and Galirubu'. *Annual
           Report for British New Guinea for 1896-97*. 91-3.

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  1926   'Languages of the Abau District'. *Territory of Papua
           Annual Report for the year 1925-1926*. 92-7.

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  1892   'Vocabulary of Bula'a Dialect, Spoken in the Central
           District of British New Guinea, by some Coast Tribes'.
           Annual Report for British New Guinea for 1890-91. 108-14.

KOLIA, J.A. (formerly COLLIER, J.A.)
  1975   'A Balawaia Grammar Sketch and Vocabulary'. In: Dutton,
           ed. 1975:107-226.

KOLOA, M. and J.A. COLLIER
  1972   An Introduction to the Grammar and Vocabulary of the
           Balawaia Dialect of Sinagoro as spoken at Tauruba, 1972.
           Port Moresby: University of Papua New Guinea. Mimeographed.

LAWES, F.E.

    1892   'Aboriginal Vocabulary of Sinaugolo - Table showing certain
             Principal Words etc., used by Aboriginals of Sinaugolo,
             Central District, British New Guinea, and Spoken by Saroa,
             Rigo, Babaka, Bono, Kemaia, Waburava, Saroakh (= Saroake),
             Gumiridobei (= Gomoredobu), and Gamata'. *Annual Report
             for British New Guinea for 1890-91*. 142-5.

    1894   'Vocabulary of Words Spoken by the Keakalo Tribe, from
             Vererupu to Paramana Point'. *Annual Report for British
             New Guinea for 1892-93*. 103-6.

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    1877   *Bukana kunana levaleva tuahia adipaia*. Sydney: Reading
             and Foster.

    1885   *Grammar and Vocabulary of Language Spoken by Motu Tribe,
             New Guinea*. Sydney: Government Printer.

    1888   *Grammar and Vocabulary of Language Spoken by Motu Tribe,
             New Guinea*. Second and revised edition. Sydney: Government
             Printer.

    1890   'Comparative View of New Guinea Dialects'. *Annual Report
             for British New Guinea for 1889-90*. 158-67.

    1896   *Grammar and Vocabulary of the Language Spoken by the Motu
             Tribe, New Guinea*. Third and enlarged edition. Sydney:
             Government Printer.

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             Port Moresby: Department of Anthropology, University of
             Papua New Guinea. Mimeographed.

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             Papua: A Preliminary Study'. In: Dutton, ed. 1975:3-106.

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             Mainland South-East Papua*. PL, D14. (In press.)

1976b   *Basic Vocabulary Lists of Austronesian Languages of Central
         Papua.* PL, D13. (In press.)

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1896   'Galoma Vocabulary'. In: Lawes, W.G., 1896.

RAY, S.H.
1893   'The Languages of British New Guinea'. *Transactions of
         the Ninth International Congress of Orientalists, London,
         1892.* 754-70.

1894   'The Languages of British New Guinea'. *JRAI* 24:15-39.

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.3: *Linguistics.* Cambridge University
         Press.

1929   'The Languages of the Central Division of Papua'. *JRAI*
         59:65-96.

1938   'The Languages of the Eastern and South-Eastern Divisions
         of Papua'. *JRAI* 68:153-208.

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         graphed.

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         ZKS 3:182-200.

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         Vocabulary and Translation and Notes of Other Dialects of
         the Hood Bay District. M.A. thesis, University of Adelaide.

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             inland, eastern end of Table Bay, E.D., near Mogubo Point'.
             Papua Annual Report for 1917-18. 91. Compiled by E.M.
             Bastard.

   1920   'Vocabulary of Karo Tribe, Villages: Gabu-oni, Kelalakwa,
             Kapari, Eaula, Wanigela, and Wai-ori'. *Papua Annual
             Report for 1918-19*. 111. Compiled by E.M. Bastard.

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4.2.6. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES:
WESTERN PART OF SOUTH-EASTERN MAINLAND PAPUA

A.J. Taylor

4.2.6.0. INTRODUCTORY REMARKS

This chapter deals with the Motu and Doura languages in the Port
Moresby District of the Central Province, the Roro, Mekeo, Kabadi,
Nara, and Kuni languages of the Kairuku District, and the Kovio language
spoken in the Kukipi District of the Gulf Province. Most of the
research has been done by missionaries of the London Missionary Society
and the Roman Catholic Mission of the Sacred Heart. In fact, mission-
aries have done some research in all of these languages as both missions
have been active in the use of vernaculars. Nearly all of the studies
use a traditional approach to language description. Unfortunately much
of the work, including almost all of that done by members of the Sacred
Heart Mission and some by Ray and Strong, has never been published,[1]
and most published studies are only outlines or notes.

These languages have been included in the comparative studies by Ray
(1907), Capell (1943), and Pawley (Pawley 1969, n.d., and Pawley et al.
n.d.). Seligman (1901) made a comparison of colour terms including
some of these languages. Comparative wordlists have been compiled by
a number of people at various times, such as Lawes, W.G. (1888, 1890),
Chalmers and McFarlane (1888), Ray (1895), and unpublished lists of
Desnoes, Brown, and Taylor.[2]

4.2.6.1. MOTU

The first work done was the collection of wordlists. MacGillivray
(1852:317-30) published a list of about 120 items collected in 1849
from the Redscar Bay area. Gill and Murray, who were among those who
landed the first London Missionary Society missionaries in Papua at
Manumanu in 1872 also published wordlists (Gill 1876:260f; Murray 1876,

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table at the end of the book). Gill refers to his list of 45 words as
'South-East New Guinea', and Murray to his 72 words as 'Redscar Bay
and onwards towards the eastern end of New Guinea'. Ray (1929:65) says
that all three lists are Doura or Motu. They all appear to be basic-
ally Motu, with perhaps a few words from other languages.[3]

The first published information beyond wordlists is at the end of
a description of Motu culture by Turner (1877-78:496-8). A member of
the London Missionary Society, he had lived in Papua only a short time
when he wrote the paper and so he probably drew on Lawes, a fellow mis-
sionary who had arrived in 1874, for at least some of his material.
It consists of miscellaneous notes on the phonology and grammar and
some translation from English into Motu. It is of some interest as
giving the missionaries' first stage in their understanding of the
structure of the language. Some errors, particularly in the account of
the verb, are due to the fact that for some years the missionaries were
taught Hiri Motu, rather than Motu, but they did not realize it.[4]

A sketch of the grammar was presented by Lawes, based on seven years'
study (Lawes 1885).[5] He expressed the hope that the book would help in
language learning, an aim that continued in later published grammars,
which have all been by missionaries. In this first grammar very little
attention is given to phonology or syntax. The morphology is treated
using traditional parts of speech and their characteristics, such as
number and gender, as a descriptive framework.[6] However, Lawes used
the framework fairly well, and he pointed out in the third edition
(Lawes 1896:6) that he used the traditional English terminology only to
help the English reader. He did not, then, necessarily mean that the
framework was appropriate to the description of Motu itself. In fact,
the main problem is that the work contains a mixture of Motu and Hiri
Motu forms. The second edition (Lawes 1888) differs little from the
first as regards the phonology and grammar. There are some additions
to the vocabulary section - an expansion of the vocabulary section
itself, a few pages of phrases useful for language learners, and a
comparative vocabulary of four hundred words in seven 'dialects' of the
south-east coast.

In the preface to the third edition (Lawes 1896) Lawes says that the
grammar has been almost entirely rewritten. One finds no change to the
phonology section, but in the morphology there is in particular a good
deal more on verbs with an increased understanding of the verb system.
However, Lawes was aware that many problems remained and he gave a
listing of verb forms about which he said 'The complex arrangement and
terminology of grammarians seem quite inapplicable here - I leave my
readers to name tense, mood, etc., as they please' (Lawes 1896:15).

He noted for the first time in his published work the existence of what
he called 'pidgin' Motu forms (i.e. Hiri Motu) and gives examples in-
cluding the omission of the verb prefixes (or particles) involving tense,
person and number, and negation. He refers to the pidgin Motu forms as
not being correct grammatically and adds that their use was much to be
regretted, pointing out that they are only used when speaking with
foreigners (Lawes 1896:30). There is a little more on syntax, but the
additions deal mainly with the verb phrase and there is still almost
nothing about clause and sentence construction.

In 1930, two other members of the London Missionary Society, Lister-
Turner and Clark, who both had a long acquaintance with Motu, produced
a *Revised Motu Grammar and Vocabulary*. Although the title indicates a
revision, the authors state in the preface what is soon evident to the
reader, that the book is almost a new work. There is a comparative
study in which Motu is compared with languages of Indonesia and Island
Melanesia, a grammar, and a vocabulary. The morphology and syntax are
more detailed while in general retaining Lawes' descriptive framework.
For the first time there is a description of the various types of clauses.
This is arranged according to the traditional English types - adjectival,
time, place, cause, etc. The little that Lawes said about the phonology
remained basically unchanged and unexpanded.

After World War II Chatterton, another missionary, edited a revision
of the work of Lister-Turner and Clark. It came out in two volumes
(Lister-Turner and Clark, n.d.a and n.d.b). The first contains the
grammar and is bound with *A Basic Motu Dictionary* by Chatterton, which
has both English-Motu and Motu-English sections with about a thousand
entries in each (Chatterton, n.d.a). The second volume contains the
comparative study and vocabulary. The changes are generally minor.

In these early studies very little was said about phonology. This
gap was filled somewhat by Dietz (n.d.) who gives an account of the
phonemes of Motu and says a little about the intonation patterns.

Two studies have appeared which compare Motu and Hiri Motu, viz.
Brett, Brown, Brown, and Foreman 1962, and Wurm 1964. The latter is
the more detailed and points out that despite the fact that Motu and
Hiri Motu share well over 90% of basic vocabulary cognates the differ-
ences in grammatical structure make the two languages mutually unintel-
ligible. Kess (1969) takes up the question of the relationship between
Motu and Proto-Austronesian, and he attempts to relate Motu forms
directly to their Proto-Austronesian antecedents, without referring to
intervening strata in the way that Capell (1943) did.

The most recent studies have been done by the writer. The main
study (Taylor 1970a) is primarily of the processes of relativisation,

complementation, and coordination, using a transformational approach
set broadly within the abstract syntax model as developed by G. Lakoff,
J.R. Ross, R. Lakoff, and others. It makes a detailed study of what
are traditionally called adjectival clauses and shows that there is
considerable similarity of structure between them and most types of
adverbial clauses, a similarity which the traditional grouping obscures.
The phonology is described in generative terms, and a sketch of Motu
dialects given. Following on Capell's study of reduplication in the
languages of south-east Papua (Capell 1937-39), a study of reduplication
in Motu was made (Taylor 1970b). A survey of language knowledge and
use was carried out in one Motu village, Tubusereia, and a brief pre-
liminary account published (Taylor 1968). While all the earlier studies
were done in the Western Motu dialect, especially as spoken at
Hanuabada, that of the writer was done in the Eastern Motu dialect as
spoken at Tubusereia. Dialect differences are, however, only slight.
A start has been made on a new, more extensive, dictionary by Chatterton
and the writer.

4.2.6.2. DOURA

This language is spoken by only about 300 people today and has not
been studied much. Chalmers collected a wordlist (in Chalmers and
McFarlane 1888) and this was the only material available to Ray in 1907,
so that he does not include Doura in his discussion of the phonology
and grammar of the Melanesian languages of British New Guinea, but just
gives some words in the comparative vocabulary. In a later paper Ray
(1929:96) refers to vocabulary lists and notes made by Strong and from
them he lists the forms of pronouns, both personal and possessive,
including the suffix forms.

In the last few years Wilson has done some work on the language in
connection with a sociological study and has notes in manuscript of the
basic forms of the verb and some vocabulary.[7] Dutton and Taylor each
collected wordlists in the late 1960s using Wurm's list (Wurm, 1963).

4.2.6.3. RORO[8]

Early wordlists were published by the explorer D'Albertis (1880:
385f), and two London Missionary Society men, Dauncey (in Lawes 1896)
and Chalmers (Chalmers and McFarlane 1888). Ray (1907:414) refers to
wordlists and notes in manuscript compiled by two Sacred Heart mission-
aries, Guis and Cochard. The two main works have also been written by
Sacred Heart missionaries. These are the grammar by Joindreau (1907)
and the dictionary by Coluccia (1939, 1941). The grammar, although

brief, gives a reasonable outline of the morphology and some statements
about syntax in traditional terms. However, Joindreau was careful to
point out that there was an enormous difference between Indo-European
and Melanesian (i.e. Austronesian) languages and that the structure of
the latter must not be violated if one is to use the language correctly
(1907: section 5.1). Guis (1936:227-36) gives some extracts from
Joindreau's grammar and an English translation of the grammar was made
by Bluhme in 1968. Coluccia's dictionary is in two volumes and is quite
extensive, the Roro-French volume having 569 pages and the French-Roro
428. Strong (1913-14) outlines Roro morphology with some notes on
syntax, but his account is briefer than that of Joindreau. He mentions
that it is mainly derived from information supplied by members of the
Sacred Heart Mission, though he does not specifically mention Joindreau.
Ray (1929:96) refers to a grammar of his own in manuscript and to a
vocabulary by Strong also in manuscript. Bluhme (1970) made a study of
the phonemes of Roro. Chatterton (n.d.b) gives a very brief outline of
the main points of morphology.

4.2.6.4.   MEKEO[9]

Early vocabulary lists were published by Lawes, F. (1890), a govern-
ment officer, and Bouellat (1902), a Sacred Heart missionary. The
latter also included some simple sentences showing the main tense forms
of the verb, questions and possessives. Ray (1907:414) refers to a
grammar by Vitale and notes by Bouellat, and later (Ray 1929:96) he
mentions a grammar of his own in manuscript and a vocabulary by Strong.
Strong (1913-14) gives a brief outline of Mekeo morphology and just a
few notes on syntax, drawn from material he got from the Sacred Heart
missionaries. The main grammars, both unpublished, are by two Sacred
Heart missionaries, van Goethem and van Lamsweerde.[10] The former's
work is in French and was done in the 1920s. The latter is in English,
and was written mainly in 1940-41. In it the approach Joindreau had
used with Roro was employed as a basis but it is not by any means just
a repetition of Joindreau's work. It differs somewhat in approach and
gives more detail. Van Lamsweerde was also able to use notes made by
Desnoes. Desnoes, also a Sacred Heart Missionary, prepared a Mekeo-
French dictionary in the later 1920s. This was typed in 1941 by van
Lamsweerde who made some additions to it. It includes a comparative
study of some aspects of the relationships between Motu, Roro, Mekeo,
and Nara. Van Lamsweerde also has a Mekeo-English dictionary on cards.
Bálint (1968) made a study of the Mekeo time indication system.

4.2.6.5.   KOVIO

This is a small language spoken by about 200 people in two villages, Urulao and Okavai. It is related most closely to Mekeo. Brown, of the London Missionary Society, has notes on the grammar and a wordlist.

4.2.6.6.   KABADI

Lawes (1888:115-29) included Kabadi in a comparative vocabulary, while a government officer, Green (1894) recorded a wordlist and a number of sentences to indicate the main tense forms of the verbs, possessives, and clause construction. Timoteo, of the London Missionary Society, made some notes in Samoan on the pronoun, noun, and verb forms. These were translated and edited by J.E. Newell of the London Missionary Society in Samoa (Timoteo 1897). Strong (1912) also published some grammar notes on Kabadi, and acknowledged that he had gained his information from Timoteo. Both noted the fact that while the other languages in this group do not often mark the number of nouns, it is nearly always indicated in Kabadi, there being suffixes for both singular and plural.

4.2.6.7.   NARA[11]

The earliest information published (Anonymous 1892) consists of a wordlist and something over twenty short sentences designed to show the main tense forms of the verb. Ray (1907:414) refers to a grammar and vocabulary compiled by Rijke, a Sacred Heart missionary, and later (Ray 1929:96) he mentions a grammar of his own in manuscript and material collected by Strong. Two other members of the Sacred Heart Mission, Coltré and Desnoes, wrote grammars in the period 1920-40, and a third member, Coluccia, wrote a dictionary. Nara is included in a comparative study that is part of Desnoes' Mekeo-French dictionary (Desnoes, n.d.). Lanyon-Orgill (1941) gives an outline grammar in the usual traditional framework. He says that it is based on the work of members of the Sacred Heart Mission and he also refers to grammar notes and a wordlist compiled by Lister-Turner.

4.2.6.8.   KUNI[12]

Ray (1907) drew on vocabulary collected by Rijke and later (Ray 1929:96) he refers to material gathered by Blyth (n.d.) and Strong, including some on the speech of Rapeka, which is now a part Kuni, part Mekeo village.[13] Much work was done on Kuni language and culture by Egidi of the Sacred Heart Mission. In one article (Egidi 1913) he gives some information on the grammar, noting particularly those places where it differs from Roro. Another priest, Eschlimann, wrote a grammar and

a dictionary in French, probably in the 1920s. Ray (1929:96) refers to notes and vocabulary collected by Strong. An anthropologist, van Rijswick, made some notes on Kuni dialects and on the influence of surrounding languages (van Rijswijck 1968:7-14). Ray (1912:351f) also comments on the influence of the adjacent non-Austronesian languages.

N O T E S

1. Some of these manuscripts have probably been lost. I am greatly indebted to Fr Hubert van Lamsweerde, MSC, for providing information about the research done by members of the Sacred Heart Mission. Thanks are also due to Fr M.J. Wilson, MSC, who informed me of his work in the Doura language, and to Bishop L. Vangeke, MSC, Fr X. Vergês, MSC, Fr P. Coluccia, MSC, and Fr M. Gremaud, MSC, who provided me with material about the Kuni, Mekeo, Roro, and Nara languages respectively some time ago.

2. Some lists were also collected by Dutton.

3. The almost total absence of h from the lists of Gill and Murray indicates they were obtained from Manumanu, the most western Motu village. MacGillivray's list seldom omits h from which it may be inferred that his informants were from some other village, perhaps Rearea, the next village east. Stone (1880:237-52) also gives a list of Motu words and some comparative lists including Motu and Roro.

4. Turner says
   > The language is a full one, but bald, the nouns being inde-
   > clinable, and having neither gender nor case, the verbs no
   > moods or tenses, time past, present, and future being gathered
   > from the context... There are neither articles nor conjunc-
   > tions; but particles as <u>to</u>, <u>e</u>, <u>ai</u> <u>be</u>, and the suffixes <u>na</u>,
   > <u>mu</u>, <u>ku</u>, which have no meaning, but are used for the sake of
   > euphony and idiom; sometimes the latter denotes the possessive.

5. In the preface Lawes wrote
   > As a first attempt it is necessarily imperfect, but I need
   > make no apology for its publication. The first step towards
   > accuracy and correctness is only taken when the result of
   > observation and study is put into print.

Also in the preface he acknowledges the contribution made by Chalmers.

6.   Lawes had earlier used this framework in a study of the Niue lan-
guage (see Tregear and Smith 1907).

7.   Members of the Sacred Heart Mission have translated some catechisms
and prayers into Doura (Wilson, personal communication).

8.   Roro is used as the name of the language that includes both the
Roro, or Laval, and Waima, or Maiva, dialects.

9.   The Mekeo language is here taken to include the Bush Mekeo dialect.

10.   Van Lamsweerde does not know of any grammar by Vitale.

11.   This language has also been referred to as Lala, Nala, Rara, Pokau
or Pokao, and Kaiau. The last is the name of a village, while it seems
that Nara is the Motu name for the people and Pokau is the Roro name.
A study of Nara is being made by J. Kolia and S. Clunn and a study of
Gabadi (Kabadi) by A. Taylor. In each case the intention is to produce
a brief grammar and dictionary.

12.   The spelling of Uni is found in some early literature.

13. Kowald (1894) gives a wordlist which he calls 'Upper Angabunga or
Arabule' and which Ray (1907:479) lists as 'Arabule', relating it closely
to Kuni. In fact most words are from Kuni, as Egidi (1913:981) points
out, and there is no separate group involved.

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4.2.7. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES:
MILNE BAY PROVINCE

David R. Lithgow

4.2.7.1. INTRODUCTION

In the Milne Bay Province there are forty Austronesian languages as
well as some non-Austronesian languages, namely Yele on Rossel Island
(see (I) Part 2.13.) and the languages of the Daga stock-level Family
(see (I) 2.9.) in the inland area south and west of Rabaraba. I have
divided the history of research into the early Government-sponsored
period, the work of the linguists Ray and Capell, the work of anthro-
pologists, missionaries, and recent work by members of the Summer In-
stitute of Linguistics and other linguists.[1]

4.2.7.2. EARLY PERIOD

Systematic linguistic study in Papua (then the Territory of British
New Guinea) was commenced energetically by his Excellency the Adminis-
trator, Sir William MacGregor, as part of his administrative policy. An
outstanding linguist himself, his Annual Reports included much data on
languages of Papua. Some of this data he recorded himself. For instance
he elicited 450 sentences and phrases from Nada (Laughlan Islands) and
listed them with their Sariba equivalents, and recorded his quite astute
observations on Nada phonology. His Resident Magistrates also recorded
wordlists for him, and missionaries provided grammatical data and word-
lists for inclusion in his Annual Reports.

Chart I summarises the Milne Bay Province linguistic data in the
Annual Reports. The wordlists vary in reliability, being most accurate
if the recorder had learnt the language, but still subject to spelling
errors. The work of Rev. S.B. Fellows in Panaeati and Kiriwina is out-
standing. In Panaeati (Misima language) he noted and recorded non-

CHART I

Milne Bay Province Linguistic Data in the Annual Reports

Date of Report	Language	Other Names	No. of Words	No. of Sentences and Phrases	Other Data	Collector
1889-90	Sariba	Suau	1000	80		W. MacGregor
1889-90	Awaiama	Tawala	600			W. MacGregor
1889-90	Murua	Muyuw	700	100		W. MacGregor
1889-90	Misima	Panaeati	400	50		W. MacGregor
1889-90	Tagula	SudEst	450			W. MacGregor
1889-90	Rossel	Yela	50			F.P. Winter
1891-92	Nada	Budibud	800	450	phonology and grammar	W. MacGregor
1892-93	Kiriwina	Kilivila	600	40	phonology and grammar	W. MacGregor
1892-93	Dobu	Edugaura	750	50		Rev. W. Bromilow
1893-94	Wedau		1500		phonology and grammar	Rev. Copland King
1893-94	Pannieti	Panaeati (Misima)	1500	10	extensive grammar	Rev. S.B. Fellows
1894-95	Yela	Rossel	1000	50		?
1901-02	Kiriwina	Kilivila	3500	16	grammatical notes	Rev. S.B. Fellows
1910-11	Doga		100		numerals and pronoun forms	?

Date of Report	Language	Other Names	No. of Words	No. of Sentences and Phrases	Other Data	Collector
1910-11	Warakauta	Anuki	100		numerals and pronoun forms	?
1910-11	Mukawa	Are	100		numerals and pronoun forms	?
1910-11	Paiwa		100		numerals and pronoun forms	?
1910-11	Dauakerikeri	Paiwa	100		numerals and pronoun forms	?
1912-13	Panaeati	Misima	1700		grammatical notes	A.H. Symons
1913-14	Paiwa		400			A. Liston Blyth
1916-17	Nada	Budibud	180			A.H. Symons
1916-17	Kiriwina	Losuia	180			R.L. Bellamy
1917-18	Mia-i-topa	Dawawa	150			W.R. Humphries
1918	Gawa	Lougwaw (Muyuw)	120			A.H. Symons for W.M. Strong
1920-21	Damwapa	Anuki	250			W.M. Strong

predictable stress. Capell, when he used this data, found the Muyuw
(Murua, Woodlark) data to be less than satisfactory. For instance, the
words given for *bright* mean literally *good moon*, and the words for *drown*
mean *he does not know how to swim*. The wordlists in the 1910-11 Report
are in the form of a chart which also includes seven languages from the
Northern Province.

MacGregor's work was carried forward by W.M. Strong, the Government
Anthropologist, and also by Armstrong. Strong collected data from the
Louisiade Archipelago for analysis by the linguist Sidney Ray. He showed
frustration at the complexity of the linguistic task in his notes on Pem
village in the Annual Report 1920-21.

I can find no Papuan vocabularies in the Annual Reports after 1925.
From this point onwards missionaries and professional linguists did most
of the recorded linguistic work in the Milne Bay Province, the outstanding
linguists being Sidney Ray and A. Capell.

4.2.7.3. SIDNEY RAY

Sidney Ray laid the groundwork for systematic linguistic analysis in
the Milne Bay District. Strong recorded data in the Calvados languages
(Louisiades) which Ray used in his analysis. Ray paid special attention
to the Kiriwina, Muyuw, Misima, Nimowa, SudEst and Rossel languages. He
attempted an analysis and description of Rossel phonology, describing it
as "the most intractable language in the Possession". Ray's relevant
published works extend from 1893 to 1938. They contain vocabularies,
grammatical data and comparative material, and classifications of lin-
guistic groups and types.

As early as 1895 his *A Comparative Vocabulary of the Dialects of
British New Guinea* includes seventeen languages or dialects of the Milne
Bay District, for which he lists 128 words, plus the free-form pronouns
and possessive suffixes. He noted the three forms of possession, and the
labialisation of labial and velar consonants, which are characteristic
features of Austronesian (AN) languages in this area. He classified the
languages as Melanesian, Melano-Papuan or Papuan. His Melano-Papuan
group included the Trobriand Islands, Murua (Woodlark), Nada (Laughlans),
Misima, Tagula (SudEst) and Yele (Rossel). He later classified Yela (now
called Yele) correctly as a Papuan language. He mentioned the existence
in 1895 of a reading and spelling book at East Cape, and Mark's Gospel
and a Catechism in Suau. As sources for his vocabularies, he listed:
MacGILLIVRAY, J.
    1852   *Narrative of the Voyage of H.M.S. 'Rattlesnake'... .* 2 vols.
           London: Boone.

CHALMERS, J. and S. McFARLANE

1888   'British New Guinea Vocabularies'. In: Cust, R.N., ed.
          Linguistic Pamphlets 20/5. London: Society for Promoting
          Christian Knowledge.

1890-92   *Annual Reports for British New Guinea.*

SIDNEY RAY's works which relate to the Milne Bay Province are as
follows:

1893   'The Languages of British New Guinea'. *Transactions of
          the Ninth International Congress of Orientalists, London,
          1892.* 754-70.

1894   'The Languages of British New Guinea'. *JRAI* 24:15-39.

1895   *A Comparative Vocabulary of the Dialects of British New
          Guinea.* London: Society for Promoting Christian Knowledge.

1897   'Melanesian and New Guinea Songs'. *JRAI* 26:436-45.

1899   'An Account of the Linguistic Results of the Cambridge
          Expedition to Torres Straits and New Guinea'. *JRAI* 29:218-9.

1900   'The Linguistic Results of the Cambridge Expedition to
          Torres Straits and New Guinea'. *British Association for
          the Advancement of Science, Report of 69th Meeting, 1899.*
          589-90.

1907   'The Languages of British New Guinea'. In: *Report of the
          Cambridge Anthropological Expedition to Torres Straits,*
          vol.3: *Linguistics.* 284-503. Cambridge University Press.

1919   'The Melanesian Possessives and a Study in Method'. *AmA*
          21:347-60.

1926   *A Comparative Study of the Melanesian Island Languages.*
          Cambridge University Press.

1937-39   'The Languages of the Eastern Louisiade Archipelago'.
          BSOAS 9:363-84.

1938   'The Languages of the Eastern and South-Eastern Divisions
          of Papua'. *JRAI* 68:153-208.

Capell recommends the 1938 article as an excellent general study.

4.2.7.4. A. CAPELL

A. CAPELL's major works relating to the Milne Bay Province are:

1937-39   'Word-building and Agglutination in South-Eastern Papua'.
          BSOAS 9:765-80.

1943   *The Linguistic Position of South-Eastern Papua.* Sydney:
               Australasian Medical Publishing Co.

1962   *A Linguistic Survey of the South-Western Pacific.* New and
               Revised Edition. Noumea: South Pacific Commission,
           ·   Technical Paper 136. (First edition 1954).

1969   *A Survey of New Guinea Languages.* Sydney University Press.

I will comment on the work published in 1943, 1962 and 1969.

In 1943 Capell attempted to establish the linguistic history of
South-Eastern Papua with reference to the Indonesian content of the
languages. He postulated three major linguistic movements into South-
Eastern Papua from Indonesia, and analysed the sound-laws by which these
words were absorbed into the local languages. Grammatical comparisons
are given in quite thorough detail at the word level. This book marked
a major advance in the documentation of the Austronesian languages of
eight families. A number of the listed languages are dialects of the
same language, while at least a dozen Austronesian languages of the area
are not represented. In spite of these deficiencies his classification
is reasonably accurate. This work includes a wealth of grammatical data
and comparisons between languages, but the data from some of the sources
is inaccurate or incomplete. Notably the theory of double possession
(p.231) is not supported by data which I have collected. The postula-
tions about migrations can be evaluated with more confidence when all
of these languages are more accurately documented.

In the 1962 survey there is a section on the Milne Bay District,
listing the languages in which missions were working, and referring to
the work done by Ray and the anthropologists Malinowski and Armstrong.
The language map includes most names which have ever been given for
languages or dialects in the area, so it can be used for locating
obsolete language names. However when four or five names on the map
represent only one language, this is misleading. The placing of names
on the map is inaccurate in some cases.

In his 1969 book Capell has a chapter on Austronesian languages in
which a distinction is made between languages which are object-dominated,
and those which are event-dominated. The Austronesian languages of the
Milne Bay District are predominantly event-dominated with the compounding
of many semantic elements in the verb structure. However in the
Kiriwina language family, the preferred word-order of subject-verb-
object rather than the subject-object-verb order found in the rest of
the Milne Bay District suggests that it is in the object-dominated group,
as does Kiriwina's complex system of noun classifiers, which is described
in detail. In all other respects, however, the Kiriwina family is
event-dominated.

4.2.7.5. ANTHROPOLOGISTS

Some documentation of Austronesian languages of the Milne Bay Province is to be found in the publications of anthropologists. Below are the names of anthropologists and the languages or areas in which they worked, followed by a bibliography.

Seligman   Tubetube, Tokunu (Misima language), Wagawaga
Armstrong   Louisiade Group
Malinowski   Kiriwina
Jenness and Ballentyne   Bwaidoga
Fortune   Dobu
Róheim   Duau

Ann CHOWNING also has a manuscript dictionary of the Molima language, produced in 1958.

ARMSTRONG, W.E.
 1923 'Report on Anthropology of South-Eastern Division (excluding Woodlark Is.), Engineer Group, Bosilai, East Cape, Normanby Is. (South coast), Fergusson Is. (Morima)'. *Annual Report for Papua for 1921-22.* 26-39. Also: *Territory of Papua, Anthropology Report* 2/1:1-31.

FORTUNE, R.F.
 1932 *Sorcerers of Dobu.* London: Routledge.

 1960 'Folk Medicine in the Dobuan Islands'. *JPS* 69:31-3.

 1961 'Dobuans Abroad: Letters from the Dobu Islands'. *JPS* 70: 314-20.

 1963 *Sorcerers of Dobu.* Revised edition. London: Routledge & Kegan Paul; [also New York: Dutton].

JENNESS, D. and A. BALLANTYNE
 1928 *Language, Mythology, and Songs of Bwaidoga, Goodenough Island, S.E. Papua.* Polynesian Society Memoir 8. New Plymouth, N.Z.

MALINOWSKI, B.
 1920 'Classificatory Particles in the Language of Kiriwina'. *BSOAS* 1/4:33-78.

 1922 *Argonauts of the Western Pacific.* London: Routledge & Kegan Paul; [also New York: Dutton].

1935   *Coral Gardens and Their Magic.* 2 vols. London: Allen and
          Unwin.

RÓHEIM, G.
    1943   'Children's Games and Rhymes in Duau (Normanby Island)'.
              AmA 45:99-119.

    1946   'Yaboaine, a War God of Normanby Island'. *Oceania* 16:210-
              33; 319-36.

    1948   'Witches of Normanby Island'. *Oceania* 18:279-308.

SELIGMAN, C.G.
    1912-13   'Five Melanesian Vocabularies from British New Guinea'.
              ZKS 3:182-200.

4.2.7.6. MISSIONARIES

A number of grammars and vocabularies have been produced by mission-
aries, together with a large body of religious literature - Scripture
translations, hymn books, Bible stories, catechisms, etc. Much of this
literature is still in print and available, but most of the linguistic
material was never published, except for the material provided by mis-
sionaries for the Annual Reports. Therefore much of the linguistic
material has been lost. We know of the previous existence of some, and
there must have been more of which we do not know. At various mission
stations and archives there are still old copies of typed grammars and
vocabularies. The following is the information I have gathered about
these:

A.   Published Linguistic Materials
    1892-   *Annual Reports for British New Guinea.* (Dobu, Wedau,
    1902   Misima and Kiriwina Languages).

KING, Copland (Rev.)
    1901   *Grammar and Dictionary of the Wedau Language.* Sydney:
              Pepperday.

BROMILOW, W.E. (Dr)
    1904   *Vocabulary of English Words, with Equivalents in Dobuan
              (British New Guinea), Fijian, and Samoan. With a short
              Dobuan Grammar.* Geelong, Vic.: Thacker.

DIXON, J.W. (Rev.)
    1970   *Dictionary, Dobu-English and English-Dobu.* 2 vols. Dupli-
              cated and bound by United Church, Salamo. (Produced 1923-47).

ARNOLD, J.K. (Rev.)

    1931   *A Grammar of the Language of Edugaura*. Port Moresby:
               Government Printer.

BALDWIN, B. (Fr)

    1945   'Usitima! Song of Heaven'. *Oceania* 15:201-38.

    1950   'Kadaguwai: Songs of the Trobriand Sunset Isles'. *Oceania*
               20:263-85.

GRANT, R.V. (Rev.)

    1952   *Tubetube Reader No.1*. Port Moresby: Department of Education.

    1953   *A School Dictionary in the Dobu Language*. Rabaul: Methodist
               Mission Press.

Arnold's Dobu Grammar runs to 50 mimeographed quarto pages plus four
pages of narrative text. Dixon's Dobu Dictionary is excellent with
5,000 Dobu entries and 2,200 major English entries, subdivided into
shades of meaning. For instance, *pig* is a major entry in English, sub-
divided into 23 shades of meaning, each with a separate Dobuan word.
Grant's Dobu Dictionary is compact and useful, having 2,800 English
entries and 2,200 Dobu entries plus 250 useful sentences and phrases.
There are only a few copies of Copland King's Wedau Dictionary still in
existence, one or two being at Dogura. The grammar section is very
brief, but the dictionary has about 3,000 Wedau words and also a large
English-Wedau section.

B. Manuscripts or Typed Materials

    These will be listed under languages, starting with the Louisiades.

SudEst

    1950(?) Vocabulary by Fr K. TWOMEY. Now at Sideia.

Nimowa

    1953   Dictionary by Fr K. TWOMEY, revised by Fr K.B. MURPHY in
               1956. 270 pages typed and bound, copies at Nimowa and Sideia.

Misima

    1938   Panaeati Vocabulary and Grammar by Rev. H.K. BARTLETT,
               S.P.C. Microfilm Dictionary (No.76).

Kiriwina

    1939   Large dictionary by Fr NORIN, at Gusaweta.

    1948(?) Kiriwina Grammar contrasted with Indonesian by Fr B. BALDWIN.
               Probably at Gusaweta.

1972   Dictionary file and personal linguistic data of Rev. R.
            LAWTON, at present studying at the Australian National
            University, Canberra.

Bwaidoga
1917   Grammar and Dictionary of the Bwaidoga Language by Rev.
            W. GREEN. Held by A. Capell in Sydney.

1930(?)   Grammar by Rev. J.K. ARNOLD. Sighted at Wailagi 1964.

1955   Grammar by Rev. K.G. BOND. Sighted at Wailagi 1964.

1963   Vocabulary by Reta BERRY. Sighted at Wailagi in 1964.

1973   Personal language data of Fr C.G. ABBOTT, at Wataluma.

1973   Personal language data of Fr K. YOUNG, at Diodio.

Wedau
1947   Introduction to the Wedau Language by Canon JENNINGS, at
            Dogura.

Mukawa (Are)
1910(?)   Dictionary and Grammar by Rev. E. GIBLIN. Held by A. Capell
            in Sydney.

Paiwa
1910(?)   Dictionary Mukawa-English-Paiwa. Held by A. Capell in Sydney.

Tavara (Tawala)
1962   Dictionary and Grammar in the Keherara Dialect by Rev. H.T.
            WILLIAMS. At S.I.L. library, Ukarumpa.

1950-70   Dictionary in Bohilai Dialect by Frs BALDWIN, EARL, TWOMEY
            and McGRANE, at Sideia.

1950(?)   Bohilai Grammar by Fr B. BALDWIN. Possibly at Hagita High
            School.

Tubetube
1900(?)   Dictionary by Rev. A.W. GUY. Held by A. Capell in Sydney.

Kurada
1961   Grammar and Dictionary by Fr J. MOORE. Sighted at Kurada
            in 1964.

Dobu
1960(?)   Dictionary and Grammar by Fr LANGLANDS. Sighted at
            Kelologea in 1964.

1970(?)   Dobu Grammar and Dobu Language-learning Lessons by Fr
          M. ATCHISON, at Budoya.

1971   Dobuan Orthography by Rev. **R. LAWTON**, duplicated. One copy
          held by D. Lithgow at Dobu.

4.2.7.7. RECENT WORK

Recent work in this area has been done by Isidore Dyen, Cooper,
Pawley, Dutton, Thomson and members of the New Guinea Branch of the
Summer Institute of Linguistics.

Isidore DYEN in his 'Lexicostatistical Classification of the Austro-
nesian Languages' (*IUPAL, IJAL* Memoir 19, supplement to *IJAL* 31), in-
cludes five languages from the Milne Bay Province - Wedau, Keherara
(Tawala), Dobu, Molima and Panaeati (Misima). The first four he groups
together in what he calls 'Tip cluster' and 'Massim cluster'. Because
of the grammatical similarity of all of the Austronesian languages of
the Milne Bay Province, I suggest they be grouped together as a linguis-
tic unit and called Papuan Tip Cluster (see 4.4.10. in this volume).

N.P. THOMSON has studied languages on the south coast of Eastern
Papua, and he has contributed to T.E. Dutton's 'Languages of South-East
Papua: A Preliminary Report' (*PL* A28:1-46. 1971). In this work of
Dutton's there are excellent maps. The map of the Rabaraba District
includes the Austronesian languages on the coast. In the Summer Institute
of Linguistics survey of this area in 1973, wordlists from these lan-
guages and the non-Austronesian Dagan languages were collected. The
lists suggest that there are five Dagan languages where Dutton has only
Gwedena, Ginuman and Sona. I was impressed by phonetic similarity be-
tween these languages and Rossel, especially the simultaneous closure
of certain consonants. The initial consonant in the name Gwedena (Gvede)
is a simultaneously articulated velar and bilabial fricative.

In 1971, **T.E. DUTTON** produced three mimeographed articles at the
Australian National University, which relate to this area, namely: Magori
and the Linguistic Pre-history of South-East Papua; Magori: its Nature
and Relationship to Other Languages of South-East Papua; A Checklist
of Languages and Present-Day Villages of Central and South-East Mainland
Papua. The second of these was presented to the Linguistic Society of
Papua New Guinea in August 1971, and the third, in an enlarged form,
was published in 1973 as *PL*, B24.

Russell COOPER, as a post-graduate student at the University of
Hawaii, studied the dialects of Suau for his Ph.D. thesis, not yet pub-
lished. He also contributed a chapter, 'Coastal Suau: A Preliminary
Study of Internal Relationships' for T.E. Dutton's *Studies in Languages*

o{ Central and South-East Papua, (PL, C29:227-80). This is a lucid
demonstration of the dialect complexity which is typical of the Austro-
nesian languages of the Milne Bay Province. It includes wordlists of
more than 200 words of nine Suau dialects or closely related languages.
Cooper's *Suau Texts* (preliminary edition published by Marion College,
Indiana, U.S.A. in 1970) provides excellent data for the study of the
Suau language and mythology.

Andrew PAWLEY is working on the phonology of languages around Milne
Bay. He has supplied wordlists for publication by Dutton in *Pacific
Linguistics* (D14, D15) in the near future. Pawley is currently working
on the phonological history of Austronesian languages to determine the
language or dialect region from which they have originated. **Anne
COCHRAN** of the Summer Institute of Linguistics is working on a segment
of this subject. Some of Pawley's and Cochrane's material was supplied
by students writing their own languages. Students in this area invari-
ably omit glottal stops, so their material may be defective at this
point, as is the material which I gathered from high school students in
my study of possession affixes.

4.7.2.8.   SUMMER INSTITUTE OF LINGUISTICS

Summer Institute of Linguistics workers according to their languages
have been as follows:

Muyuw (Woodlark Island)	David and Daphne Lithgow 1964-73.
Iduna (Vivigani)	Joyce Huckett 1965- and Ramona Lucht 1971-
Iamalele (Yamalele)	Bryan and Janet Ezard 1967-70 John and Margaret Beaumont 1970-
Yela (Yele, Rossel, non- Austronesian	Jim and Anne Henderson 1971-
Dobu	David and Daphne Lithgow 1972-

Published works include:

LITHGOW, D. and Daphne

    1966   *Ukaramp Wanawud*. Ukarumpa: Summer Institute of Linguistics.
            40pp. Muyuw narrative.

    1967   'Exclusiveness of Muyuw Pronouns'. *Notes on Translation*
            26:14.

    1970   'Impersonal Pronoun in some Melanesian Languages of New
            Guinea'. *BT* 21/3:137.

1971   'Change of Subject in Muyuw'. *BT* 22/3:118-24. Also an
            expanded version of this article including Muyuw text in
            Notes on Translation 41:21-7.

1971   *Muyuw Kwaneib-nen*. Ukarumpa: Summer Institute of Linguistics.
            47pp. Muyuw folk-tales.

1973   'Language Change on Woodlark Island'. *Oceania* 44:101-8.
            This is a documentation of a 23% change in basic vocabulary
            of the Muyuw language during the last 50 years.

1974   *Muyuw Dictionary*. Ukarumpa: Summer Institute of Linguistics.
            240pp. Muyuw-English and English-Muyuw, with grammatical
            introduction and sentences illustrating common Muyuw words.

LITHGOW, D. and P. STAALSEN
1965   *Languages of the D'Entrecasteaux Islands*. Port Moresby:
            Department of Information and Extension Services. 21pp.
            with maps.

Other Summer Institute of Linguistics Surveys:

HENDERSON, J. and Anne
1974   'Languages of the Louisiade Archipelago and Environs'.
            WPNGL 3:39-61.

LITHGOW, D.
1973   Eastern Tip of Papua Survey Report.   Typescript, with map.

PARLIER, J., J.F. AUSTING, D. LITHGOW, et al.
1973   *Languages of the East Papua Region*. Ukarumpa. A Summer
            Institute of Linguistics work-book.

Relevant material from these surveys will be presented in 4.4.10.
in this volume.

Unpublished Material:

LITHGOW, D. and Daphne   Muyuw Phonemic Paper
                          Muyuw Grammar Sketch

EZARD, B. and Janet   Iamalele Phonemic Paper
                          Iamalele Grammar Essentials

HUCKETT, Joyce   Vivigani (Iduna) Phonemic Paper
                          Iduna Grammar Essentials

LITHGOW, Daphne   Dobu Language-learning Course with tape

Primers and literacy books in the Muyuw, Iduna and Iamalele languages
are listed in the Bibliography of the Summer Institute of Linguistics,
Papua New Guinea Branch, published in 1973.

4.2.7.9. AREAS NEEDING FURTHER WORK

Detailed study of the SudEst, Nimowa and Misima languages should
prove interesting, especially as all of these languages seem to have
non-predictable stress. It would be good to have documentation of the
dialect differences of the Misima language.

Gumasi (Amphlett Islands) does not seem to belong to the Kiriwina or
the Dobu language families, and calls for study. Other languages of
which nothing is recorded, except survey material, include Fagululu,
Kalokalo, Wataluma, Diodio, Dawawa, Igora, Garuwahi, Wagawaga, Bohutu,
Bunama, Mwatebu, Sewa Bay, Molima, Galeya, Bosilewa. In most of the
languages where data have been recorded, they are fragmentary and not
generally available. Other languages which need published documentation
include Are, Paiwa, Boanaki, Wedau, Taupota, Tawala, Kukuya, Tubetube
and Duau.

NOTE:

1. To assist the reader in finding bibliographical references, the
following alphabetical finder-list of the references occurring in the
chapter has been added (the numbers refer to the page numbers in the
chapter):

4.2.8. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: NEW IRELAND

C.H. Beaumont

4.2.8.1. INTRODUCTION

There are nineteen Austronesian languages in the New Ireland Province. As the Tolai (Kuanua, Tuna) and Duke of York languages in North-East New Britain are more closely related to the New Ireland languages than to other languages of New Britain, research on these is also included in this section. There are strong traditions that the speakers of these two languages migrated from New Ireland and there are many links in the missionary and linguistic work.

4.2.8.2. THE EARLY PERIOD

The first New Ireland wordlists were collected in 1616 by Jacob Le Maire and Willem Schouten during their circumnavigation of the globe. Their lists were of the Sursurunga (Claes Pietersz Bay) and Tabar (Moyses Island) languages (reprinted in Lanyon-Orgill 1960:36-52 and 637-39). Another two hundred years passed before any further wordlists were collected, until d'Urville published two lists of Siar in 1834 (reprinted in Lanyon-Orgill 1960:47-50).

It was not until the late nineteenth century that anything more than isolated wordlists was published. In 1875 a Methodist missionary Rev. George Brown established the first mission station in the region in the Duke of York Islands. Brown studied the Duke of York language, and also collected language data from other areas which he visited. With his successor, Rev. Benjamin Danks, he produced in 1882 a large mimeographed dictionary with a grammatical introduction. Using Brown's translations and this work, Codrington included a brief Duke of York grammar in his book on the Melanesian languages (1885:565-72) and also included the

language in the comparative wordlist in the same volume.

   The larger language of the Tolai people on the adjacent mainland of
New Britain soon attracted more attention from both Methodist and Catholic
missionaries. Most of the work was unpublished or reproduced only in
limited numbers, although some grammar notes appeared in more general
books on the region. The best published work was written in German by
a Catholic priest (Bley 1912). This is pedagogical in nature but it has
provided a record of the language that is still not completely superseded.

   In the same period Father Peekel (1909) provided the first grammar of
a New Ireland language - Pala, now known as Patpatar. This grammar, also
in German, is less pedagogical than Bley's work on Tolai and is a more
complete grammar, rich in examples.

   A German deputy governor Heinrich Schnee published (1901) a general
article on the languages of the whole Bismarck Archipelago which included
lists for Kara (Lamusmus), Patpatar (Bo, Kurumut) and Lavongai (Neu-
Hannover). Two German scientific expeditions visited the area and in-
cluded studies of the languages. From the first, Stephan and Graebner
(1907) published some information on the southern part of New Ireland.
From the second, Friederici (1912) published the first language map of
New Ireland along with brief notes. He also established where the Le
Maire and Schouten lists mentioned above and previously identified only
as from New Guinea, had been collected.

4.2.8.3. FROM 1914 TO 1945

   In the period from 1914 to 1945 very little was published, the only
specifically linguistic works being a brief grammar and wordlist of
Kandas (Label) by Peekel (1929), a short but useful grammar and phrase
book of the Tolai language (Waterhouse 1939) and a brief and uneven
general article (Lanyon-Orgill 1942). Some linguistic work was done
during this period, mainly by missionaries, and some of this has since
been made accessible by the publication, in microfilm form by the
Anthropos Institute, of grammars of Lihir (Neuhaus 1954) and Tangga
(Maurer 1966), and of dictionaries of Patpatar (Neuhaus 1966), Tangga
(Maurer 1972) and Tolai (Meyer 1961). All three authors were Catholic
priests. Grammars of Kara by Father Peekel and of Lavongai by Father
J. Stamm, and a dictionary of Tangga by an anthropologist, F.L.S. Bell,
may yet be published in some form. Many other works were lost in the
Second World War during the three years of Japanese occupation.

4.2.8.4. THE POST-WAR PERIOD

In the post-war period there have been two general surveys carried out by A. Capell in 1952 and by D. Lithgow and Oren Claassen of the Summer Institute of Linguistics in 1966. In his fullest published account, Capell (1971) provides short comparative wordlists, grammatical comments, typological classification in relation to other Austronesian languages of Papua New Guinea and some provisional subgrouping. Lithgow and Claassen (1968) made some lexicostatistical comparisons of the languages. Their work is brief but it is very useful for establishing the language boundaries, and it has good language maps.

Beaumont (1972) provides a summary of published materials and major surviving manuscripts of the New Ireland languages, and is more complete than the present article. The paper also goes a little further than Lithgow and Claassen (1968) in establishing subgroupings based on the lexicostatistical approach.

Of individual languages, Tolai has again received most attention in this period. Two major dictionaries have appeared. The first (Lanyon-Orgill 1960) is more scholarly in presentation. It is based on various sources and a period of fieldwork. As well as the main vernacular-to-English section, there is an English-to-vernacular index, and a lengthy introduction gives a good history of work on the language. Also, some consideration is given to its development. Lanyon-Orgill's concept of the extent of the language is rather too broad, but this does not spoil the usefulness of the work as Duke of York and New Ireland words are marked as such in the dictionary. The other dictionary (Wright 1964) is the culmination of a series of Methodist dictionaries for which Revs. Rickard, Fellman and later Linggood were responsible. It is only a Tolai-to-English dictionary, but in this respect it is as complete as Lanyon-Orgill's work and it has the advantage of using the current orthography.

The Territory Administration, in conjunction with the Summer Institute of Linguistics, produced a Tolai language course, which a few years later had a second edition (Franklin and Kerr 1968). The lessons provide source language material and there are accounts of the phonology and dialects. This second edition has a very brief grammar statement by Beaumont.

The only other language on which anything has been written and published since the war is the Tigak language. Two short papers by Beaumont (1969 and 1970) outline the phonology and the pronoun system. Beaumont's doctoral thesis (1974) gives a much fuller account of the language.

4.2.8.5.   CONCLUSIONS

Linguistic study of the area must be considered as very inadequate especially in view of the diversity of the languages. General studies may be considered to have ascertained the location and number of the languages, a few general features and some tentative subgroupings. Of the twenty-one languages considered here, only two have substantial grammatical accounts published of them and in both cases this was before 1914. Grammars published in microfilm form, a thesis, surviving manuscripts and short articles provide some grammatical materials on seven other languages. Good dictionaries in book form exist for only one language. Even extensive wordlists are not generally available. As a result, New Ireland has been largely unknown to most linguists.

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4.2.9. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES:
NEW BRITAIN

Ann Chowning

4.2.9.0. INTRODUCTION

4.2.9.0.1. Linguistic work in New Britain has been of three kinds.
First, a number of people, mostly missionaries or anthropologists, have
learned languages for particular purposes; in only a very few cases
(Friederici with Bariai, Lanyon-Orgill with Tolai) has a language been
studied for its own sake. These investigators have produced the handful
of published descriptions of individual languages, along with many writ-
ings from which a little linguistic information can be gleaned. Second,
a number of surveys have tried to name and locate all the different lan-
guages spoken on the island. Third, attempts have been made to group
some or all of these languages. Connected with this last endeavour is
the question of whether a particular language is to be considered wholly
Austronesian or not. Each of these categories will be discussed sepa-
rately.

4.2.9.0.2. Because the earliest European settlements on New Britain
were in the Tolai-speaking region of the Gazelle Peninsula, this lan-
guage (variously called Tuna, Gunantuna, Tinata Tuna, Blanche Bay dia-
lect) was the first, and is still the most thoroughly, studied of all
New Britain languages. In early writings, it often is called simply
"the New Britain language". Under the label of Kuanua, it became the
official language of the Methodist Overseas Mission (now part of the
United Church), and until very recently all its activities throughout
New Britain were conducted in Kuanua. By contrast, Roman Catholic
(Sacred Heart) missionaries did not use Tolai outside the Gazelle Penin-
sula, relying instead on Pidgin English or learning the local languages,

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but they have produced much literature on and in Tolai, as well as often
comparing other New Britain languages with it. Despite some disagree-
ments, especially as regards possible connections between Tolai and the
Nakanai language (or sub-family of two languages, Meramera and West
Nakanai (Lakalai) (Chowning 1969)) which extends west along the north
coast below the Gazelle Peninsula, it has been generally agreed not only
that Tolai is separate from the other Austronesian languages of New
Britain, but that its closest relatives are on New Ireland and the small
neighbouring islands. Beaumont has accordingly included it, as a member
of his Patpatar-Tolai Subgroup, in his discussion on New Ireland languages
(see Beaumont 1972), and I shall not duplicate what he says. In the fol-
lowing discussion, then, I shall omit Tolai, and mention only the other
Austronesian languages of New Britain.

4.2.9.1. DESCRIPTIONS

4.2.9.1.1. According to Laufer (1966), many New Britain languages have
been described by Roman Catholic priests, but very few of these descrip-
tions have been published, and it is feared that many of the manuscripts
were lost during World War II. Of the material that has been published,
very little consists of more than wordlists; these will be discussed
below. The first more detailed accounts of Austronesian languages other
than Tolai appeared in 1907: Father Müller's grammar of Mengen, and a
very brief account of Nakanai (the easternmost dialect, Melamela or
Meramera) in Parkinson, who acknowledges his indebtedness to Fathers
Bley and Rascher for the information on this and other languages
(Parkinson 1907:724). Müller's material is much fuller, dealing with
such problems as the different ways of forming the plural in Mengen, but
it is still so brief as to leave unanswered many questions about the
possible non-Austronesian influences on (or nature of) Mengen grammar.

4.2.9.1.2. The next description to appear was much more detailed.
Friederici (1912) dealt with both the phonology and the grammar of
Bariai, near the north-west extremity of the island, as well as giving a
lengthy vocabulary. These data laid the ground for his comparative
study of the affiliations and possible origin of the language, to be
described below. Doubts may be expressed about some of his conclusions
(for example, the -ra he considers a suffixed article is almost certainly
just the 1st person plural inclusive possessive suffix), but the material
as a whole looks accurate to one working with Kove, the closest relative
of Bariai.

4.2.9.1.3. In 1915-16, there appeared in *Anthropos* the work of Father
Hees. Hees was stationed in East Nakanai, but for some reason became
fascinated with the language and culture of the westernmost Nakanai
(Lakalai), whom he never visited. He learned the language from a few
schoolboys, and recorded many texts which he published along with verba-
tim translations. The texts contain some misprints (such as n, which
Lakalai lacks, for u) and occasionally Hees misunderstood a construction
or metaphor, but the errors are few and minor. He describes the phonol-
ogy, notes the differences between the eastern and western dialects
(particularly as regards lexicon), and compares Nakanai with Tolai and
Pala of New Ireland. A few interlinear translations illustrate gram-
matical points.

4.2.9.1.4. Since Hees wrote, only one other detailed description has
appeared: that of Counts, an anthropologist, describing the Kaliai dia-
lect of Kove (1969). Counts concentrates on phonology and grammar, and
gives only a little lexical material (some of which represents borrowings
from Pidgin).

4.2.9.1.5. At present, Summer Institute of Linguistics linguists are
working both in Kilenge, at the western tip of New Britain, and in
Lakalai, so that much more material on these languages should be avail-
able shortly.

4.2.9.1.6. In addition, at least two anthropologists have presented
papers at international congresses which contain a fair amount of de-
scriptive material: Goodenough (1961b) on the languages of the Willaumez
Peninsula, with particular attention to lexicon, Chowning (1966) on the
Pasismanua dialects of south-west New Britain, with some data on grammar
as well as lexicon, and Chowning (1973) on Lakalai and Kove. Of these,
Goodenough's still unpublished paper has received considerable attention
from linguists. A second paper by Goodenough (1961a) is more appropri-
ately discussed below.

4.2.9.1.7. Apart from these attempts, however brief, to deal with va-
rious aspects of the languages, a number of wordlists have been published,
which between them contain material from all the major language groups
in New Britain. They will be discussed in connection with the compara-
tive work.

4.2.9.2. SURVEYS

4.2.9.2.1.   Many of the writers already mentioned have noted names and
locations of languages in small areas of New Britain, and one publication
(Allen and Hurd 1963) is wholly devoted to such a small-scale survey,
but there have been only a few attempts to cover the whole island: by
Meyer (1932), Capell (1954, 1962a, 1971), Laufer (1966), and Chowning
(1969).   Because Meyer's work, though very brief and little-known, seems
to have greatly influenced both Capell and Laufer, it will be described
first.

Meyer simply presented a map of New Britain with a detailed legend.
As is so often the case, there are several discrepancies between the
names on the map, including the classification of languages as Melanesian,
Papuan, or mixed, and the legend.   The languages listed as Melanesian in
both places are the following (with my designations in parentheses where
they differ from or clarify Meyer's): Gunantuna (Tolai), Birar (Tolai),
Melamela (East Nakanai), Muku (Lakalai), Mai (Xarua), Bakovi (Bola),
Vitu, Kove, Sahe, Bariai, Arave, Lote (Uvol), Siasi.   There is no dis-
pute about calling these languages Austronesian, though it seems uncer-
tain that Sahe deserves separate status (Chowning 1969:27).   In addition,
on the map only, Boroqoroqo is shown in the Mamusi region and designated
as Melanesian.   The legend lists as "mixed Melanesian-Papuan" Tumuip,
Mengen, Tulil [*sic*], Idne, Bau (Kapore), and something which I cannot
read.   I have noted elsewhere (Chowning 1969) that I consider Tumuip,
Mengen, and Kapore Austronesian, Taulil non-Austronesian, and have no
information on Idne.   Only Baining and Sulka are called Papuan in the
legend, but on the map Maseki (presumably Mangseng, though too far west)
is also so designated.   Several other languages appear on the map but
are not classified.   Along with "Makolukolu-Koul", which certainly des-
ignates one or more non-Austronesian languages, they include Bulu, at
the tip of the Willaumez Peninsula (certainly Austronesian; see
Goodenough 1961a); Logologo, in the interior at the base of the Willaumez
Peninsula (possibly related to Kapore); Pau, inland from Melamela (a
dialect of Mengen); and Mio, very near Pau.   This last is unknown; it
may be a dialect of the non-Austronesian Kol, which is roughly in the
same region.

Along with the map, Meyer gives the first line of the Lord's Prayer
in several of these and some New Ireland Languages, in order to show
the differences between them.

4.2.9.2.2.   In his two surveys (1954, 1962a), Capell has copied these
lines, though sometimes altering the spelling and the names of the lan-
guages.   A few typographical errors have also crept in; the Lakalai

(there called Muku) and Kove texts are less accurate in Capell's version
than in Meyer's. It seems likely that the names, classifications (as
Austronesian or not), and locations for some languages on Capell's maps
come from Meyer; examples are Idne and "Maseki". Capell does change
some language names and locations, and adds several languages not men-
tioned by Meyer. Also, in 1954 he classified Idne and Tumuip as non-
Melanesian but Mengen as Melanesian. In 1962a, however, his map shows
all three languages as "mixed Melanesian-Papuan", along with Maseki and
Lakalai (there called Bileki). No explanation is given for the change
or for any of the classifications. In the text (1962a:90), Nakanai is
called Melanesian (and the bibliographical reference is to Hees 1915-16
on Lakalai), and so is Mengen, while Idne and Tumuip are said to be
"non-Melanesian" "with no available information on Bau (which is not on
the map) and Maseki". Apart from these discrepancies, both the 1954 and
the 1962 maps show confusion about the location of the Nakanai group of
languages. In 1954, 'Nakanai' appears only where its easternmost dia-
lect, Melamela, is spoken. In 1962, 'Meramera' appears at that location,
'Nakanai' is farther west, two of its western dialects (Maututu and Vele)
are in approximately their correct locations but apparently not recogni-
sed as part of Nakanai, and Lakalai ('Bileki') is correctly located but,
as noted, incorrectly classified. In the samples from the Lord's Prayer,
Capell has relabelled Meyer's Melamela 'Nakanai' but retained 'Muku' for
Lakalai, although Muku does not appear on the map. On the whole, it
cannot be said that these two surveys substantially clarify the situation
west of the Gazelle Peninsula.

4.2.9.2.3. Laufer has published two lists of New Britain languages, in
the first one (1946-49) concentrating on languages he considered non-
Austronesian, and in the second (1966) trying to cover the whole of New
Britain as well as adjacent smaller islands. When the Duke of Yorks and
the Siasi Islands are removed, we are left with twenty-three 'languages',
some of which are said to contain various dialects, for the whole of New
Britain. Approximate locations are given, but there is no map and no
explanation, other than geography, for the groupings. In some cases,
as his No.15 ("Arave") and his No.24 ("Muku-Lakalai"), he has certainly
listed as dialects of the same language separate languages which have no
close genetic relation, as may be seen if one compares the lists for A
Kinum and Moewe-Haven (both Laufer's No.15) in Chinnery (1926), or for
Bileki and Mangseng (two of the very mixed bag of languages in his No.24)
in Goodenough 1961a. Although the list is particularly useful as indica-
ting what languages had been studied by Catholic priests up to 1954, when
Laufer left New Britain, it also reveals their confusing habit of calling

languages by the name of the local mission station. In at least one
case, that of Bau, this has led to real confusion; Bau is used to des-
ignate Kapore (Banaule) by the mission, and a different, though related,
language by the speakers of the latter (see Allen and Hurd 1963:7;
Chowning 1969:31).

In the 1966 article, Laufer does not distinguish between Austronesian
and non-Austronesian languages, although a number of those he lists are
unquestionably non-Austronesian. In several cases, however, he includes
a language designated in 1946-49 as fully or partly Papuan (i.e. non-
Austronesian) under the same numeral as one which has always been con-
sidered fully Austronesian (e.g., his No.22, where 'Longo' and Aria are
put with Kove). He also notes that often nothing is known about a par-
ticular language but its name and approximate location. We may, then,
treat his list as a guide to further research on the possible identities
and affiliations of languages said to have been spoken in particular
regions, rather than taking it more seriously.

4.2.9.2.4. Chowning 1969 was written without knowledge of Meyer's map
or Laufer's 1966 article. It attempts to do three things: to locate the
named languages (omitting those mentioned only in these two sources); to
decide, often on the basis of manuscript materials, which languages can
be considered Austronesian; and to group these. There are gaps on the
map because of lack of data, especially for parts of the interior and
the south coast; the data for the north coast are much fuller and more
accurate. It is nevertheless hoped that fuller information will ulti-
mately make it possible to reduce the number of separate "families" (see
below 4.2.9.4.).

4.2.9.2.5. In his latest work (1971), Capell mentions Chowning 1969 (as
"1968") several times, but obviously does not accept its classifications.
He is not willing to call Tumuip and Mengen Austronesian, and his map of
language distributions diverges at several points. He still misplaces
and misclassifies Lakalai, assigning the name to other Nakanai dialects
and putting the Lakalai-speaking region in with Bola. He entirely ig-
nores the language groups postulated for the south coast, only noting the
putative locations of two Arawe dialects (not stated to be such) for
which he collected the data himself, and leaving the spaces between them
blank. The 1971 map also omits some languages (Kapore, Lote, Mamusi)
which were classified as Melanesian on his 1962 map. In several cases
he has ignored languages for which published material is available (some
of which he cites in his comparative vocabularies) while including one
language, Sahe, for which it is not (Map 3, p.255, and Table V, p.270).

The map in Capell 1971 is much less complete than that in Capell 1962
and the one in Chowning 1969.

4.2.9.3. WORDLISTS

4.2.9.3.1. Both in connection with surveys, and as a guide to the clas-
sification of New Britain languages, a number of comparative wordlists
have been published. It is difficult to appraise their accuracy unless
one has made a detailed study of the languages concerned. Because of
such studies, I am in a position to criticise one wordlist ("Kobe", my
Kove) in Friederici 1912, one ("A Kinum" and "Apui", my Kaulong-Sengseng)
in Chinnery (1926), and two, Nakanai and Kove, in Capell 1971, but am un-
able to say much about the others. Since Chinnery collected all his
wordlists personally (except those for the Umboi and Siasi languages)
and under the same conditions, one is inclined to assume that the same
sorts of errors may appear in all his lists. The situation is different
with Friederici and Capell, who collected some lists personally but take
others from published sources; Friederici had also made a detailed study
of one of his languages, but Capell had not (apart from Tolai), and
Capell also states, with regard to New Ireland (1971:256) that some ma-
terial "is drawn from other sources acting on the writer's behalf". In
these cases, the inaccuracy of one list tells us nothing about another
one. It is worth noting, however, that so far as I can judge, Chinnery
contains many mistranslations - for example, the names of colored objects
rather than simple color terms - while such mistakes are very rare in
Friederici's and Capell's lists. These latter tend to err in phonology,
in ways that suggest that the informant (or recorder?) was not a native
speaker.

4.2.9.3.2. The published lists are as follows: Dempwolff (1905) contains
them for Maleu (Kilenge) and Vitu. Parkinson (1907), in addition to
Nakanai (Melamela), has Tumuip and Mengen, comparing them with the neigh-
bouring Sulka. Friederici collected, in addition to Bariai, lists in
Kilenge, Kove, Nakanai (East), Arawe, Vitu, and has copied Mengen and
Tumuip lists from Parkinson. He also has a few words of a language
called Longa. Chinnery (1926) has Pulie (a Lamogai language), Moewe-Haven
(Arawe), and A Kinum-Apui (a mixture of two Pasismanua dialects); these
are compared with Siasi languages. Goodenough (1961a) has Mangseng (like
Pasismanua, a Whiteman language), Kapore (another), Bileki (Lakalai), and
Bulu (Willaumez; like Lakalai, a Kimbe language). Capell (1971) has
Nakanai (a mixture of Lakalai and Melamela), Bola, Kove, Bariai, Kilenge
and its dialect Maleu, four dialects of Arawe (Kumbun, Moewehafen,

A Kolet, and Solong), A Kinum (see above), Pulie (see above), Mengen, and Tumuip. A considerable amount of this material comes directly from Parkinson, Friederici, and Chinnery. Unfortunately, even a single writer may not collect the same lists of words for different languages, and it is difficult to make much comparative use of most of the wordlists just mentioned.

4.2.9.3.3. In addition to Bariai, one other language, Melamela, has an extensive vocabulary available for consultation (Bischof 1961, where the language is called Ubili; I have not seen this). Others exist in manuscript form, with eventual publication planned (e.g., for Lakalai, by Goodenough and Chowning). But at present, the only New Britain language apart from Tolai on which a considerable amount of lexical material has been published is Bariai.

4.2.9.4. GROUPING

4.2.9.4.1. The principal reason for collecting and publishing wordlists has often been not the filling in of blanks on the map, but the determination of subgroups. In general, however, this has been preceded by the attempt to decide whether a particular language is wholly Austronesian or not. It has been noted that considerable vacillation is evident, particularly as regards a few languages (such as Mengen and Tumuip). Sometimes the uncertainty reflects simple lack of evidence, sometimes the fact that individuals differ in their ideas of what makes a language Austronesian, and sometimes we have no way of knowing why a classification is assigned or changed. Capell has given some indication of the grammatical features that seem to him typical of non-Austronesian languages (1962b:371-2), but he does not hesitate to characterize as wholly or partly non-Austronesian languages for which no grammatical data are available (see 1962b:375). Like other writers who do the same (e.g., Loukotka 1957), he seems to be relying on the number of words with obvious cognates in Indonesian (or Proto-Austronesian) and the actual shape of words; one assumes that initial consonant clusters, for example, simply look non-Austronesian. Some of these assignments are questioned in Chowning 1966 and 1969. The lack of agreement among linguists as to what constitutes an Austronesian language means that the position of certain New Britain languages will continue to be disputed. For purposes of discussion, I shall continue for the present to treat as Austronesian all those languages so labelled in Chowning 1969.

4.2.9.4.2. Capell (1969, 1971) has also been concerned with dividing the Austronesian (AN) languages of Melanesia between two great groups

that he calls AN_1 and AN_2. As Beaumont has pointed out (1972:10), he
reverses these labels between the two works. The division corresponds
to some extent to that set up by Friederici (see below): languages in
one category have subject-object-verb word-order in sentences and, among
other features, the preposed genitive, and are concentrated on the main-
land of New Guinea, and those in the other category have subject-verb-
object order and the postposed genitive, and are concentrated in "Island
Melanesia". It is assumed that the first category has been influenced
by non-Austronesian languages.

   In 1969, Capell put all of New Britain in the "island" category (Map
2), and says (p.23): "The AN_2 type is most firmly seated in New Britain
and New Ireland, and may indeed have radiated out from that centre."
Within New Britain, Lakalai and Tolai are put together in a separate
group from the languages of the western section: Bola, Vitu, Kove,
Kaliai, Bariai, Sake [*sic*], Kilenge, and Arawe. No other languages are
mentioned, and the reasons for the lumping together of these last are
not given. In 1971, however, Capell seems to have separated Tolai from
the Nakanai languages and their close relatives, though there are ambi-
guities in his discussion of "northern New Britain", Tolai being treated
under two headings (p.265). As regards the AN_1/AN_2 distinction, Bariai
is now (p.244) the only New Britain language assigned to the mainland
category. A description of the difficulties of applying these categories
to New Britain languages, as well as the insistence that Bariai cannot
be separated from Kove and Kilenge on grammatical grounds, may be found
in Chowning 1973. Certainly Capell is correct, however, in noting that
the languages to the west of the Willaumez Peninsula (the 'Bariai Family'
in Chowning 1969) are grammatically very different from those to the east
of it (the 'Kimbe Family', which includes Nakanai).

4.2.9.4.3. Milke's work had something in common with Capell's, especially
as regards his attempts to distinguish a special subgroup of Austronesian,
called New Guinea Austronesian (NGA), which would include almost all of
the Austronesian languages of the island of New Guinea, and some of those
of the adjacent islands (Milke 1961, 1965). Here we are only concerned
with his treatment of New Britain languages. Briefly, he thinks that the
Bariai and Kimbe languages belong in New Guinea Austronesian because (a)
the former share with New Guinea Austronesian the preposed genitive, and
its absence in Kimbe can be attributed to influence from Tolai, and (b)
there are "many isoglosses connecting Nakanai with the languages of
westernmost New Britain and of the mainland of New Guinea" (1965:332).
He also suggests (p.338) that they are united on phonological grounds.
I have argued elsewhere that Milke was incorrect in putting Kimbe and

Bariai together, or in tying Kimbe to the mainland of New Guinea, but
that he was correct as regards Bariai (Chowning 1973). (This argument
leaves aside the question of whether the Austronesian languages of New
Guinea form a single subgroup.) Capell (1971:297) also doubts Milke's
theory, at least as regards phonology and grammar.

4.2.9.4.4. The part of the theory that links Bariai with the mainland
of New Guinea explicitly derives from Friederici's second publication on
the language (1913), in which he explores in detail the relations between
Bariai proper and other languages of New Britain, New Guinea, more dis-
tant parts of Melanesia, and western Indonesia. This was the first real-
ly detailed work in comparative linguistics devoted to a New Britain lan-
guage other than Tolai, and it is impressive. Considering the paucity
of his data, he does succeed in demonstrating the regular sound-shifts
between Kilenge, Bariai, and Kove, and once he had established his
'Bariai-group', he is equally painstaking in trying to trace connections
with other languages. Grammatical data are weighted as heavily as lex-
ical, though again he suffered from insufficient information about the
distribution of certain features, such as pronominal forms. Friederici's
conclusions were that: (a) the Bariai Group shares a common history with
some of the languages of the north coast of New Guinea, such as Jabim
(Yabêm) and Bukaua, but since separating, each group has differentiated
under the influence of languages already present in New Guinea and New
Britain; (b) the Bariai Group resembles the languages of the 'Western
Papuo-Melanesians' (Motu and its neighbours) more than the languages of
the Solomons; and (c) because of some isoglosses which separate Bariai
and some languages of western Indonesia from languages farther west in
Melanesia, the Bariai are fairly recent migrants from a "Gegend...die
durch die Linie Süd-Philippinen, Nordost-Celebes, Molukken bezeichnet
wird" (Friederici 1913:12, 17; 1912:215). The third point seems gener-
ally to have been ignored, although Grace mentions it in a mildly derog-
atory way, but there is every reason to say that Friederici was quite
right about the ties between Bariai and some languages of the north coast
of New Guinea, and its resemblances, in at least some grammatical fea-
tures, to Motu (see Capell 1971, Chowning 1973, Hooley 1970).

4.2.9.4.5. The possible external ties of another group of New Britain
languages were discussed by Goodenough (1961a). While working among the
Lakalai (whom he called Bileki in this paper), he and C.A. Valentine,
another member of his team, collected wordlists for a number of languages
spoken on and near the north coast. Goodenough used some of his material
to show that Lakalai differed notably from some of the nearby Austronesian

languages, and then suggested that on several grounds it merited inclu-
sion in a subgroup proposed by Grace (1959), consisting of Fijian,
Rotuman, and Polynesian, which Goodenough christened Central Oceanic.
Goodenough particularly stressed the ties between Lakalai and Fijian,
and suggested that Nakanai and its relatives (later called the Kimbe lan-
guages) arrived in New Britain as the result of a back-migration from the
east. Goodenough's data have been criticized by Milke (1965:332), and
with some justification; lack of familiarity with other Melanesian lan-
guages let Goodenough propose as uniquely shared features some which have
a much wider distribution (e.g., a word for *blood* derived from Proto-
Austronesian *ce(n)cen, and the development of a consonant before words
that in Proto-Austronesian begin with *a-. (On the other hand, both
Milke and Capell (1971:266) seem not to have realized that the resem-
blances in plural pronouns between the two sets of languages do not de-
pend on the fact that they seem to be derived from trials, but that they
lack the /l/ which appears in the word for *three*. See Grace 1959:44.)
Capell, who apparently does not understand the "principle of least moves"
invoked by Goodenough, is reluctant to accept the back-migration sug-
gested, and seems impressed by Milke's arguments, but agrees with
Goodenough that languages in the Kimbe group are more similar to those
of Central Oceania than to other Austronesian languages in New Britain,
and concludes that "the subject remains open for debate" (Capell 1971:
318). More recently (1971, 1973), Chowning (another member of Goodenough's
team) has suggested a modification of Goodenough's theory, stressing the
resemblances between the Kimbe languages and those now called Eastern
Oceanic, and still postulating that the Kimbe-speakers reached New Britain
from the east.

4.2.9.4.6. In 1963, Allen and Hurd, of the Summer Institute of Linguis-
tics, published a proposed grouping of the languages of one small region
in West New Britain. This is the only publication resulting from several
Summer Institute of Linguistics surveys in New Britain. Groupings are
based purely on lexicostatistical counts, and no wordlists are given.
Their classification generally agrees with that proposed by others, ex-
cept that they (like Dyen) include as Austronesian a language (Wasi, Ata,
Peleata) which is probably non-Austronesian but has borrowed a number of
words from surrounding Austronesian languages (see Chowning 1969:20).

4.2.9.4.7. Three other attempts to group New Britain languages have re-
lied heavily on lexicostatistics, which were also used by Goodenough.
Except in the case of Dyen, this reliance primarily reflects the fact
that for many languages, wordlists were the only data available. The

first such attempt was Grace's, based on a preliminary examination of a
few lists. He put "northern" New Britain (the Gazelle Peninsula) with
New Ireland, in his Group 11, and "southwest New Britain", together with
the Siasi Islands and some of the languages of the nearby north coast of
New Guinea, together into his Group 12 (Grace 1955:339). This classifi-
cation, which preceded Grace's own fieldwork in Melanesia, has long been
abandoned by Grace himself. Although he was roughly correct in sugges-
ting that there were ties between the Gazelle Peninsula and New Ireland,
on the one hand, and parts of west New Britain and New Guinea, on the
other, there is no reason to believe that the Austronesian languages of
New Britain fall into only two groups.

4.2.9.4.8. Indeed, their great diversity was first stressed by Dyen.
He had wordlists for eleven languages: Arawe (Pililo), Bola (Bakovi),
Kapore, Kilenge, Lakalai (Nakanai), Mamusi, Mengen, Tolai (Blanche Bay,
Gunantuna, Tinata Tuna), Tumuip, Uvol, and Wasi (Peleata). Of these,
the lists for Kapore, Kilenge, and Peleata were too short to be used in
the main classification. Bola and Nakanai are put together to form the
Willaumez Linkage, with the possibility that Kapore also belongs there,
while Mamusi, Mengen, and Uvol are assigned to the Uvolic Cluster of the
Austronesian Linkage. The other New Britain languages, though also as-
signed to the Austronesian Linkage, remain isolates; Dyen notes that of
those which he assumes (erroneously) to be located in "Southwest New
Britain", Arawe, Kilenge, Tumuip, and Wasi "are apparently no more
closely related with members of (the Willaumez Linkage) than with each
other and other members of the Austronesian Linkage" (Dyen 1965:62).
Dyen was so impressed by the diversity that he suggested (p.54) that it
might result from the fact that New Britain was one of the two "possible
areas of origin of the Malayopolynesians". This suggestion, as regards
New Britain, has not been retained in Dyen's most recent writings on the
subject, and it is probably safe to assume that he no longer regards New
Britain as a major centre of dispersal for Austronesian languages. As
regards the amount of diversity, however, it is probably somewhat greater
than he realised. The Kapore-speakers are bilingual in Lakalai, and have
taken over a number of words from Lakalai, complete with fossilised af-
fixes; the lists in Goodenough 1961a demonstrate that the languages are
fundamentally unlike. I have noted above that Peleata is probably non-
Austronesian, again with a deceptive number of loans, but since Dyen had
no wordlists from the group which Chowning calls Lamogai (see below 4.2.
9.4.9.), he could only note seven of the eight divisions postulated there.

4.2.9.4.9. Chowning's 1969 classification made much use of lexico-
statistics, and the agreement with Dyen is hardly surprising when it is
realized that in a number of cases, we were using the same wordlists (col-
lected by Goodenough and Grace). In addition, however, this classifica-
tion made use of grammatical data where it was available. Though it was
minimal for the groups labelled Arawe, Lamogai, and Tumuip, it was abun-
dant for Tolai and, as a by-product of lengthy anthropological fieldwork
in three different parts of New Britain, for languages in the Bariai,
Kimbe, and Whiteman groups. In addition, all available wordlists, both
published and unpublished, were consulted. The result was the postula-
tion of eight separate "families": Arawe (containing Dyen's Pililo);
Bariai (containing his Kilenge); Blanche Bay (his Gunantuna, otherwise
Tolai); Kimbe (essentially his Willaumez Linkage); Lamogai; Mengen (his
Uvolic Cluster); Tomoip; and Whiteman (containing Kapore). Subsequently
Chowning has followed Beaumont (1972) in assigning her "Blanche Bay" to
his larger Patpatar-Tolai subgroup, and has also assigned Bariai to
Hooley's 1970 Siasi Family, but the actual number of diverse groups re-
mains intact.

4.2.9.5. UNPUBLISHED MATERIALS

4.2.9.5.1. New Britain remains an area on which comparatively little
has been published. Since 1954, however, a great deal of anthropological
work has been done outside the Tolai-speaking region, and the Summer
Institute of Linguistics has become increasingly active since the early
1960s.

Many of these investigators have been concerned with collecting word-
lists and mapping the distribution of languages, and much material exists
in manuscript form to supplement that collected by Grace. To the list of
collectors mentioned in Chowning (1969:39) may be added the names of M.
and P. Dark, M. and R. Johnston, and of course Capell. In time, some of
these investigators should publish on various topics connected with New
Britain linguistics; the Summer Institute of Linguistics members are
already beginning to do so, but I lack the references.

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4.2.10. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: BOUGAINVILLE PROVINCE[1]

Peter C. Lincoln

4.2.10.1. INTRODUCTION

Most research on the languages of Bougainville Province could be characterised as incidental. The researchers themselves were only incidentally interested in language, or their travels took them to Bougainville only incidentally. Only recently have trained linguists started to unravel the absorbing puzzles of Bougainville languages and the fascinating histories of their development, movement, and interaction.

This chapter will proceed in three stages: geographical, biographical, and bibliographic. The first is to identify clearly the languages themselves, the second to sketch briefly who the reporters are, and the third to identify what information is now available.

4.2.10.2. GEOGRAPHY

It should be unnecessary to explain the geography of the district, but I have found that certain basic and useful facts about the size, location, and major land features are scattered through several sources.[2] Language names follow the usage of Allen and Hurd (1965) except that I have changed 'Nissan' to 'Nehan' following the usage of Hannet (1970). I have changed 'Nagarege' to 'Piva'. Piva is actually the name of the central village in this language area, but has wider use in the literature.[3]

Co-ordinates give limits of large islands and centres of small groups. Some relevant groups from British Solomon Islands Protectorate are included as well. I have used official names here, but on Map 1 I have used language names to identify smaller islands.

Map 1

BOUGAINVILLE PROVINCE
PAPUA NEW GUINEA

non-Austronesian areas
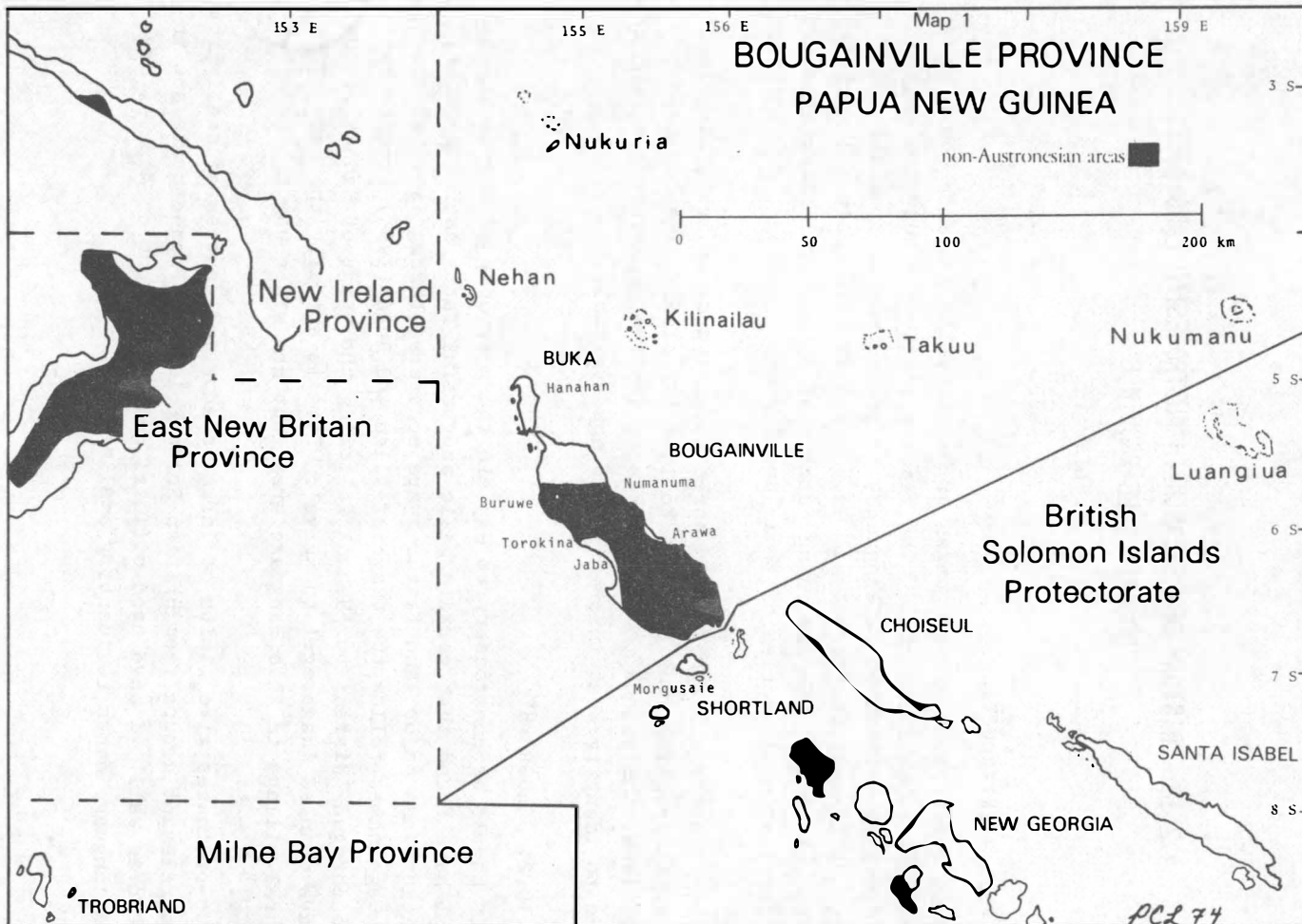
BOUGAINVILLE [5°26'-6°52'S, 154°39'-155°59'E]
    languages: Austronesian: Saposa, Halia (Selau variety), Hahon,
                  Teop, Papapana, Torau, Uruava, Piva, Banoni, and
                  Non-Austronesian: Konua, Keriaka, Rotokas, Eivo,
                  Nasioi, Nagovisi, Siwai, and Buin.
    population: 63,400
    land area: 8,400 sq.km.; steep mountainous interior, and swampy
                  coastal areas impede overland travel.

BUKA [5°-5°29'S, 154°30'-154°40'E]
    languages: Halia, Solos, Petats (off-shore islands), Saposa (off-
                  shore islands): all Austronesian.
    population: 15,600
    land area: 600 sq.km.; hilly in south but easily traversed.

CARTERETS [4°45'S-155°20'E]
    language: Halia (Kilinailau variety)
    population: 1,200 (six villages)
    land area: about 2 sq.km.; few small islands around lagoon 25 km.
                  across.
    other names: Kilinailau.

NISSAN and PINIPEL [4°30'S-154°10'E]
    language: Nehan (Austronesian)
    population: 3,000
    land area: 20 sq.km.; two major islands, one nearly encloses lagoon
                  about 15 km. across, height up to 30 meters.
    other names: Sir Charles Hardy Islands, Green Islands.

FEADS [3°15'S-154°45'E]
    language: Nukuria (Polynesian)
    population: 200 (one village)
    land area: 10 sq.km.
    other names: Nuguria, Nukuria.

MORTLOCKS [4°50'S-157°]
    language: Takuu (Polynesian)
    population: 200 (one village)
    land area: 2 sq.km.; reef encloses lagoon 12 km. across.
    other names: Takuu, Taku, Tauu, Marqueen.

TASMANS [4°35'S-159°25'E]
    language: Nukumanu (Polynesian)
    population: 200 (one village)

land area: 3 sq.km.; reef encloses lagoon 15 km. across.
other names: Nukumanu.

ONTONG-JAVA [5°15'S-159°30'E] (B.S.I.P.)
language: Luangiua (Polynesian)
population: 1,100
land area: 20 sq.km.; small islands scattered around lagoon 60 km.
              long.
other names: Lord Howe Atoll, Luangiua.

STEWARTS ISLAND [8°S-163°E] (B.S.I.P.)
language: Sikaiana (Polynesian)
population: about 300
land area: 1 sq.km.

SHORTLAND [7°5'S-155°45'E] and **TREASURY** [7°40'S-155°35'E] (B.S.I.P.)
language: Mono-Alu (Austronesian)
population: 1,700
land area: 500 sq.km.; several large islands and many small
              islands visible from south Bougainville, elevations up
              to 500 meters.
other names of important islands: Mono (Treasury), Alu (Shortland),
              Morgusaia, Faisi, Fauro.

These data together with map 1 locate the various languages. The
details of subgrouping are taken up elsewhere (see 4.4.9. in this
volume), but the following groupings are recognised.

Buka group: Halia, Solos, and Petats
North group: Hahon, Timputz, and Teop
West group: Banoni and Piva
East group: Uruava, Torau, and Mono-Alu.

These four subgroups may loosely form a Bougainville Group that also
includes Saposa and Papapana. Outside the Bougainville Group, Nehan
and the Polynesian Outliers: Nukuria, Takuu, Nukumanu, Luagiua, Sikaiana.
Bougainville languages present few difficulties to unsophisticated
spellers. Glottal stops, long nasals, and long vowels cause trouble,
but are not too frequent. Banoni [γ], Takuu geminate stops (Elbert
1965), and Halia vowels (Allen and Allen 1965) are particular problems.
Overdifferentiation can cause some distortion.[4]

4.2.10.3. RESEARCH WORKERS

Now with the objects of study identified geographically and linguistically, it is possible to proceed to the history of research.[5]

There were no indigenous writing systems in the area, thus there is no local history of research. Bougainvilleans often have great facility at learning one another's languages and are aware of major affinities among the various speech varieties, but as yet their interests and opportunities have not led to deeper study as linguists rather than polyglots.

The early records of European visitors yield almost no linguistic data or observations. Le Maire and Schouten aboard a Dutch ship in 1616 heard a Polynesian language on Ontong Java or Takuu (Sarfert and Damm 1929-31:483). The French explorer Bougainville recorded the shouts "Bouka! Bouka! Onelle" (Bougainville 1771, as quoted by Ray, 1926:12). But as far as I know, the meaning and origin of these shouts have not been ascertained. The English sailor, Carteret, was also in these waters in 1768, and passed close enough to Kilinailau to see "Bow carrying Bukas" (Friederici 1912:293). This observation is of interest because it would date the displacement of Polynesian culture by Halia-speakers somewhat prior to the estimate of Parkinson (1899:1).[6]

Apart from these three fragments, the history of research goes back just 100 years. In 1876, the scientific expedition of Freiherr von Schleinitz made a quick visit to Bougainville. The ethnographer Strauch (1877:102) saw no villages during their four days at anchor in Empress Augusta Bay. He saw twenty-one impressive men in a plank canoe but his comment that some knew a few English words does not distinguish local Banoni from Mono-Alu raiders.

The English botanist, Guppy, gave us our first sample of any Bougainville-area language, Mono-Alu (Guppy 1887). During the next decade, Woodford, an English naturalist, Zöller, a German journalist, Ribbe, a German adventurer, and Parkinson, who ran a plantation in Neu Pommern (German New Britain), had all visited Chief Gorai's territory in the Bougainville Straits and published some samples of Mono-Alu speech.

Halia, Solos, and Torau samples are also found among these sources. The Halia sample was bolstered by Judge Schnee's report, among more valuable data from New Britain and New Ireland (Schnee 1901). After the turn of the century the Marist Mission was established near Kieta. Not long after, Pater Rausch wrote to Europe about the location of Banoni, Torau, and Uruava and their non-Austronesian neighbours (Schmidt 1909). Then he gave the brief, but as yet unreplaced, description of Torau and Uruava (Rausch 1912).

Research on Bougainville reached a peak in 1908. The English ethno-
grapher Wheeler went to Mono-Alu. The German linguist Friederici
visited Bougainville but is very vague about his whereabouts especially
when his companion, the German geographer Sapper, was making an adven-
turous crossing from Kieta to Empress Augusta Bay (Sapper 1910).
The German anthropologist Thurnwald was settling at Buin, near Pater
Grisward's mission station. The results of these visits were of uneven
linguistic value. Wheeler collected and published over seventy texts
in Mono-Alu with English translation (Wheeler 1926). This is the best
material of this kind for any Bougainville language.

Wheeler made the interesting assertion that the people who lived on
Alu before 1860 spoke a distinct language 'Old Alu'. Preliminary
examination of the fragments that Wheeler identifies as 'Old Alu' sug-
gests two alternative conclusions: first, they are just foreign words
that slipped into the corpus from several different language backgrounds
or, second, 'Old Alu' was a separate language distinct from all presently
known languages. Consider the following:

gloss	*pig*	*bathe*	*who*	*not*
'Old Alu'	/boko/	/sisiu/	/ei/	/aka/
Torau	/bo/	/sasaoa/	/sea/	/aka/
Uruava	/boro/	/ui/	/taka/	/kana/
Piva	/bonoɣo/	/sisiu/	/asei/	/kaʔana/
Banoni	/boroɣo/	/sisi/	/see/	/ɣinawa/
Mono	/bo/	/sisile/	/ale/	/abu/
Papapana	/boro/	--	/eteena/	/ʔai/

I favour the first conclusion, partly because it avoids the problem of
what happened to 'Old Alu' to say that it never existed.

Thurnwald and Frizzi, another German anthropologist, who studied the
Nasioi in 1911, appear to have shared a non-linguist and non-Austronesian
bias. They refer to Austronesians of south Bougainville as "Alu immi-
grants" (Frizzi 1914:3) and their languages as "Alu dialects" (Thurnwald
1909:513, 125). The data cited above contradicts their implications
that Torau, Uruava, Piva, Banoni, or Papapana should be so closely iden-
tified with either 'Old Alu' or Mono.

Friederici does not greatly expand our knowledge of Bougainville lan-
guages. First, he identifies his samples (none over 100 words) by
village name. Such labelling is natural because Bougainvilleans identify
with their village rather than tribe, ethnic group, or language
(Blackwood 1935:17). One consequence of this is that the first Banoni
data, his Iapa words, were not identified as such for fourteen years
(Ray 1926); another is that his Buruwe data are first identified with
Piva language in this sentence!

At the close of the German era, the language groups of south Bougainville had been pretty well identified, but not very well sampled. Buka was known to form a linguistic unit with internal variations. However, groups in between remained unknown.

Under Australian administration, the government anthropologist Chinnery visited Bougainville in 1925 and 1930. He surveyed Buin sub-district and Takuu but did not report on unknown areas.

In September 1929, the British ethnographer Blackwood started field-work in Petats. In January 1930, she shifted to north Bougainville. Her reports add Saposa, with distinctive [f] sound, to the inventory of languages. She also identifies Konua as non-Austronesian, but she is a bit vague about the relations and range of the Teop, Timputz, and Hahon languages.

The American anthropologist Oliver spent most of 1938 and 1939 with the Siwai, but visited and sampled other areas enough to complete the language inventory except for Papapana. He is the first to distinguish Piva from Banoni, but he attributes the differences to "Papuanization" (Oliver 1949).[7]

In 1963, a new era of research began. Allen and Hurd of the Summer Institute of Linguistics surveyed the entire district. Theirs was the first work to cover all and only the languages of the Bougainville Province.[8] The Allen S.I.L. team have begun to produce Halia data and analysis. Similar results should be expected for the Hostetler team working on Timputz.

Various people from the University of Hawaii have visited Bougainville Province. Samuel Elbert, now retired, visited Takuu briefly in 1963. The following year Irwin Howard, now with the Linguistics Department, did anthropological research on Takuu. He is planning additional field-work and later publication of a dictionary and grammar. Kirk Schoffner is presently studying Teop culture and language. Rene Siracusa is preparing to study Torau language and culture. I finished my doctoral research on Banoni in 1973. I also collected some Piva and Uruava material.

Conrad Hurd of the S.I.L. has recently gathered some Uruava data also. Thus the prognosis for the study of Austronesian languages in the Bougainville Province is bright indeed.

4.2.10.4. SOURCE MATERIALS

In this section, I have listed the source materials for each language, with Polynesian forming a separate section. Sources which I have not seen are marked by an asterisk. The language identification in the

source is put in special type. Sources with vague identification are
marked with question mark.

EBNG refers to *An Ethnographic Bibliography of New Guinea* 1968,
which is a most helpful reference.

4.2.10.4.1. *GENERAL*

Some sources cover several languages. Such sources are discussed
here and a later reference only gives the language identification.

Friederici (1912) lists canoe terminology in one chapter. In another,
common words are cited in comparison with New Britain materials.
Friederici (1913) lists various Bougainville forms in his lexical evi-
dence for migrations. Forms collected by Friederici are usually marked
with diacritics. However, this phonetic detail does not guarantee
phonetic accuracy.

Oliver (1949) maps and comments briefly on all language groups except
Papapana. This is based in part on 700-item wordlists collected for all
south Bougainville languages except Piva.[9]

Dyen (1965) published no supporting data. However, data were col-
lected for this area in 1955. The Tri Institute Pacific Project (TRIPP)
lists contain Swadesh 215 list and about 300 more basic and cultural
vocabulary. Most of the lists for this area were filled in by students
at Methodist Goldie College, Banga Island, British Solomon Islands
Protectorate (B.S.I.P.). Copies of these lists are believed to be in
Dyen's possession. Results of his classification are given in 4.4.9.

Allen and Hurd (1965) classify all languages of the district, giving
village names, alternate language names, population estimates, and
locally available religious and language materials. They collected the
190-item Summer Institute of Linguistics lists for all languages except
Uruava.[10] In the following catalogue I will mention names they give
for the varieties and I will also list the authors of locally available
materials.

Schmidt (1909) includes a map, which is repeated in the preface to
Rausch (1912) and Grisward (1910). It is not impressively accurate,
but it was important at that time.

Capell (1971) gives 25-word examples of each language discussed. He
also gives some grammatical data and discusses sound changes, Proto-
Oceanic *s and *ns.

The following sources are based on secondary data and will not be
catalogued further:

Lanyon-Orgill (1942) repeats some data from Rausch (1912) and
Friederici (1912, 1913) without significant comment.

Salzner (1960) presents a confused picture of the area because he fails to resolve conflicting reports and his maps show extra language names.

Voegelin and Voegelin (1964) resolve some differences but include mistakes from Capell (1962) and Rausch (1912).

Oliver (1955) summarises the results of Oliver (1949).

Oliver (1973) incorporates Allen and Hurd (1965).

CSIRO (1967) includes a summary of Allen and Hurd (1965).

Müller (1954) includes a sketch map of Bougainville based on his experiences, but more accessible sources give the same information.

4.2.10.4.2.   *BANONI*

Schmidt (1909) maps **Banone**.

Sapper (1910) mentions **Banoni** territory, but maps village names without boundary.

Thurnwald (field notes): about 150 **Panone** words; dates from 1908 or 1909.

Thurnwald (1909, 1910) mentions **Alu colonies** and **dialects** on the west coast.

Thurnwald (1912): musical scores without lyrics, villages mapped in contradicting fashion. (Sapper is more accurate.)

Friederici (1912, 1913): **Iapa**.

Ray (1926:590-1): a total of 36 **Bunone** words from Friederici's **Iapa** and **Buruwe**; also Edge-Partington notes.

Chinnery (1931:84-6): a few proper names and kinship terms. Spelling unreliable, e.g. k, y, g, are all used for [γ]. Map.

Oliver (1949): **Banoni**.

Grace (field notes): **Banoni**: 500 items of TRIPP list collected in Rabaul in 1955.

Allen and Hurd (1965): **Banoni (Tsunari)**, Fr. Schliecker.

Dyen (1965): **Banoni**.

Capell (1962): **Banoni**: population figure should be 1,250 (not 12,500).

Capell (1971): **Banoni S.**

Lincoln (field notes): grammatical, lexical, and text material, May-December 1973.

4.2.10.4.3.   *HAHON*

Blackwood (1935): **Hahon** mentioned as group and located on map.

Oliver (1949): **Hahon**.

Allen and Hurd (1965): **Hahon**, Mr Busus.

Capell (1971): **Hahon**.

4.2.10.4.4. *HALIA*

Woodford (1890) collected 70 **Lehona** words from his servant.

Schellong (1890): about 50 words each for **Salomon Insel Buka** from Frau
    Parkinson, and for **Green Island** from the crew of a ship visiting
    Finschhafen, in the appendix to his Jabîm dictionary.

Ray (1891) corrects Schellong's **Green Island** designation.

Ray (1896) collates Woodford, Zöller, and Schellong lists.

Parkinson (1899): scattered **Buka** cultural terms may be Petats or Solos
    or Halia or some of each.

Schnee (1901:269-72): about 100 **Hanahan** words and paradigm for *'go'*.

Friederici (1912, 1913): **Carteret, (?) Soa, Hamatana, Hanahan, Lehona.**

Ray (1926:591-4): **Buka**, mostly Schnee's material with comparative data
    and comment.

Oliver (1949): **Sailo.**

Capell (1962:195-7) indicates he has field notes for **Halia, Kilinailau,
    Lontis,** and **Sailo.**

Dyen (1965): **Hanahan, Lontes.**

Allen, Janice (1971): short description of syntactic and discourse
    strategies.

Allen, Jerry (1971): short description of tense/aspect and conjunctions.

Allen and Allen (1965): brief pedagogical grammar with glossary. Not
    intended for scientific use.

*Allen and Allen (in preparation): dictionary.

*Allen and Allen (in preparation): New Testament translation.

Allen and Hurd (1965): **Halia (Hanahan, Tulon, Tasi), Haku, Hangan,
    Selau.** Fr. Lamarre, Fr. Montauban, Fr. Müller, Fr. Lepointe.

Capell (1971): **Kilinailau, Lontis, Halia, Sailo.**

Hooley (1971) includes **Halia** wordlist and compares it to Morobe area
    languages.

4.2.10.4.5. *MONO-ALU*

Guppy (1887:181-4): over 300-item **Vocabulary of Bougainville Straits**
    (294-367): **vulgar** names given with botanical data.

Woodford (1890:225-34): 70 words of **Treasury Island, Fauro Island** and
    Shortland Island.

Zöller (1891:444-529): nearly 300 words of **29. Morgusaie**, which was
    Chief Gorai's residence.

Ribbe (1894:135): numerals compared to Malay.

Ribbe (1903:184-212): **Sprache der Shortlands-Insulaner.** Comment on
    variation, about 70 words compared with other languages.

Parkinson (1899): some cultural terms from **Shortland Islands.**

Parkinson (1907b:479): 10 numerals of Shortlandinseln.

Thurnwald (1909, 1910, 1912): various mentions of Alu colonies and
    Alu dialects, also map (1912:end).

Wheeler (1926): over seventy numbered texts with translations and notes,
    outline of pronouns and tense marking, glossary. Most items iden-
    tified as Mono, some as Old Alu.

Wheeler (1910-11): short text in Mono-Alu, English versions with
    vocabulary and notes.

Wheeler (1912a): text No.29 in I.P.A. notation by Daniel Jones from
    Wheeler's dictation.

*Wheeler (1912b): source EBNG.

Wheeler (1913a): text No.66 with introduction.

*Wheeler (1913b): Nine texts.

*Wheeler (1914a): source EBNG.

Wheeler (1914b): clan and totem names for Mono-Alu and Buin.

Friederici (1912, 1913): Mono, Shortlands, Alu, Awa.

Boch (n.d.): 20-page typescript grammar of Alu. Adequate coverage of
    morphology, may date from German era, but probably not seen by
    Wheeler. Boch has better spelling system.

Ray (1926:584-9): comparative notes on Mono with short sketch of grammar
    based on Wheeler's data.

Chinnery (1931:115): Alu kinship terms.

Capell (1962): Mono and Alu.

Dyen (1965): Mono.

Capell (1968): Mono list approximating Swadesh 100, compared with
    Choiseul and commented on.

Terrell and Irwin (1972): no language data, but recently collected
    information on traditional history.

Oliver (1955, 1973): brief discussion of contact with Bougainville.

Hackman (1968): map 1. Shortlands subgrouped by itself, map 2. indicates
    /b, d, g/ not prenasalised in contrast to Choiseul and New Georgia.
    Sample of 20 Shortlands words included.

4.2.10.4.6. *NEHAN*

Schmiele (1891): about 200 Nissan words.

Parkinson (1899, 1907b) mentions Nissan as a group, but no language
    data found.

Krause (1906): very few words included in ethnographic sketch.

Thurnwald (1908): mostly proper names from Nissan.

Friederici (1912, 1913): Nissan.

Sarfert (1913) describes masks without local words.

Mayr (1930-31): **Nissan** vocabulary near match with Schmiele, comments
   on historical phonology added by Dempwolff.
Allen and Hurd (1965): **Nissan.**
Capell (1962) mentions **Nissan** field notes.
Hannet (1970): **Nehan** stories in English translation.
Capell (1971): **Nisan** with New Ireland groups.
Beaumont (1972:18): results of lexicostatistics of 70 **Nissan** words with
   eight New Ireland languages.

4.2.10.4.7. PAPAPANA

Allen and Hurd (1965) indicate **Papapana** is the language of **Teperoi**
   village which is near Numanuma plantation. I have found no refer-
   ence to **Papapana.**
(?) Friederici (1912, 1913) gives some words identified as **Teperoi.**
   Only word for *'ear-his'* overlaps with Allen and Hurd field notes.
(?) Pfeil (1899:307) identifies Numanuma with **Toboroi** village, but
   modern maps show **Toboroi** south of Kieta, 65 km. by air from **Teperoi.**
   I am unable to resolve these conflicts.

4.2.10.4.8. PETATS

Friederici (1912, 1913): **Pororan, Petat, Hitau.**
Chinnery (1925:63-5): 21 cultural terms of people of Hitau, **Pororan,**
   Petats Islands.
Thomas (1931, 1933): cultural information, no real language data.
Blackwood (1931): little data; summary of language situation.
Blackwood (1932a): only catalogue of texts.
*Blackwood (1932b): probably summaries of texts.
Blackwood (1935): numerals, kinship terms and other cultural terms in
   various places in the book.
*Blackwood (1936): source *EBNG.*
Capell (1962): **Petats, Matsungan.**
Allen and Hurd (1965): **Petats, Hitau-Pororan, Matsungan;** Rev. Cropp,
   Rev. Sotutu, Rev. Cornwell, Sis. Common.
Dyen (1965): **Petats.**
Capell (1971): **Petats.**

4.2.10.4.9.   PIVA

Friederici (1912, 1913): **Buruwe.**
Ray (1926) includes Friederici's material under **Bunone.**
Oliver (1949): **Piva, Papuanized Banoni.**
Capell (1962): **Piva, Papuanized Banoni.**

Allen and Hurd (1965): **Nagarege, Amun.**

Capell (1971): **Banoni N(orth), Amun.**

Lincoln (field notes): lexical data, some grammatical data, and three
texts with translation collected in November 1973.

Lincoln (1976): **Banoni, Piva, and Papuanization.**

4.2.10.4.10. *SAPOSA*

Blackwood (1932a) mentions Saposa as having distinctive [f].

Blackwood (1935): occasional mention of Saposa as group.

Oliver (1949): **Saposa.**

Capell (1962) mentions his field notes for **Saposa** and **Taiof.**

Allen and Hurd (1965): **Saposa, Taiof;** Rev. and Mrs Cornwell.

Dyen (1965): **Saposa.**

Capell (1971): **Taiof and Saposā.**

4.2.10.4.11. *SOLOS*

Zöller (1890): 50 words under **24. Buka** from a Samoan through Frau
Parkinson, and Buka troops in Finschhafen. Some words appear to be
Halia, perhaps through mixing of sources.

Zöller (1891): about 300 **Buka** words.

Parkinson explored this area but I found no specifically Solos words
in his works.

Montauban and O'Reilly (1952, 1955, 1958): 20 myths in French. Two in
original also. "O tatete te i'totopiok ai o muniesin pean": le conte
du totopiok et les deux frères enfants (1952:57-64). "O tatate te
i mat": le conte de la mort (1955:40-59). Collected at Gagan in
1934, 1935.

Capell (1962) mentions his field notes for **Sumoun.** References for
Gagan would probably be Solos as well. His reference "<u>AR</u> 1924-5:
89-90" (195) probably should be McAdam (1926). (Cf. *EBNG*, Vol.3.)

Allen and Hurd (1965): **Solos;** Fr. Keady, Fr. Luken.

Dyen (1965): **Sumoun.**

4.2.10.4.12. *TEOP*

Friederici (1912, 1913): **Tiob.**

Blackwood (1935) mentions **Tiop** as a group.

Oliver (1949): **Tiop.**

Carter (1952): brief informal grammar of **Teop.**

Capell (1962) mentions his **Tiop** field notes.

Allen and Hurd (1965): **Teop, Wainanana, Losiara, Taunita, Melilup,
Petspets;** Rev. Carter, Rigamu, Fr. Lebel, Fr. Rondeau.

Dyen (1965): **Teop, Raosiara.**

Capell (1971): **Teop.**

Rev. Bruce and others compiled a card file of Teop-English and English-
    Teop, the latter was typed in November 1973.

Schoffner continues fieldwork on Teop language and culture, 1973-1974.

4.2.10.4.13. *TIMPUTZ*

Blackwood (1931) comments on **Kurtatchi** language and grammar.

Blackwood (1935): **Kurtatchi** numerals, kinship terms, personal names,
    proper names and extensive cultural information with cultural terms.
    Partially collated into glossary.

Blackwood (1932a): only catalogue of text types.

*Blackwood (1932b) may have texts in **Kurtatchi.**

Oliver (1949): **Timputz.**

Capell (1962): **Timputs.**

Allen and Hurd (1965): **Timputz, Pokpapa, Orig, Dios (Tsibatabai),**
    Chundawan; Fr. Rondeau.

Capell (1971): **Timputz.**

4.2.10.4.14. *TORAU*

Ribbe (1903): about 75 **Gieta** words.

Schmidt (1909) maps **Torau.**

Thurnwald (1909, 1910, 1912): various references to **Alu colonies** and
    some specific details of traditional history.

Rausch (1912:983-5): brief sketch of **Torau** grammar, [ŋ] probable mistake
    throughout, more likely [g], about 400-word vocabulary (986-94).

(?) Friederici (1912, 1913): **Toboroi, Reboine, Popoko.**

*McAdam (1926:83-4): **Torua.**   Source *EBNG*.

Oliver (1949): **Torau.**

Burgmann (1954): no data but gives Müller's account of traditional
    history.

Allen and Hurd (1965): **Torau;** Fr. Sullivan.

Laracy (1969): an account of traditional history.

Terrell and Irwin (1972): a detailed account of traditional history.

4.2.10.4.15. *URUAVA*

Schmidt (1909) maps **Uruava.**

Rausch (1912:924-82): brief sketch of grammar of **Uruava.**   Other sources
    all agree on [g] where Rausch wrote [ŋ].   This may be editing error
    for [ŋg] or [g].

(?) Friederici (1912, 1913): Pōpoko may be Uruava or Torau or Nasioi.
    There are so few forms that it hardly matters.

Frizzi (1914:52): lyrics to a song without translation.

Thurnwald (1909, 1910, 1912): allusions to Alu colonies cannot be
    clearly identified with Uruava.

Chinnery (1931:69-71): **Arawa** kinship terms, misleadingly associated
    also with Rorovana village.

Oliver (1949): **Uruava**.

Allen and Hurd (field notes): only about 50 items collected.

Allen and Hurd (1965): briefest mention of **Uruava** as a member of the
    Torau family.

Capell (1962): **Uruava**.

Capell (1971): **Uruava**.

Lincoln (field notes): checked Rausch and Oliver materials with semi-
    active speaker of Uruava at Arawa in 1973.

*Hurd (recent field notes): may have text material, if so this could
    be unique.

4.2.10.4.16.   *POLYNESIAN OUTLIERS*

Nukumanu, Nukuria, Takuu. (Since these languages form part of relatively
well-developed Polynesian studies, I will refer the reader to the major
works and a few others that have come to my attention.)

Pawley (1967): thorough discussion of subgrouping with some supporting
    data. Misprints in table of sound correspondences.

Biggs (1971): discussion of research on all Polynesian. Major references
    cited. Misprints in table of sound correspondences.

Elbert (1965): discussion of special phonological developments in all
    Outliers. Includes some Takuu data from his fieldwork there. Appears
    to have correct sound correspondences. I quote here:

PPN	*p	*t	*k	*ʔ	*f	*v	*s	*h	*m	*n	*ŋ	*l	*r
Takuu	p	t	k	∅	f	v	s	∅	m	n	n	r/l	r/l
Luangua	p	k	ʔ	∅	h	v	s	∅	m	ŋ	ŋ	l	l
Sikaiana	p	t	k	∅	h	v	s	∅	m	n	n	l	l

*Ray (1912-21) recommended by Biggs (1971).

Ray (1919) comparative treatment gives Nukuria data.

Bayard (1966) discusses linguistic and cultural relations among Polynesian
    Outliers and relations to triangle Polynesia.

N O T E S

1.   Many friends helped in many ways while I researched this chapter. Don Laycock, Professor S. Wurm and his staff at the Australian National University, Paul Lapun, Irwin Howard, Joseph Tomoke, Renée Heyum are among them.   I am also grateful to the National Science Foundation for helping me to go to Bougainville.

2.   The Village Directory was the source for most population figures. Some guesses were made to distribute those figures onto geographical units considered here.   Land areas were approximated from World Aeronautical Charts, Village Directory, and CSIRO (1967).

3.   Nagarege is actually a Banoni word [naɣařeɣe] 'plural *human above*', i.e. those who live on higher land.   The Piva people themselves call their language [laβunuia] and the Banoni use [laŋunuia].   These names have limited area of recognition and might lead to confusion with Luanguia.   As far as I know no speaker of the language objects to the appellation 'Piva'.

4.   The extreme case is non-Austronesian Rotokas which has only six consonant phonemes /p, t, k, b, d, g/ (Firchow and Firchow, 1969).

5.   This section is modelled after an excellent ethnographic bibliography by Oliver (1949).   Much of the information here is from that source.

6.   See 4.4.9.

7.   For discussion see Lincoln (1976).

8.   See review by Grace (1968).

9.   Professor Oliver has generously given me access to these materials.

10.   This list is described by Bee and Pence (1962) and evaluated by Laycock (1970).

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          Jahrbuch des Städtischen Museums für Völkerkunde, Leipzig,
          1911-12*. 5:38-41.

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   1929, *Luangiua und Nukumanu*. In: Thilenius, G., ed. *Ergebnisse
   1931   der Südsee-Expedition 1908-1910*, vol.12, parts 1 and 2.
          Hamburg: Friederichsen, de Gruyter.

SCHELLONG, O.
   1890   *Die Jabim-Sprache der Finschhafener Gegend*. *EAVS* 7.

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   1909   'Neuentdeckte Papuasprachen von den Salomoninseln
          (Bougainville)'. *Globus* 95/13:206-7.

SCHMIELE, G.
   1891   'Aus dem Schutzgebiete der Neu Guinea Companie: Die Insel
          Nissan'. *MDS* 4:100-12.

SCHNEE, H.
    1901   'Beitrag zur Kenntnis der Sprachen im Bismarck-Archipel'.
                MSOS 4:229-79.

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    1971   *Current Trends in Linguistics*, vol.8: *Linguistics in
                Oceania*. The Hague: Mouton.

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    1877   'Allgemeine Bemerkungen ethnologischen Inhalts über Neu-
                Guinea, die Anachoreten-Inseln, Neu-Hannover, Neu-Irland,
                Neu-Britannien und Bougainville...'. *ZEthn* 9:9-63, 81-104.

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                Analytical Study of the Torau Migration to Southern
                Bougainville in the 1860s'. *JPS* 81:317-49.

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                2:220-31.

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                40:106-15.

    1909   'Reisebericht aus Buin und Kieta'. *ZEthn* 41:512-32.

    1910   'Im Bismarckarchipel und auf den Salomoinseln 1906-09'.
                ZEthn 42:98-147.

    1912   *Forschungen auf den Salomo-Inseln und dem Bismarck-Archipel*.
                Band I and Band III (Band II did not appear). Berlin:
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           Islands'. *ZKS* 1:290-304.

1912a   '[mono]' (a speech sample of a Melanesian language spoken
           in the Bougainville Straits, Western Solomon Islands).
           MPhon 1-2:12-14.

1912b   'Sketch of the Totemism and Religion of the People of the
           Islands in the Bougainville Strait (Western Solomon Islands)'.
           ArchR 15:24-58, 321-58.

1913a   'A Text in Mono Speech (Bougainville Strait, Western
           Solomon Islands)'. *Anthropos* 8:738-53.

1913b   'Nine Texts in Mono Speech (Bougainville Strait, Western
           Solomon Islands) with Translation and Notes'. *MSOS* 16:66-113.

1914a   'An Account of the Death Rites and Eschatology of the People
           of the Bougainville Strait'. *ArchR* 17:64-112.

1914b   'Totemismus in Buin (Süd-Bougainville)'. *ZEthn* 46:41-4.

1926   *Mono-Alu Folklore*. London: Routledge.

WOODFORD, C.M.

1890   *Naturalist among the Headhunters, Being an Account of Three
           Visits to Solomon Islands in the Years 1886, 1887 and 1888.*
           London: Philip.

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           Distribution Division (C-44), National Oceanic Survey,
           Riverdale, Md. 20840.

ZÖLLER, H.

1890   'Untersuchungen über 24 Sprachen aus dem Schutzgebiet der
           Neu Guinea-Compagnie'. *PM* 36:122-8, 145-52, 181.

1891   *Deutsch-Neuguinea und meine Ersteigung des Finisterre-
           Gebirges.* Stuttgart: Union Deutsche Verlagsgesellschaft.

4.2.11. HISTORY OF RESEARCH IN AUSTRONESIAN LANGUAGES: ADMIRALTY ISLANDS AREA

Alan Healey

4.2.11.1. PRE-GERMAN AND GERMAN PERIOD

There has now been a whole century of linguistic discovery and research in the Admiralty Islands and the small islands to the west.

In the pre-German period wordlists were collected on at least two occasions. During his travels (1871-78) around New Guinea, the Russian scientist Nikolaĭ Nikolaevich Miklukho-Maklaĭ obtained brief wordlists of the Andra and Sori languages (Miklukho-Maklaĭ 1951:324-5, 507; Capell 1971:247-8). When the H.M.S. Challenger expedition made formal navigational studies of the Admiralty Islands in 1875, the botanist obtained a wordlist from the Wild Islands (Sori Island or Harengan Island?) (Moseley 1877:387-90).

During the German administration (1884-1914) many scientific expeditions and individual scientists visited the area, and a few missionaries as well. Quite a number collected wordlists, grammatical samples, or information on the distribution and intelligibility of the languages. The following incomplete[1] list is presented in order of the dates of publication rather than of the dates of the fieldwork:

O. Schellong	1890:103-27	Tulu ? (Admiralty Is.)
Hugo Zöller	1890:127	? (Elizabeth I.)
Rev. R.H. Rickard, in Ray	1891:7-8	? (Green I.)
Richard Parkinson	1896	Wuvulu (Maty I.)
Heinrich Schnee	1901	Titan (=Moanus), Papitalai, Hermit (=Luf I.)
Georg Thilenius	1903:351-64	Titan (=Tawi), Hermit (=Agomes), Kaniet, Seimat (=Ninigo), Wuvulu (=Popolo)
Otto Dempwolff	1904:400	Wuvulu (Maty I.)

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Otto Dempwolff	1905:185-210	Wuvulu, Seimat (=Ninigo), Kaniet, Pam (=Poam), Hermit (=Agomes)
Fr. Josef Meier	1906a	Titan (=Moanus)
Fr. Josef Meier	1907-12	Papitalai
Paul Hambruch	1908:38-65	Wuvulu, Aua
Augustin Krämer	1908	Wuvulu, Aua
Richard C. Thurnwald	1910:111	
Georg Friederici	1912:224-8	Baluan, Lou, Pak, Titan (=Mouk)
Fr. Otto Meyer	1932:188	
Hans Nevermann	1934	scattered comments and vocabulary
Alfred Bühler	1935:5-6	
Richard Salzner	1960:26-7, map 41	

Two of these publications give a linguistic map of the area: Meyer has
one showing 39 dialects apparently in ten languages, and Salzner has
one showing 40 languages in ten groups.

4.2.11.2. AUSTRALIAN PERIOD

During the period of Australian administration linguistic research
proceeded at a somewhat slower pace, and very few of the results have
ever been published. From their anthropological fieldwork of 1928-9,
Margaret Mead (1930:220) made some observations on the dialects of Titan (=Manus)
and Reo F. Fortune (1935:x) stated his intention of writing an account
of the Titan language and grammar. However, this was never published
and Fortune's linguistic materials are now in the keeping of Theodore
Schwartz of the University of California at San Diego (Schwartz, per-
sonal communication 1974).

While stationed on Manus Island (1946-48, 1958) as District Health
Officer, William E. Smythe made a survey of the languages of the area
and reported 25 different languages (Smythe 1949, 1970) and presented
a typological classification of them based on samples of 195 vocabulary
items, pronouns, numerals, and 45 phrases and sentences. He also made
a detailed study of Seimat (Ninigo) and Gele' (Smythe 1958a, 1958b).
These two studies and the 25 language samples are now being prepared for
publication by J. Guy of the Australian National University.

Margaret Mead, Theodore Schwartz, and Lenora Schwartz did further
fieldwork during 1953-54 and T. Schwartz studied both the Titan (=Manus) and Nali
languages (Schwartz 1962:218-21). During longer fieldwork in 1967-69
the Schwartzes collected extensive samples, mostly on tape, of the 20 or

so languages named and recognised by the people of the Admiralty Islands and smaller samples from the islands to the west. Their standard sample included 1,000 vocabulary items, pronouns, numerals, kinship terms, at least 400 sentences, and a large number of texts. In addition L. Schwartz made a particular study of the Sori and Mokareng languages. T. Schwartz aims to publish a monograph on the languages of the Admiralty Islands (Schwartz, personal communication 1974) as a part of his general areal ethnography of the region (Schwartz 1963).

Robert Blust made a survey of the languages of the Admiralty Islands in 1975. His 28 samples include 500-800 vocabulary items, pronouns, numerals, and 30-60 sentences - all carefully chosen to reveal the historical position of these languages and their internal relationships. He plans to write up the results soon for publication (personal communication 1975).

Several missionaries made detailed studies of five of the languages, but a couple of the manuscripts have been lost, and most of the remainder are unpublished. Others made Bible translations.

Fr. A. Kleintitschen	n.d.	Bundralis
Fr. R. Jürgens	n.d.	Bipi (Sisi)
Fr. Josef Meier	1906b	Titan (=Moanus)
Fr. van Klaarwater	n.d.a	Mondropolon (ms. lost)
Fr. van Klaarwater	n.d.b	Papitalai
Fr. K. Borchard	n.d.	Papitalai (ms. lost)
Rev. H. Kraft	1921	Lele (or Gele' ?)
Pastor F. Walter	1948	Lele (or Gele' ?)
Rev. R. Goebel et al.	1956	Lele (or Gele' ?)

The work of the Australian period has been partially summarized by Laufer (1966) and Capell (1954:28-32, 147; 1962:56-60, 75-6; 1971:247-52).

The most urgent task for the future is to preserve and publish the very considerable materials already collected.

N O T E

1. I have not been able to inspect some of the items in the list person-
ally because the libraries I had access to contained very few of the
older works. It is likely that several more items could be added to
this list if one had the resources to examine all of the Manus District
entries in Nevermann 1934:396-9 and in EBNG 1968, vol.3:61-2.
I am grateful to R.A. Blust, Fr J. Brugger, A. Capell, N. Dietsch,
Mrs F. Helbig, D.C. Laycock, Sr Theodore Lee, T. Schwartz, A.J. Taylor,
and S.A. Wurm for information they supplied as I was preparing this
paper.

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            South Pacific Commission, Technical Paper 70.

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            Technical Paper 136.

  1971   'The Austronesian Languages of Australian New Guinea'.   In:
            Sebeok, T.A., ed. *Current Trends in Linguistics*, vol.8:
            Linguistics in Oceania. 240-340.   The Hague: Mouton.

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  1904   'Ueber aussterbende Völker. (Die Eingeborenen der 'westlichen
            Inseln' in Deutsch-Neu-Guinea)'.   *ZEthn* 36:384-415.

  1905   'Beiträge zur Kenntnis der Sprachen von Deutsch-Neuguinea'.
            MSOS 8:182-254.

EBNG
  1968   An *Ethnographic Bibliography of New Guinea*.   3 vols.
            Canberra: Department of Anthropology and Sociology,
            Australian National University.

FORTUNE, R.F.

1935   'Manus Religion: An Ethnological Study of the Manus Natives
          of the Admiralty Islands'. *American Philosophical Society
          Memoirs* 3. [Pages cited from the University of Nebraska
          Press edition.]

FRIEDERICI, G.

1912   *Wissenschaftliche Ergebnisse einer amtlichen Forschungsreise
          nach dem Bismarck-Archipel im Jahre 1908. II. Beiträge
          zur Völker- und Sprachenkunde von Deutsch-Neuguinea.* MDS,
          Ergänzungsheft 5.

GOEBEL, R., chief translator

1956   *Niu Testament ad ndorlaben adu Jesu Kristo i bolumiadu.*
          (The New Testament in the Manus Language, Territory of New
          Guinea). Sydney: British and Foreign Bible Society.

HAMBRUCH, P.

1908   *Wuvulu und Aua (Maty- und Durour-Inseln) auf Grund der
          Sammlung F.E. Hellwig aus den Jahren 1902 bis 1904.
          Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten,*
          Beiheft 4. *Mitteilungen aus dem Museum für Völkerkunde* 25.

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                93/16:254-7.

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                Inseln'. *BICUAER* 8:125-9.

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                Education.* New York: William Morrow. [Pages cited from
                the Penguin edition, 1942.]

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                Sprache der Moánus (Admiralitäts-Inseln)'. *Anthropos* 1:
                210-28, 472-82.

    1906b   Grammatik und Wörterbuch der Moánus-Sprache.   Manuscript.

    1907-12   'Mythen und Sagen der Admiralitätsinsulaner'. *Anthropos*
                2:646-67, 933-41 (1907); 3:193-206, 651-71 (1908); 4:354-74
                (1909); 7:501-2 (1912).

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    1932   'Missionar und Wissenschaft'. In: Hüskes, J., ed.
                Pioniere der Südsee. 185-96.   Salzburg: Herz-Jesu Missionhaus.

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    1951   *Sobranie sochinenii* [Collected Works], vol.3, part 1:
                Stat'i po antropologii i etnografii [Articles on Anthropology
                and Ethnography].   Moscow-Leningrad: Adademiia Nauk SSSR,
                Institut Etnografii.

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                6:379-429.

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    1934   *Admiralitäts-Inseln*. In: Thilenius, G., ed. *Ergebnisse*
            der Südsee-Expedition 1908-1910, IIA, vol.3. Hamburg:
            Friederichsen, de Gruyter.

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            IAE 9:195-203.

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            Admiralty Islands'. *JRAI* 21:3-13.

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            on the Admiralty Islands of Northern Melanesia'.
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1970   Ed. by Alan Healey. 'Melanesian, Micronesian, and
          Indonesian Features in Languages of the Admiralty Islands'.
          In: Wurm, S.A. and D.C. Laycock, eds. *Pacific Linguistic
          Studies in Honour of Arthur Capell*. PL, C13:1209-34.

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          Die polynesischen Inseln an der Ostgrenze Melanesiens.
          2. Die westlichen Inseln des Bismarck-Archipels.
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          Leopoldinisch-Carolinischen Deutschen Akademie der
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          ZEthn 42:98-147.

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          Christian Literature Society.

ZÖLLER, H.
  1890   'Untersuchungen über 24 Sprachen aus dem Schutzgebiet der
          Neuguinea-Compagnie'. PM 36:122-8, 145-52, 181.

PART 4.3.

THE NATURE OF AUSTRONESIAN LANGUAGES OF THE
NEW GUINEA AREA

4.3.0. FEATURES OF AUSTRONESIAN LANGUAGES IN THE NEW GUINEA AREA IN GENERAL IN CONTRAST WITH OTHER AUSTRONESIAN LANGUAGES OF MELANESIA

A. Capell

LIST OF ABBREVIATIONS

The following abbreviations are used in this chapter:

AN	Austronesian
CNH	Central New Hebridean (or - Hebrides)
EIN	Eastern Indonesia(n)
EO	Eastern Oceanic
IN	Indonesia(n)
NAN	Non-Austronesian
NC	New Caledonia(n)
NGAN	New Guinea Austronesian
NNH	Northern New Hebridean (or - Hebrides)
NS	Northern Solomons
OC	Oceanic
PAN	Proto-Austronesian
PEA	Proto-Eastern Austronesian
PEO	Proto-Eastern Oceanic
PN	Polynesia(n)
PNG	Papua New Guinea
POC	Proto-Oceanic
PPN	Proto-Polynesian
SEP	South-Eastern Papua
SES	South-Eastern Solomonic (or - Solomons)
SNC	Southern New Caledonia(n)
SNH	Southern New Hebridean (or - Hebrides)
WAN	Western Austronesian
WS	Western Solomons

4.3.0. INTRODUCTORY REMARKS

In the present context, "Melanesia" is used as a geographical term, including the whole of New Guinea, the islands eastwards to and including Fiji, but excluding Polynesia. There are some features of Micronesian languages which are relevant, and reference is made from time to time to various languages within the political unit of Indonesia, of which western New Guinea is now part.

Although there may be a typical "Austronesian" linguistic structure as against, say, Australian or Mon-Khmer, this structure is not a complete unity. There are sub-structures which it is the business of this chapter to describe. Questions of lexicon must be touched on even though the title of the chapter stresses structure, for the Austronesian (AN) content of the vocabularies is also a feature of the languages.

The features to be examined are therefore four in number:

1. phonetic
2. syntactic
3. morphological
4. lexical

The only attempt as yet (on any large scale and backed by scientific method) is that of Andrew Pawley (Pawley 1972), backed by his later paper (Pawley 1973).

Pawley's "Proto-Eastern Oceanic" (PEO) is subdivided into subgroups as follows:

1. South-east Solomonic
    (a) Guadalcanal-Nggelic (Nggela, Bugotu, Vaturanga and Inakona
    (b) Cristobal-Malaitan (Arosi, Fagani, Kwaraʔae, Lau, Oroha, Saʔa)

2. North Hebridean-Central Pacific
    (a) Northern New Hebridean-Banks (Tolomako, Maewo, Nogugu, Oba, Raga North, Tangoa, Tasiriki; Lakon, Merlav, Mota, Volow)
    (b) Central New Hebridean (Baki, Tasiko, Nguna, Sesake, Aulua?)
    (c) Central Pacific (Fijian, Proto-Polynesian (PPN)).

While PEO thus covers a fairly wide area of the Pacific, it is clear that there are large parts still not accounted for. They are provisionally grouped as Proto-Oceanic (POC) or simply "Oceanic" (OC). The present chapter has the purpose of setting out differences in the POC field from PEO and to a certain extent also in the various subgroupings of POC that may emerge.

The areas of Oceania which are not included in PEO are the following:

1. Western Austronesian (WAN).
2. New Guinea Austronesian (NGAN) including the neighbouring
    islands - Admiralty Islands, New Ireland, New Britain and their
    dependencies.
3. Northern Solomons (NS) - Buka and Northern Bougainville.
4. Austronesian languages of northern Bougainville.
5. Santa Cruz area languages.
6. Languages of New Caledonia (NC).
7. Such parts of the New Hebrides as are not classed as PEO, viz.,
    7a. Southern islands of Aneityum, Tanna and Eromanga.
    7b. Eastern Malekula (including the Aulua queried by Pawley).
    7c. Some parts of Santo, especially Sakau and the east coast.

The Polynesian outliers, Mae, Mele, Fila, Aniwa, Futuna, are excluded
from the present chapter as being Polynesian.

The fact that WAN is not part of PEO is obvious, almost by defin-
ition. The problem that has long engaged Oceanic linguists is the
question of where "Indonesian" finishes and "Oceanic" begins.

This chapter will discuss the subdivisions on a regional basis in
most of its considerations, but there are some subjects which are best
treated as features of these languages in contrast to PEO. One such
feature is retention of final Proto-Austronesian (PAN) consonants,
which is fairly widespread apart from subgroups.

4.3.1. GENERAL FACTS

The first section of this paper will consider some facts which are
independent of region and so may be called general. These include sound
systems, syllable structure and final consonant retention.

4.3.1.1. *SOUND SYSTEMS*

Pawley accepts the sound system proposed by Biggs (1965) as repres-
entative of Eastern Oceanic in general and of PEO (Pawley 1972:24).
This shows certain coalescences of PAN sounds, some at least of which
were already presupposed by Stresemann (1927) as the basis for the
Seran-Ambon languages. The resultant alphabet shows voiced and voice-
less stops coinciding: *p and *b become p; *mp and *mb become mp, *d
and *D become d while *nd and *nD become nd; the sibilants coalesce:
*s, *z, *c, *j become s, and the nasal combination ns represents *ns,
*nz, *ñc, and *nj; *k and *g become k, and the nasal combinations *nk
and *ng become nk; *m remains, but *n and *ñ become n; *h becomes ø,
but *w, *q, *ʀ and perhaps *y remain. In addition he proposes two

labiovelars, ŋm and ŋp, orthographically mw and pw in the modern lan-
guages.

For the non-PEO languages this is not quite satisfactory, but they
would seem to fit in with Stresemann's sound system to a very large
degree. In fact, many Oceanic word forms are precisely the same as
those found in Eastern Indonesia; the prevailing word for *canoe*, waka,
is already found in Eastern Indonesian (EIN) as the normal shape;
Pawley maintains *waŋka(ŋ) largely on the basis of Fijian where the
word is waŋga. But as all voiced stops in Fijian are regularly pre-
nasalised (mb, nd and ŋg are the only phonetic possibilities in Bau
Fijian), should it not rather be *waga, becoming by regular phonetic
rule in Fijian waŋga; the POC form of the root would then naturally be
*waga, which is the actual form also in some of the more westerly lan-
guages, e.g. South-Eastern Papua (SEP).

It would seem that Pawley's PEO sound system is too far advanced
(if the term may be used) for POC in general; fewer coalescences had
taken place at the earlier stage. Similarly, *R is fairly stable in
POC, as witness e.g. Numfor wa:r *water*. Salawati forms such as wayer
are much closer to PAN *wayer than Polynesian (PN) wai, which is also
the PEO root of the word.

4.3.1.2. *SYLLABIC STRUCTURE*

One outstanding feature of PEO is the comparative rarity of syllable
final consonants, and still more of word final consonants. While such
structures are common enough in WAN, the PEO languages largely appear
to avoid them (Pawley 1972:7). The fact that the languages of the
Banks Islands do not do this may perhaps argue for their comparative
antiquity or at least for a certain conservatism on their part. Certain
features of structure, however, do argue for antiquity. Pawley remarks
at some length on syllable structure as a factor in establishing phon-
emic evidence for Eastern Oceanic. There he says:

> The only phonological evidence which I have been able to find
> differentiating PEO from POC consists of the loss of a final
> consonant or consonant plus vowel in a small group of PEO bases.
> In each case the base concerned is one reconstructed as ending
> in a consonant in PAN. As a general rule, PAN final consonants
> disappear in POC. There are two sorts of exceptions. One cat-
> egory consists of certain transitive verbs in which a final
> consonant is retained before a transitive suffix, and in fact
> can be considered part of the suffix, but is lost in all other
> contexts. The other category consists of noun and intransitive
> verb bases in which the PAN final consonant is retained in all
> contexts; in some Oceanic languages this final consonant is
> supported by a following vowel which usually harmonizes with
> that preceding the consonant. (Pawley 1972:7)

This is practically a statement of what will be said here in the
next few paragraphs, and cannot be controverted. It seems a little un-
satisfactory to say that the original final consonant of the stem can
be considered part of the suffix; surely this could never be correct.
A consonant cannot so dissociate itself from a stem that it belongs to
the next morpheme added! Pawley goes on to mention Capell (1971) as
providing further discussion on final consonant retention in POC, the
reference being to Capell 1971:300-3. It is as well therefore to pass
to this subject immediately.

4.3.1.3.   *FINAL CONSONANT RETENTION*

In his discussion of final consonant retention, Pawley (1972:9)
gives as examples enem *six*; ikan *fish*; lumut *moss*; manuk *bird*; quZan
rain; kulit *skin*; toluʀ *egg*; papan *plank*; puna *root*; qaZan *name* as
examples. These are by no means a full list, of course. The retention
of such final consonants is an outstanding feature of NC and Southern
New Hebridean (SNH), and examples will be given below. Pawley lists
areas in which this retention feature is found, viz., many languages
of Papua New Guinea, Western Solomons, New Caledonia, "and in at least
some languages of the north coast of New Guinea, New Britain, New
Ireland and Southern New Hebrides". He recognises this phenomenon as
a differentiating feature, saying, "On these grounds, then, a large
proportion of the languages belonging to the Oceanic subgroup can be
excluded from Eastern Oceanic". It is clear that retention of final
consonants is an important matter in the process of classification. It
must also point to a comparatively early period of language movement,
for any consonant retained in the SNH must have been present in the
particular stage of the proto-language which lies behind these languages.

The retention areas seem to correspond more or less to the geograph-
ical regions of south-eastern Papua, northern Solomons, and western
Solomons, although not wholly so. There are lacunae in SEP, e.g. the
Suau and Motu regions, a separate subgrouping in SEP (Capell 1943).
So there are in the retention areas. There are also clear boundaries.
The retention area stops at the western Solomon Islands boundary in the
centre of Ysabel Island, and reappears in SNH and southern New Caledonia.
Its north-western boundary is also fairly clear. In the Rabaul (Tuna
or Tolai) region it is present but not in the rest of New Ireland,
although the loss of final syllables is observable resulting in e.g.
*manuk *bird* > man as against Banoni manuɣu, manaʔu. The New Guinea
north coast as a whole represents one of these "shortening" areas which
rules it out from the retention area. Each area has its characteristic

word shapes, e.g. *ikan *fish* > retention areas *ikana- but other areas
*ian. There seems to be always loss of *-k- in this case. Also *manuk
bird > retention area *manugu, but loss area *manu, *man. In this case
there is never any loss of the middle consonant so that *mau results.
/k/ seems to be weaker than /n/.

In some languages final -*C is not permitted, and here such forms as
manu or man may appear. Certain consonant losses seem to go along with
this -*C loss, e.g. possessive 1.sg. -ku, -u, while the retention area
forms often have -ku, -gu. Mota allows -*C; *my father* is na tama-k.
Fijian does not allow -*C; *my father* is na tama-ŋgu or in some dialects
tama-ku. In New Guinea a language such as Malol allows -*C and has
ama-k *my father*.

It thus appears that although the process of -*C retention may seem
to be sporadic, certain other phenomena are linked with its presence or
absence. The uncertain or "mixed" position of some languages also
becomes noticeable when the phonetic phenomena are taken into account.
Yakamul (Meyer 1932) eo *I* < *aku with consonant loss in the -*k-; i
wood < *kayu, along with the presence of -*C in the group; the related
Suain it *we* < *kita; rum *house* < ʀu(ŋ)maq; djal *road* < Zalan. Some-
times a group of languages which show these phenomena may also share
common non-Austronesian (NAN) roots, such as *wiyar *good* in Manus, cf.
Suain hjain; or *ruvei > taboi *give*; *pwayi *speak*, cf. Sio poro *say*.

At the same time some of the correspondences seem to be closer to
PAN than might be expected from the generally "broken down" type of
the words. Words that illustrate this shortness are, e.g., *sun* PAN
*a(n)daw > Sisano, Malol arau but Sori yau, contrast Bel, Swit ad.

Some roots receive a distinctive treatment in the two areas, e.g.
PAN *binay, *babinay *woman*: the longer forms coming into PN as wahine,
is present in Manus as *pihin, *bihin, and in Wogeo as veine, Manam
aine, Bel pain < *pahine, Swit etc. pen. It is very likely that western
languages of the type of Numfor and Windesi where bin is common, may
represent this longer form with loss of the ba- element, but it is
easier to take them as derivatives of *binay.

Two of the most important retention areas are the north-east coast
of SEP: Wedau-Mukawa-Ubir area, and some of the neighbouring islands:
the coast west of Samarai is not such an area. The first named area
is illustrated in Capell 1971:301, Table X. In most cases the -C is
supported by a vowel added, e.g. *(qa)baʀat *north-west monsoon* >
Bwaidoga yavalata; in some languages the consonant is lost but the sup-
porting vowel is present, e.g. *namuk *mosquito* > Dobu namu-a (as against
*ma+takut *fear* > Dobu matauta, where *-k-, as usual, is lost, as also
in iana *fish*. This contrasts with Numfor mkak, which would seem to

represent *ma+ta(ku)t, as *t is usually > k in Numfor). In the SNH and
Southern New Caledonia (SNC) such retention is normal: *manuk *bird*
becomes menuk, etc.; *hiDup *live* gives Eromanga nom-urep *live, life*,
as against the usual Melanesian Austronesian and PN mauri.

A case can well be made out on these grounds for separating Mota and
the Banks Islands as a whole from Pawley's PEO group and including it
in the wider POC languages. It is a region in which final consonants
are allowed, and in many cases the whole root is kept as such, e.g.
Mota lumut-a *moss* < *lumut; wen-a *rain* < *huzan. The subject of the
historical interpretation of retained finals is worth more space than
can be given it here; it needs to be made the subject of a separate
essay which still waits to be written.

Keeping to the brief statement needed at present, it can be said that
there are three stages of phonetic development involved:

(1) the retention of the original -*C;

(2) permitting a final -*C but with the rejection of the entire
syllable after it, as when *laŋit *sky* becomes laŋ;

(3) rejection of final consonants in all cases. This is the stage
which Pawley accepts as normal PEO.

On this basis, then, POC languages would include all those that come
under (1) and (2) above, and the Banks Islands certainly do this. So
do some other areas of the New Hebrides, some of which Pawley accepts
as PEO - the north-eastern islands, for instance such as Omba, and parts
of Malekula including Aulua and the other eastern and southern languages
of the island. It is profitable to read in this connection the relevant
pages of Ray's *Melanesian Island Languages* (Ray 1926), especially those
in which he discusses the characteristics of each group as he comes to
it.

The matter of thematic revivals must not be overlooked here. Thematic
consonants are such as originally belonged to a stem, but are now lost
except when a suffix is added, e.g., *taŋit *weep*, which may become taŋ
or taŋi, but when made transitive, *weep for* becomes taŋi-s-i, reviving
the original final consonant as s. Where this happens, it means that
at the time when the given language developed a separate existence, the
original final consonant was still present but in process of dropping
out unless supported by a following syllable, which would be the case
only in transitive verbs. The forms of nouns that do not take suffixes
are probably safer criteria to use in this connection. The criterion
consonants appear to be final *t, *k, *q and *n of the PAN forms - and
they may incidentally provide material to determine whether -*q is to
be restored for a given root or not. Mota has the possibility also to
add an ending to an original final vowel, as in the case of kpwatu-i

head, as the independent form (cf. kpwatu-k *my head* < POC *(n)patu *head*,
< PAN *batu. However, this is a subject of large possibilities, which
cannot be pursued here.

   Areas showing stage 1 (finals retained) include Tuna and New Ireland,
SNC, SNH, Banks Islands in some instances at least; areas showing stage
2 (finals supported) include parts of SEP, southern Bougainville (Banoni,
Uruava), northern Bougainville-Buka and the western Solomons (Mono,
Mandegusu, Roviana, etc.).

   Most other parts show stage 3 (loss of final original -*C, and re-
jection of finals as a pattern). SEP shows regional distribution of
1 and 2, and along the south coast (Suau-Motu) it shows stage 3 - no
final consonants at all.

   Certain phonetic features are linked by Pawley with his chosen group
of PEO languages. These involve the following features:

   (1) PEO *R and *l fall together in the South-east Solomonic (SES)
languages, and *q is lost. In Fiji *R is lost; this happens also in
Northern New Hebridean (NNH), and Central New Hebridean (CNH).

   (2) San Cristobal and Malaita languages agree in that *t > ∅, *R and
*l merge, *s and *ns > s before high vowels and become t elsewhere. No
other Eastern Oceanic (EO) language reflects *s/ns as t.

   (3) Accretion of s before *a in a number of words (apparently a
closed set). In these Fiji seems to accrete y-, although Pawley does
not mention this. It may be connected with fricative or palatal onset
to *a. In Motu (Papua) initial *a- seems to accrete l- very commonly
(Capell 1971:304-5). Special words picked out in this connection are
*qate *liver*; *ane *white ant*; *ampe *body, presence, near*; *ansan *name*;
*qasu *smoke*; *wanso *sun*, which becomes sato; *tansi *younger brother*;
*qatu *bonito*. Some at least of these words are treated with accretion
of l- in Motu - which is not mentioned as a PEO language.

4.3.2. SUMMARY OF PEO GRAMMAR

   In terms of its contents the following summary follows Pawley's
setting out; in terms of its arrangement it represents some recasting.
It deals first with the syntactic arrangement, then with the verb
phrase, then with the noun phrase. Tables 1 and 2 given below represent
tabulated summaries of Pawley's findings for PEO. He is not responsible
for the shape they have taken here, but it seems a convenient shape in
which contrasts with other types of Oceanic language may be demonstrated.

4.3.2.1. *THE PROPOSITION*

4.3.2.1.1. Verbless Sentences

Verbless sentences occur widely in Oceanic languages as in many other
language groups, and they are important. Strangely enough, Pawley
passes over them with the statement that "sentences without a verb
probably occur, but their structure has not been investigated" (Pawley
1972:40). Something needs to be said about them here, just because
they are an essential part of all the languages - with very few excep-
tions. They consist mainly of two types: identifications, in which
A = B, forming an equation, as in *'this man is my father'*, and descrip-
tives, in which A is B but the two are not the same thing, e.g., *'the
house is green'*. Not all OC languages have both types; in some cases,
especially the descriptive, a "verbal pronoun" of some kind is needed.

4.3.2.1.1.1. *A = B, Equational Sentences*

These are normal in a large number of languages within OC and were
probably not only PEO but POC as well. They are illustrated in Mota
of Banks Islands, iniko natuk *you (are) my child*. o piɣ taɣai *the relish
not*, i.e., *there is no relish (with the food)*. The writer recalls
coming home to his house to find two Mota-speakers had called in his
absence, and left a message saying they had called but iniko taɣai *you
(were) not (there)*. In Fijian again, o iko na luveŋgu *you (are) my
child*; o ðei na rinamu? *who is your mother?*; and in South-East Papua,
Wedau tauna amau *he is my father*; tauna eɣa *he (is or was) not (there)*.
This usage is fairly widespread and is found in WAN also; it may cer-
tainly be taken as part of PAN also. In other areas, such as Gilbertese
there are other ways of expressing the same idea, although equational
sentences exist also.

4.3.2.1.1.2. *Descriptive Sentences*

These may take the A = B form, but less commonly. As a rule, they
require a verbal particle, so that the "adjective" really functions as
a verb, e.g., Fijian: sa lalaŋa na sala *the road is divided* which is
sa lalaŋa na sala vm. *wide the road*, vm. being "verb marker". Simi-
larly, Mota o matesala we tawela *the road is wide*; Wedau eta i dabora
like Gilbertese e rababa te kawai.

4.3.2.1.2. The Verb Phrase in PEO

The regular features of the verb phrase in PEO are summarised in
Table 1 where, in this re-writing, the verb phrase as stem and base

TABLE 1

FEATURES OF PEO STRUCTURE: THE PEO VERB PHRASE

Definition	Contents	Markers
Verb: Kind	Active or stative: see below	Stative verbs may carry a prefix or be unmarked
quantifiers	numerals; some related terms	Not subject to transitivity
prepositional	Limited class often used as carriers for object indication	
Morphological transformations		
1. causative	Shows source or cause of activity; with quantifiers indicates number of times	Prefix *paka-; in other areas *pa-
2. stative	Suffix indicates abundance of quality mentioned	*ka- prefix, in some cases *ma-; activiser -*(C)i-m, -*(c)aki
3. reciprocal	Mutual action or effect	*paʀi-
4. spontaneity	A state self-caused	*ta-, *tapa-.
5. nominalisation	Nouns from verbs	*-na nouns of quality; *-ŋa nouns of action
6. instrument	The tool etc. which produces the action	*i- is very common
Morphology		
Aspect	Complete aspect is frequently marked	No one marker, but usually a particle after the verb, some are WAN as well as PEO
Tense	Marking is often vague, but in some areas tense is clear	e indefinite, non past; i future; ø hortative, imperative
Participles	Largely coincide with stative form	*ma, *ta-, *ka-, but not formed at will of speaker
Imperative	A simple base may often be used	See "Tense"
Negation	A free form as a rule	Derivatives of PAN *si are frequent

are taken first, because it is certainly true for Oceanic (and perhaps
for most other areas of the world's languages) that the verb is basic
to the sentence. While this is true, it is also true that Oceanic verbs
are not used as bare stems, except occasionally as imperatives. A
Fijian parent may say to a child kania! *eat it!* when the child hesitates
or refuses - but even this has the object suffix -a added to the stem;
the imperative marker mo is omitted from before the verb. Even *go away*
would be lako yani- - with the direction marker added.

In Oceanic languages of today a verb phrase usually consists of:

$$VP = \pm Pr_s + Pr_v + S(B)\ [\pm T + Pr_o]$$

which is to be read, "verb phrase consists of an optional personal pro-
noun, followed by an obligatory verbal pronoun (or verb marker, vm.) an
obligatory stem or base, with an optional transitive suffix and an
optional pronoun object". In practice the two last go together - hence
the square brackets. If there is to be an object there will be a trans-
itive suffix, but not otherwise. The optional personal pronoun is used
only for emphasis but the person marker is obligatory whether the sep-
arate subject pronoun is used or not. In the more westerly languages
the person marker is not always used if the subject of a noun, but in
the island languages it is - and this one difference between PEO and
some NGAN languages might serve as one characteristic of PEO as against
non-PEO languages. Sio is one such language in northern New Guinea.

If vm. as "verb marker" may be substituted for "person marker" in
the formula given above, the formula then becomes:

$$VP = \pm Pr_s + vm + S(B)\ [\pm T + Pr_o]$$

Pawley calls these markers "unemphatic subjective pronouns" in his
section 4.1.54.4. (Pawley 1972:42).

In this formula, the first item for convenience of consideration is
the verbal stem or base. These terms are not used interchangeably: the
stem is the bare lexical form; the base is the same form with the rele-
vant transitive suffix added. The Fijian would say au sa rai rawa *I can
see*, but au sa raiða rawa na tamata *I can see the man*; au na raiði iko
I shall see you. The stem will appear in an intransitive sentence, the
base in a transitive one.

Apart from a distinction of stem and base, there will also be a
distinction between simple and derived verbs; Fijian rai *see* is simple;
vaka-rai-ða *show* is derived. Each of these is not only PEO but appar-
ently PAN and therefore POC of all possible kinds. Examples for all
parts of WAN could be adduced also.

The verb stems themselves will divide into (1) stems intransitive
by nature, such as *go, come*, but these will not always coincide with

the English classification; (2) stems transitive by nature, always im-
plying an object even if one is not mentioned, e.g., 'teach' always
implies someone taught. These normally take the transitive suffixes but
sometimes can be used without; as in English *'thou shalt not kill'*, it
is possible to say in Fijian mo kakua ni lamba, without the transitive
suffix used in mo kakua na lambata na tamata koya *thou shalt not kill
that man*. In Nggela, on the other hand, the same commandment is stated
as ko mbei lambutahu tinoni *you shall not kill men*.

Transitive suffixes are treated by Pawley as "subclassification of
verbs" and this is satisfactory to a degree. Formally they consist of
a consonant added to the intransitive stem, followed by a vowel: -Ci
for direct objects and -(C)aki for indirect or remoter objects. A pro-
noun object is usually added to these suffixes as an anticipatory object:
Fijian au sa rai-ð-a na tamata *I see the man*, literally *'I see him the
man'*.

Verb bases are formed by the addition of an affix, normally a prefix,
which modifies its meaning in some way, and these are not only PEO but
traceable back into PAN, and as a rule are to be found in most of the
languages included in this chapter. Pawley gives two such, *paʀi-
'reciprocal' and *paka- 'causative', and *ka- and *ma- stative verb
derivatives. A shorter causative, *pa- will be noticed in the non-PEO
groups.

Another category of apparently verbal constructions listed by Pawley
are "quantifiers" including such words as *pinsa *how many* and *^{m}palu
some. In most of the languages numerals will come under this category,
but in some, numerals are not quantified but classed with prefixes that
fit them into the noun phrase and not the verb phrase. This already has
happened in EIN, where some languages have at least two class prefixes
to numerals. For the bulk of non-PEO languages it is doubtful whether
a special class of quantifiers is needed, although it is in some of them.
In other areas, again, numerals are not only quantified but become verbs
entirely, and are marked for tense, as in some languages of Malekula.

In PEO the morphology of the verb is of the analytical type, the
elements of which, in the written forms of the languages, have generally
been written apart from the verb stem. Tense is not in all or even most
of the languages, the most highly developed feature. Certainly it is
not marked in such detail and such graduations as are found in the NAN
languages of New Guinea. But this is not an essential feature even of
a NAN language, for those in Alor, Timor and the Vogelkop do not have
the elaborate tense systems of central New Guinea. Some Austronesian
languages lay more stress on aspect, but these tend to be languages in
fairly close touch with NAN languages, e.g. Dobu amongst the languages
of SEP.

For tense, Pawley gives *e 'non-past, indefinite'; *i 'future'; and
'zero, plus imperative intonation in verb base': 'hortative'. Actually
there is much more variation in Pawley's own examples than this list
suggests. He himself shows a fairly wide occurrence of *ma as 'non-
future' and there are still others, more common perhaps in POC than in
the eastern groups but not altogether absent from PEO. One such is a
form of the PAN verb *panaw *go* marking future action, and this does
occur in Pawley's NNH group.

The feature of direction marking is also common in PEO: mai shows
movement towards the speaker and atu movement away from him. These are
found on the IN side of the border also as well as being common to both
PEO languages and non-PEO, and they can probably be read into PAN itself
as elements even if perhaps not in the earliest stages of PAN which are
not reconstructible. Other directives are *nsipo *down*, *nsake *up*, and
less commonly (ka)ʀaka *upwards, eastwards*. The last is not WAN, al-
though it is so widely used in eastern OC.

Finally, there are what Pawley calls "prepositional verbs" illustrated
by Mota mule suri-a *go to him*; mule expresses the motion, suri- its
direction, the suffixed pronoun object being added. Certain of these
directional verbs are widespread, such as su(d,lʀ)i *motion to or after
a person*; *(n)tani *motion from*; *muri *to, for, with*. Others occur in
more limited areas, such as vani- *for*.

4.3.2.1.3. The Noun Phrase in PEO

The regular features of the noun phrase in PEO are summarised in
Table 2, which, like Table 1, represents a tabulation of Pawley's dis-
cussion of the most commonly found forms in PEO.

Nouns may be derived or simple as far as form is concerned. Most of
the languages provide suffixes to verb stems by which nouns can be de-
rived, and some of these are quite widespread. One of them Pawley gives
as -*(C)a, -*(C)ana which "transforms" verbs into nouns and concrete
common nouns into nouns with abstract meaning, as Kwara'ae taʔa-ŋaʔa
badness, from taʔa *bad*. There are less common methods that cannot be
ranked as PEO. It is interesting, however, to find -ŋa, the common PN
formative of similar function, performing this task in Manam, to the
north of New Guinea, well outside the PN area.

Common nouns fall into a number of subclasses, which need not be
expanded here, except to remark that many "prepositions" are at base
nouns. Pawley's

*i lalo-∅-na na tamwane
at inside-his art. *man*

TABLE 2

FEATURES OF PEO STRUCTURES: THE NOUN PHRASE

Definition	Contents	Markers
Class - common	Non-persons, animate or inanimate	na before noun; replacement (n)sapa *what?*
personal	Persons only and only when named	a, i before noun; replacement (n)sai *who?*
location	Certain specified relations of place	ta, lalo, papo, etc.
time	Certain specified relations of time	mpoŋi, napi, noʀa, waʀinsa, etc.; 'ana-, 'a
number	Pluralisers of various kinds mark various types of plural	Human noun with preposed 3rd pl. pronoun. Absence of pronoun in singular
focus		
subject	Indicated by pm before verb; in some cases also sm after noun	Short form of pronoun independent of tense; in some areas special form of noun
object	Only if noun is definite is there special marking	Suffixed pronoun as anticipatory object added to governing verb
possession	(a) Subclass of inalienable possession	A short or 'construct' form in some languages; special carriers of suffixes in all
	(b) Subclasses of alienable: 1. neutral; 2. food; 3. drink	
	Others sporadically	

inside the man, lit. *'at his inside the man'* illustrates this, and a
corresponding construction is often found even in languages that are
not only not PEO but have postpositions instead of prepositions, so that
Motu, for instance, can produce tauna lalo-na-i *man the-inside-his-at*
as the equivalent. Even the roots involved are the same, but their
arrangement is quite different. This category is by no means limited
to PEO, but occurs in such definitely non-PEO languages as Eromanga in
SNH. Here the use is seen in ra tan *on the ground* (tan *ground* < PAN
*taneh); but there is also Eromanga ra kita-n *at back-my*, *'behind me'*
and other examples. These categories are nouns in POC also, because
they can add possessive suffixes and be preceded by prepositions.

The chief category distinction is that between personal and non-
personal nouns. This is made plain by the noun markers used with each
class and the distinction is found in all areas of OC and widely in WAN
also. It undoubtedly belongs to an early stage of PAN but not, pre-
sumably, the earliest, before any words of particular function appeared.
It is better to speak of 'noun markers (nm)' than 'articles' since it
is not a matter of definition between *'a'* and *'the'*. In Mota o vat is
just *stone - a* or *the*. If this occurred as a personal name, it would
be i vat *Mr Stone*, wirh iro vat for *Mrs Stone*, and ira vat for the
whole Stone family. These distinctions within the group are not com-
monly taken so far as in Mota but i is a very common person marker of
this kind, and can be traced back to IN *si- so that the distinction of
personal and non-personal nouns is common PAN. Otherwise there is no
common noun marker in PAN, though na- is certainly POC and not entirely
absent from the west.

Morphological number marking is not common, but the tendency to use
a third personal plural pronoun as marking plural number, especially
for people, is widespread. Pawley has reconstructed for PEO *ida na
tamwane *they + nm + man*, but the use of *na tamwane siDa represents
another strand, which is found in the far west (Numfor snu:n-si *people*)
and the central Solomons. This second usage is not common enough to be
called POC; its application to PEO seems to be right, but although
Numfor and its neighbours could hardly be called PEO, they do have this
usage, and it is found also in the eastern parts of Indonesia.

Possession is the most characteristic part of the noun phrase in
Austronesian languages. Here Pawley provides a good basis, though
refinements will appear as the other subgroups are studied. Nouns are
divided into possessive classes, marked by morphemes to which suffixed
pronouns are attached. Pawley gives:

*ka- when the head noun denotes something edible;

*ø- when the head noun indicates something inalienable;

*no when the head noun denotes something neutral.

The inalienable form functions as a direct suffix to the noun stem, and
it would have been better to state this: there seems to be no basis for
treating it as a zero suffix which simply results in the addition of
the suffix to the noun: *lima-ku is the normal form in many areas, and
*lima-ŋku in WAN.   It is not that a previously existing catalyst stem
has been eliminated, but subsequent discussion will show that in PAN
suffixation was the original method of indicating possession of all types
of nouns, and this itself would appear to have developed from juxta-
position of noun and pronoun. Of this more in its place.

It is, in fact, in WAN that the development of the system can be
seen, and undoubtedly Pawley would have developed his sections on this
subject had he been dealing with wider Austronesian (AN) regions than
PEO. In such a WAN language as Malay - though this is actually far from
typical - any noun can take suffixed pronouns, whether it indicates
something 'inalienable' or not: rumah-ku *my house*, buwah-ku *my fruit*,
as much as kepala-ku *my head*. (It also has rumah saja but not rumah
aku but saja = sahaja, a Sanskrit word for *slave, your servant*.) As one
moves east one can see the PEO system developing, and in parts of
Oceania, even of Pawley's region, it is more elaborate than he gives as
PEO. A 'drinkable' class (ma-) is found in some areas, but Pawley is
doubtful whether this should be accepted as PEO or not.

Even in PEO itself the grammar of possession can be quite complicated
and Pawley's assignments must be summarised here even if they do require
some space, so that those found in other parts of OC can be better
understood. Thus:

1. Inalienable possession: Direct suffixation to the noun (elim-
    inating Pawley's *ø- as unjustified); *na tama-mu *your father*;
    note that the noun marker is retained.

2. General possession ('neutral'), *no-: Fijian na no-ŋgu koro 'no
    possession-*my village*', my village. This is very widespread,
    even outside PEO, e.g. found in Mindiri on the Rai Coast of New
    Guinea.

3. Food possession, *ka-, linking with PAN *ka-ni *eat*, and with
    some 'reference' uses developed, e.g., Fijian na kena i talanoa
    the story of him as against na nona i talanoa *the story he tells*.
    These developments are not PEO.
    In some regions again, as in Fiji:

4. Drink possession, *ma-, linking with PAN *ma+inum *drink*.

In Mota one may vary the possessive according to meaning: no-k o matiɣ
my coconut (possessed but not specified in use); ɣa-k o matiɣ *my coconut,
to scrape and eat*; mʷa-k o matiɣ *my coconut, to drink the juice*.

Moreover, special features are found in the syntax of possession when the possessor is a person. Pawley gives:

*ki when the head noun denotes something edible;

*qi when the head noun indicates something inalienable;

*ni when the head noun denotes something neutral.

Differences result also as between inanimate and animate possessors. Here Pawley's examples show *na ndau ni kayu *the leaf of the tree*; *na ka-na ntalo na tamʷane *the man's hand*; but in some areas one can also say *na ntalo ni tamʷane for alienable possession only. In Fijian one says na liŋa i Pita *Peter's hand*, using an i which seems to be the personal noun marker not occurring otherwise in the language.

Mention is made also of numeral classification, which was found, as Pawley holds, in PEO, and this is correct. It will be disregarded generally in the present study, as it seems to be more closely common with PEO than with other parts of OC. In WAN it occurs very widely but not universally, and it occurs in Mon-Khmer and Sinitic languages as well as in other parts of the world.

Finally, the pronominal system must be mentioned under the present heading, as it is part of the noun phrase even though it plays a part in the verb phrase also. Pawley's setting out of the pronominal system as it appears in PEO is given as Table 3 because of its extreme importance in the present study.

TABLE 3

PEO PERSONAL PRONOUNS AS RECONSTRUCTED BY PAWLEY

		Focal	Object	Subject	Possession
Sing.	1.	i-nau	-au, nau	(ŋ)ku	(ŋ)ku
	2.	i-koe	-ko, koe	ko, o	-mu
	3.	inia, ia	-a	na	-na
Pl.	1.excl.	kami	kami	(k,m)ami	-mami
	1.incl.	ki(n)ta	ki(n)ta	(n)ta	-(n)ta
	2.	kam(i)u	kam(i)u	m(i)u	-m(i)u
	3.	(k)ida	-da	da	-nda
Dual	1.excl.	kamidua	kamidua	(ka)midua	-madu
	1.incl.	ki(n)tadua	ki(n)tadua	(n)tadua	-(n)tadua
	2.	kamudua	kamudua	mudu	-mudu
	3.	(k)idadua	(k)idadua	dadua	-ndadua
Trial	1.excl.	kamitolu	kamitolu	(ka)mitolu	-mitolu
	1.incl.	ki(n)tatolu	ki(n)tatolu	(n)tatolu	-(n)tatolu
	2.	kamutolu	kamutolu	mutolu	-mutolu
	3.	(k)idatolu	(k)idatolu	datolu	-ndatolu

Note (to Table 3 on previous page): Pawley describes column 3, subject pronouns, as "the unemphatic subjective personals", noting also that focal forms can also mark subjects. (Pawley 1972:37.)

4.3.3. SUBGROUPS OF THE NON-PEO LANGUAGES

The non-PEO languages will be surveyed from south to north, because in many cases the curious fact is true that they show a form of both word and structure that is closer to the PAN than the more northerly ones. This is particularly true in many instances concerning the shapes of words, because here we find the PAN final consonants more often preserved than further north and west. This seems to be a sort of 'areal' linguistic field in Bonfante or Bartoli's sense and incidentally helps to give some added plausibility to the theory of 'areal linguistics'. The first two groups therefore to be considered are the languages of New Caledonia and the southern New Hebrides. These groups both preserve many PAN final consonants, and perhaps it was that which gave the impression that the two might be fairly closely connected as a subgroup. However, this is not so; in many ways they contrast rather than agree in structure and certainly in phoneme systems. They will be referred to here as NC and SNH respectively. They include:

(a) New Caledonia

These languages have been studied at varying depth over a considerable period, latterly with considerable thoroughness by A.G. Haudricourt, whose analysis (Haudricourt 1965 and 1971) is treated as basic here, but much help in matters of detail may be gained from earlier work by Leenhardt (1946). The languages of the Loyalty Islands are included by both authors, but have been more recently described in detail by Tryon (1967a,b; 1968a,b) with the exception of the PN language of Uvea spoken side by side with Iai. Connection between NC languages and those of Santa Cruz were discussed briefly by Wurm (1970b). No study has yet been made of the relationships of NC languages to those of SNH.

(b) Southern New Hebrides

The languages involved here are those of Aneityum, Tanna and Eromanga. PN languages are spoken on Futuna and Aniwa and these are excluded. Again there is a considerable amount of literature and translated material, but none reaches a high standard, especially for Eromangan.

While all these languages are classified as "Melanesian", they differ greatly amongst themselves in phonetics, morphology, syntax and lexicon, and they diverge widely from PEO. Tryon (1973) gives a very useful preliminary study of the patterning throughout the whole New Hebrides, including the SNH.

4.3.3.1. *LANGUAGES OF NEW CALEDONIA*

These languages divide conveniently into a northern and a southern group, of which the latter is phonetically the more archaic. They differ, however, so much from common OC forms that it has even been questioned whether they are more than non-Austronesian (NAN) languages with Austronesian (AN) borrowings. Although many roots are monosyllabic, and often the PAN material discernible is reduced to its lowest terms, the southern languages tend to retain PAN final consonants, which are as a whole lost in the north. The root *ma+huDip (*living*) is one example of such retention. Haudricourt proposes *mauip for Proto-NC; for SNH the form would be *murep, found in Eromanga as no-murep *life, live*, in Aneityum as umoh, and in Tanna less well preserved. For PAN *ñamuk *mosquito*, Proto-NC (PNC) *na^mbuk is probably related, and so is Eromanga nyomuɣ, while Aneityum i-nyum fits the picture, but there is no common Tanna form.

Structurally the NC languages differ very markedly from any form of OC. Leenhardt's study is helpful here, undertaken as it is from the native viewpoint as far as possible. There is no inflection, but a number of independent particles, which are arranged in various ways in the verb phrase. For Wailu, a not atypical language, Leenhardt writes:

> The interplay of these morphemes is infinite, and allows the expression of aspects of time different from those of our languages. Old people's conversation uses more original morphemes than those of the young. The latter, whose language is impoverished, make use of many adverbs of time, or even verbs which they juxtapose to the action, to give it a place in time.

In other words, the NC languages, unlike those of Tanna and Eromanga, are not inflectional in regard to time or aspect. While Aneityum stands apart, there is in Tanna and Eromanga a rigid and elaborate prefix conjugation which is quite different from NC and OC in general, so that NC and SNH contrast rather than compare on the structural level.

On the phonemic level, NC consonant systems are elaborate. Haudricourt presupposed for PNC six orders of consonants, so modifiable that for Nenema in the north there are 35 phonemes, and Wailu and the deep south still have 25. For the Loyalty Islands, Tryon finds 30 consonants for Nengone, 27 for Dehu and 33 for Iai, including, as in NC, retroflex stops which are not found elsewhere in Melanesia. Stops may be unaspirated or aspirated, pre- or post-nasalised, and nasals may also be unvoiced, and semi-vowels nasalised. Many of these complications are missing from SNH, but Tanna has some of them. In Aneityum there are 19 consonants, in Tanna the Lenakel dialect has 14, without admitting semi-vowels, and western Eromangan 16. In NC all vowels can usually be nasalised. The discussion of these languages will be involved in that

of the SNH group following. In vowel systems, NC languages are much
richer than those of SNH. In NC nasal vowels are frequent, in fact in
many cases all vowels can be nasalised: Wagap has 10 oral and the same
10 nasalised vowels, the Isle of Pines 12 oral and 7 nasals. SNH lan-
guages do not use nasalised vowels, although Eromanga has subphonemic
[õ], and the mixed vowels are very much rarer.

4.3.3.2. *SOUTHERN NEW HEBRIDES SUBGROUP*

It is doubtful whether the term 'subgroup' is quite in place here.
The languages do form a subgroup in terms of shared departures from POC
patterns, but vary tremendously amongst themselves. Aneityum stands
quite apart in the method of conjugation of its verbs and in its PN type
of syntax, with the verb normally first in the sentence, whereas the
other languages have a normally SVO order.

Aneityum agrees syntactically better with NC. Thus for NC Wailu will
serve as an example (D = demonstrative; obj. = object; pl. = pluralizer;
pm. = person marker; pro. = pronoun; S = stem; sub. = subject):

(1) Wailu   go wa na   géña
                pm. S obj. pro.
                I   do it   I   = *'I am doing it'*.

(2) Aneityum   ek aŋo ʔaiñák
                pm. S   pro.
                I   do   I   = *'I am doing it'*.

(3) Wailu   céré wa na   pai   re
                pm.   S obj. sub. D
                they do it   man   this = *'these men do it'*.

(4) Aneityum   era aŋo a   ʔatimi inɩŋki
                pm.   S   pl. sub.   D
                they do   the men   these = *'these men do it'*.

This type is Fijian syntax also, but in Fijian the VOS order applies
only to 3rd person; in SNH Aneityum uses it for all persons, and so does
NC.

In the noun phrase, there is a distinct NC pattern, shared by Aneityum
but not by Tanna or Eromanga and it is certainly not PEO. In NC and
Aneityum there are only two classes of nouns for purposes of indicating
possession, those that take a suffixed pronoun and those that do not.
The following examples show the two classes: Wailu goa-ña *father my*;
moru yiña *life my*; Aneityum etma-k *father my*; nano u-nak *action my*.
Eromangan has the same classes, as also has Efate and most of the
Central NH; Eromanga shows kita-ŋ *back my*; nomurep enyau *life my*. Tanna
departs from this dichotomy and has more classes of possession.

Syntactically, then, NC and Aneityum agree fairly closely, and show
links with the types of Fiji and Polynesia; Tanna and Eromanga follow the

more common type known as 'Melanesian' which is also PEO, and inciden-
tally, general Oceanic and largely IN.

In its method of conjugation, Tanna is completely at variance with
the other languages. It shows a complex system of conjugation that is
practically agglutinative; Tryon (1973) quotes in Lenakel dialect
tneparapəkipa *you* (pl.) *will bring it here soon*; tiashalvənan *we three*
(excl.) *will not try to go*; six sets of morphemes may occur before the
verb and two after it. Eromangan is just as complex as Tanna, but works
on a different system. The point of interest about Eromangan is that
the components of the verb complex are mostly AN in origin, but fre-
quently extremely difficult to place owing to phonemic changes; those
of Tanna usually do not seem to be AN at all.

Moreover, these SNH languages seem to link with parts of Malekula,
usually the south-west - Mewun area in particular. Tryon has made what
seems to be a correct summary in his 1973 paper, when he writes:

> An examination of noun classification suggests that the North
> NH subgroup may be separated from the remainder on the basis
> of shared innovations. The remainder of the NH reveals a
> diversity of noun classification, with the exception of South
> Malekula, Efate, Eromanga, and Aneityum, the languages of which
> manifest only two noun classes.

At the same time it is true to say that Aneityum presents a system
which is unique to the NH, but has parallels in Fiji and PN, as well as
in NC.

There is, then, little basis for including NC and SNH in one sub-
group, but there is certainly a relationship amongst these languages
which only lexicostatistical study could help to clear up - and that
is not possible in the present space. For fuller detail reference
should be made to Tryon's 1973 paper, and as a preliminary his earlier
paper of 1972.

Table 4 takes the vocabulary used by Haudricourt (1971) and adds
the Loyalty Islands languages and those of the southern New Hebrides,
to show the resemblances and differences between them. The Loyalty
Islands languages show perhaps the smallest agreement of any.

Vocabulary of AN origin in the NC and SNH alike is less than in the
PEO regions. It is often well disguised. It would seem that in gen-
eral one set of PAN vocabulary items has migrated; from this set: (1)
certain words appear to be practically universal in Oceanic, or at
least in 'Melanesia'; (2) other words occur in certain areas only;
(3) other words appear scattered, and these may possibly prove to be
constantly associated sets though not necessarily systematically linked;
(4) others again - a large proportion - are limited to WAN and do not
come into the present study, while (5) again others - a small group -

were lost to WAN altogether - words such as *sakay *up*, but some of these
appear in the eastern part of WAN. An example of such a word is the
root shown in Fijian veka *excrete*, which appears in Tuna pekpek and re-
appears in Wetar (near Timor) as peka - but there is no accepted PAN
root *peka, as probably there ought to be.

In SNH there is a complication in that much compounding of roots
seems to have taken place. In some cases both the elements of a com-
pound are AN, in some only one and in some neither - so that this com-
pounding would seem to be largely a local peculiarity of the underlying
pre-AN language(s).

A few examples of this principle of compounding may be given. The
PAN *teluʀ *egg* reaches the New Hebrides, but in SNH each language has
a compound expression, lit. *the little one (of the) bird*: Eromanga na
ɣlən netuɣ, Aneityum nakəlin ca, Lenakel neanahli menuk. In Lenakel
the second element is AN *manuk *bird* but in Aneityum and Eromanga this
root does not appear (although Eromanga has menuɣ, and Lenakel menuk,
while Aneityum has in-man. The first two have kept the AN final con-
sonant, Aneityum has not done so, but in each case the word for *little
one* is not AN). The words for *ear* also illustrate this principle. PAN
*taliŋa is represented by Eromanga teliŋo- and Tanna has the same root,
but compounded with a second element that presumably means *hole*: Lenakel
nepaŋteliŋo- will illustrate the Tanna dialects. One part of the com-
pound is AN, the other is not. For *eye* Aneityum has nesŋanimtan, which
Kern saw was n-esŋa-ni-mta-n *the innermost of his eye*, and he compared
with -esŋa- Javanese (also PAN) teŋah *interior*. Western Eromangan for
sun has nipmi-nen *eye of day*, which is precisely Malay mata-hari, but
presumably not actually derived from it. Possibly Lenakel mit *sun* is
just *eye*, for northern Tanna dialects have miti-ŋar, where the second
element is unexplained. Aneityum na-ŋesəŋa remains as either a compound
that cannot be analysed or a NAN word. The -saŋa part seems to repre-
sent PAN *siŋar *shine*, but this is uncertain.

4.3.3.3. *OTHER AREAS OF THE NEW HEBRIDES*

Pawley includes in his PEO what he calls Proto-North New Hebridean,
which takes in Tolomako on Santo along with Nogugu on the same island,
i.e. north Santo as a whole, Tangoa and Tasiriki in south Santo, and in
Banks Islands, Mota, Merlav, Lakon, and Volow; among the north-eastern
islands he includes Maewo, Oba and north Raga. This is the northern
section. He also includes Proto-Central New Hebridean, which he thinks
may include Aulua on eastern Malekula, and does include Baki and Tasiko
on Epi, and Sesake and Nguna farther south. This is a rather eclectic
set of languages.

TABLE 4: COMPARISON OF SOUND CORRESPONDENCES BETWEEN NEW CALEDONIA AND THE SOUTHERN NEW HEBRIDES
(ADAPTED FROM HAUDRICOURT 1971:359-97)

ENGLISH	PAN	PNC	DEHU	NENGONE	IAI	ANEITYUM	LENAKEL	KWAMERA	IKYAU	E. TANNA	N. TANNA	W. EROMANGA	N. EROMANGA
1. yam	ubi	quplq	koko	(wa)koko	u	nu	nu	nuk	(ŋ)uk	nu	nanup	nup	nup
2. rain	hud'an	quca	maní	lele	we	(in)gopθa	nihin	nesan	nehen	nuɣan	nuɣan	nehe, nevip	nerev'nip
3. liver	hate	qate	idefit	gu?at	ak	mopon	nakanmap	nakanmopon	kahip	naiŋmapun	naɲan namɓak	mou	maŋkllemil
4. sand	heni	qone	ŋöni	gumin	öñ	nauanaviŋ	nãmakalakai	nepaker	neŋakalakal	napakil	'makalakal	'naravin	'nalavil
5. roast, burn	tunu	tunu	uf	adjoni	ōlo	ahen	-van	-avani	-awan	-awan	-uan	netul	
6. stand	Diɲi, (t)uhuD	tuqu	člle	puča	to:t	aici	-ail	-arer	-təl	-atul	-atul	-tur, -tuy	-(wan)de
7. younger sibling	a(ŋ)Zi	taci	čipa	čeiwayen	keiñ	etuan	noɲan	pian	pian	plan	pian	ava(n) sai	ava(n) sai
8. ear	tellŋa	ⁿdaliŋa	ɲaɲeŋã	aɖaiwo	ɡ̃lkönen	intikɲan	(nema)telŋan	nepreŋen	nãmatalŋan	nemataiiŋan	mandalŋan	'teleŋon	'deliŋin
9. belly	tiyan	tiyan	ɡi	ur	ñekan	netŋan	netpan	kuβön	təβon	narfwan	nanapan	netnin	dovon
10. three	telu	telu	könl	ten	kun	eseic	kəpil	kahar	kəsisai	kəsal	kəsal	de:səl	(ŋ)gehell
11. eat	ka(e)n(i)	kani	xen	kaka	han	yaiŋ	-kən	-ani	-an	-an	-ŋwan	-eni	-geni
12. tree	kayu	kai	sinö	arel	üö	(in)yal	nak	nei	nai	niŋi	nen	ne:	ni
13. louse	kutu	kutu	ötä	ato	uto	(ne)yet	kur	ur	kel	keŋlt	kuri	no'yut	wit
14. skin	kullt	kull	kupeln	nenun	unen	narasin	naviŋ	teken	tekin	nosin	nalo:sin	noyoiis	noyodesin
15. breadfruit	kuiu(L)	kulu	wenön	yeon	öun	nohowanna	nam	nemar	nəmal	nemei	name	na'mar	
16. mosquito	ñamuk	naᵐbuk	ṭesit	nine	minö	inyum	mumuk	m̃i	m̃əm̃ok	m̃uñaŋ	kəmaŋ	ñomuy	yomoy
17. bird	manuk	manuk	wačo	iadede¹	meno	(in)man	menuk	manu	mänlŋ	manlŋ	ma'noy	'unuwa	
18. leaf	Daun	ⁿdau	ɡ̃ön	rune	lan	nerin	nema	nema(i nel)	nemalin	nema nati	nemall neŋ	no:wan ne:	nimba'liŋan ni
19. ashes	Dabuk	ⁿdapu	gatesid	čekol	dön	nohpa	nam'rau	nam'ţak	nemlau	naŋtak	nãmtap	noŋkevu	
20. blood	Darah	ⁿdaa	məda	ɖa	ɖa	(in)ča	na'ta	na'ta	na'tau	ne'ran	ndan	(n)de:	(n)de:
21. forehead	Daqey	ⁿdaqe	ɡöpadi	gubadi	barin	nipčinimtan	nanpa:nan-	nuɓa:nen	nupunan	nepanaŋan	rakamɓa	na'fi:nin	na'funln
22. two	Duwa	ṭua	lua	rewe	lo	ero	kiju	karu	kəlalu	kaju	kaju	(n)duru	(ŋ)gelu
23. road	Zalan	ⁿjala	goɓeñ	lene	ɡeɓen	nefalaiŋ	suatu	suatuk	suatuk	suaru	suandəp	sə'lat	nale'lan
24. spear	culigi	ⁿjau	lɖo	čače	ö	(in)mopul	suk	nitel	kwagau	ne'rau	suk	sau	
25. bone	(DuRi)	ⁿjui	ɖun	dun	neθuon	nakalkelin	nakak kirin	nakalkelin	nəkik kilin	nakiikilin	no'wi:		
26. breast	susu	cucu	θi	mimi	basin	(in)ritln	naha-n	naɡön	nahin	nahan	nahan	ni:	
27. who?	sayi	cal	deti	la	ia	(a)ɖi	pehe	sin	pae	pah	ⁿpa	me:	
28. name	azan	jaca	eɖen	yelen	ien	nlɖan	netŋan	naŋen	gaŋen	'narŋan	narŋan	nln	nivan
29. coconut	nijuR	nlu	nu	wa-nu	wa-nu	nesŋanevaiŋ	nien	napue ŋia	nakian	nlen	nlen	noyi	
30. mosquito	namuk	naᵐbuk	ṭesit	nine	minö	inyum	mumuk	m̃i	m̃əm̃ok	m̃uñaŋ	kəmaŋ	ñomuy	jomuy
31. child	(natu)	natu	nekön	morow	nokon	(in)haiav	neri	nare	nali	netl	netin	netni	nehnl
32. fly (n.)	laŋaw	laŋo	neŋ	neŋo	wa-ño	inlaŋ	kiaŋ	iaŋ	yelaŋ	kiaŋ	klen	uloŋ	ulen
33. fish	ikan, iahuk	lauq	i	wa?i	wo	numu	nam	namu	kam̃añ	namu	nom	nomu	unomu
34. five	lima	llma	ṭipi	(wase)doŋ	θabun	meleθ	katllum	keriram	kaikaiip	karilam	karlllam	sukrim	süelem
35. stingray	paRi	pai	e	wəbeiŋo		nlrinara	va'rau	waraku	iaku	pelaw	m̃atkatəm	uvar	
36. turtle	peñuh	ponu	dalue	(gu)cewen	uñ	nahau	lau	laku	iou	iau	na'vau	ja'vu	
37. stone	batu	patu	etä	ete	üeto	(in)hat	koɓiel	kaɓur	kaɓiel	kaɓiel	kambiel	na'vat	na'vat
38. hair	buhuk	puiu	ihe	ie-hawo	leün	numrin	nouanu	nuKanen	nuKonen	nawanun	nanun	nove'lim-pu	nava'liŋan
39. four	empat	pate	eke	eke	üak	mlčman	kuvər	kata	kawet	kawet	kawet	(n)da'vat	'lemelu
40. star	bituee	patuqu	watesiɖ	wadjekol	oxü	(in)moičöv	manau	kahamau	kem̃au	m̃ahau	m̃oho	mosi	umse
41. die	matay	mate	mečln	taŋo	mokeu	mas	-mas	-əma	-m̃a	-mis	-əmas	-mas	-mis
42. left (hand)	matwiri	(ma)maui	wəmi	ŋoroŋl	meñ	(in)maun	mul	maur	məwul	məwul	məwul	mo:r	
43. bird	manuk	manuk	wačo	wa?ia¹	meno	(in)man	menuk	manu	manlŋ	mänlŋ	ma'nuy	'uruwe	
44. bat		ᵐbueke	θiľä	wateto		nekrei		kiri	kilvən	kel	kai	naŋkaral	
45. night	baŋi	ᵐbyeŋi	ɖid	rid	lit	(ne)pliŋ	l-apən	napan	yänpaŋ	leŋaiyu	lamben	pumroy	benbeia
46. long	(p)anzaŋ	ᵐbualu(lu)	yea	lwe	beü	opra	aɓohun	-apam̃es	lapaŋ	aɓam̃a	kajimpamai	tantop	laupe
47. head	ulu	ᵐbua	he	hawo	ban	(ni)pen	kaɓa	nuKapen	kapakaɓa	kaɓa	kamba	nompun	nombun
48. mouth, hole	babah	papua	ẅä	tubeneɲoč	ɡ̃imen	(n)öysen	noua-	naKa-	nelen	naulin	noɡ̃ln	naveran	naveran
49. house	Rumah	uma	uma	ŋa	uma	(ne)lm, (ne)yom	(n) lm̃a	nlm̃a	nlm̃a	nlm̃a	n lm̃a	nimo	uvurek
50. live	ma+huDip	maulp	mel	rol	m̃öt	(u)moh	ami'uh	-am̃uru	-amiaŋ	-aniaŋi	-amleŋah	-murep	-merep
51. fish	ikan, lahuk	lauq	i	wa?i	wo	numu	nam	namu	kam̃añ	namu	nom	nomu	unomu
52. swim	laŋuy	kakaumu	aɖ	al	hai	aŋaŋ	-aik, -sai	-alai	-vämal	-ayiŋ	wəmaln	-my	
53. leaf	Daun	ⁿdau	ɡ̃ön	rune	lan	(ne)rin	nema-	nema(i nei)	nemalin	nema nati	nemali neŋ	noŋkelin ne:	nimbaliŋn nl:

¹meni = owl

Tryon, in his 1972 paper, had made a division into what he called the Oceanic type and the Melanesian type. The former agreed roughly with Pawley's PEO languages, the other embraced all the remainder. He characterised the latter group by certain features: (1) often a complex phonology with up to ten vowels; (2) complex consonant clustering; (3) complex noun morphology; (4) complex verb morphology; (5) a rather different word store from the other languages.

This second grouping of Tryon's has been examined in the preceding section as far as the SNH was concerned. An examination of the languages of Malekula would show that these also belong to the same group. There is some vocabulary agreement between Eromanga and Mewun (S.W. Malekula) that demands explanation, but the structures of the two languages are not very closely alike.

In this connection, however, the present writer feels inclined to disagree about the Banks Islands and NNH languages as parts of PEO. They show a considerable amount of vocabulary in common which is not common elsewhere. In his comparative vocabulary Pawley (1972:91-7) sets out thirty-three words in each of the languages which he accepts as PEO. Of these, a number are common to the Banks Islands languages and to most of the NNH languages. These number twenty-two, which do not in most cases even resemble the PPN, and could not have been components of the language from which PPN is derived. As a matter of fact, it seems very difficult to accept the whole theory on which such 'proto-' restorations are based. Something will be said about this at the end of the chapter. Accepting it meanwhile, the differences between these NNH and Banks Islands languages and the others (especially Central Solomons) are much greater than Pawley seems to have reckoned.

In Pawley 1972:91-7, vocabularies of words in each of the languages treated as PEO are given. There are thirty-two words, for which equivalents are given in Proto-Polynesian (PPN) and then in the individual languages. The languages of the Banks Islands and those of the NNH form a fairly solid block as far as vocabulary is concerned, and of the words in the lists, thirty-three in number, no less than twenty-three differ from the common stock. These words are as follows:

1.	*banana*	vetal	8.	*finger*	pisu
2.	*belly*	topwa	9.	*fowl*	toa
3.	*black*	naeto	10.	*good*	(p)wia
4.	*body*	turi-	11.	*hand*	pane-/gave
5.	*coconut*	mati	12.	*man*	ta-nun, ta-tun
6.	*ear*	qoro	13.	*mouth*	vala-
7.	*face*	nago	14.	*nose*	matu-

15. *rain*	raŋi	20. *spear*	sari-
16. *rat*	gasuwe	21. *spit*	anus(u), loto
17. *road*	mate-sala	22. *sun*	aso
18. *sea*	lama	23. *tongue*	me-
19. *skin*	vini-		

It is not being said that these are not good AN words - they are, but simply that they do not fit in the surroundings assigned them, in other words, they are not part of the PEO complex being presented and that as far as vocabulary alone is concerned, these languages do not belong to the PEO group; they are one of the 'other groups'. In fact some of the words have Solomon Islands occurrences; in one instance - No.12, *man*, the forms are of historical interest. For *man* a common WAN form is *taw + *matah *person-ripe*, i.e. *adult*. This form occurs in eastern WAN as taumata, tamata, and in that form reaches Fiji and in a slightly variant form is PN taŋata. This is also one of the PAN words subject to the labiovelarisation implied in the use of ŋm in Grace's script. But the Mota word ta-nun is *man real*, a different compound. Likewise, raŋi is PAN *laŋit *sky*, but with a change of meaning which is found elsewhere - e.g. in Buka. It does not belong in the same series as *taŋata. For No.11, *hand*, forms of pane- go back to a meaning *wing*, and forms of gave- seem to go back to a verb *grasp* (Eromangan no-ɣoven, and have nothing to do with the *lIma root which characterises PEO). No.17, *road* mate-sala, is the *eye of the way*, a local compound. No.21, loto, for *spit*,is found in Roviana loro and again is in the wrong company.

The word for *man* in the NNH is a form of atatu(n), reduced in Tolomako (Santo) to ta or ata. This recalls ata, the word for *man* in the Eastern Indonesian areas - Seran, Flores, Timor, etc. If this indication can be accepted, atatu(n) is then to be regarded as *ata *man* + *tu-na *true*, *real* and compared with Tolai tu-na, of the same meaning, and so equivalent to Mota ta-nun, in which the second component is different but looks like a verbalised form of tuna (i.e. (ŋ)tuna). If the initial vowel of (a)ta is disregarded, then it may leave ta < *taw and so fit better with Mota, but the problem then would be to explain where the initial vowel comes from. In any case, both words for *man* should be dissociated from *taŋata. Another word that is not PEO, Mota lama *sea* has a direct comparative in Roviana lamana.

It should in all this be said that Pawley shows a deal of hesitation about the Banks Islands-NNH subgroup. He writes (after declaring for the subgrouping):

> Still, it must also be said that a few bits of conflicting
> evidence were encountered. These seem to be most satisfactorily

> accommodated by assuming that Proto-North Hebridean-Central
> Pacific was a dialect complex, spoken in the New Hebrides,
> and that North Hebridean languages remained part of a dialect
> chain for a period after separating from Central Pacific.
> (Pawley 1972:136)

On the other hand, it does seem extremely risky to base a difference
of subgroups on the loss of *R as the one criterion, especially as this
seems to have been rather a weak phoneme in OC as a whole.

It is perhaps worth considering that Banks Islands-NNH may not be a
part of PEO. There can be no disagreement with Pawley's verdict on SNH
when he says on the same page:

> We also differ from Grace in excluding the Southern New
> Hebrides languages from our North New Hebridean-Central
> Pacific group. Indeed, these languages do not even meet
> the criteria for inclusion in Eastern Oceanic.

The implication of this last statement will be considered in the summary
(4.3.4.1.). In the present chapter they are definitely not regarded as
part of PEO but as belonging to something much older, to the very first
movement of Austronesians into the Pacific. This may actually lend
support to the idea of the New Hebrides as a 'homeland' although it is
not intended to do so. It is clear that Aneityum has been influenced
from a source very close to PPN. The presence of four numbers in the
SNH pronouns, including formations in Tanna with final consonant rep-
resenting a quadruple number would link this with the PN Futuna-Aniwa
(but not Mele or Mae) showing the full pronoun set, while other traits
which cannot be detailed here would suggest that the Philippine stratum
(to be mentioned in 4.3.4.1.) would be involved with this.

The grammatical listings on the preceding pages also suggest that
although the Banks Islands-NNH languages belong to the same Oceanic
family as the PEO group they form in themselves a consistently different
grammatical pattern to be separated from it. They, for instance, present
the reciprocal prefix *paRi- in its longer form, which is found in New
Britain, Roviana and other places to the west, but nowhere else in the
eastern region - not east of the Solomons, and in fact the only occur-
rence east of New Georgia is the occasional use of hari- in Arosi to
indicate combined action. Futures involving i are found in Waya Fijian
and then in Tolomako (north Santo), Oba and NNH, fairly generally in a
few spots in the south-eastern Solomons; they are the final break-down
of the PAN *panaw go, as appears when the NNH forms are studied in
detail. The use of ma as a tense formant, usually past or at least
aorist, is a feature of these languages, found more or less fossilised
in parts of Fiji (it is now found only in the older poetry such as the
Nakauvandra suite) and does not belong anywhere else in the PEO complex.
Quite a number of other features in these pages which cannot be dealt

with here in detail also seem to justify setting these languages in a
separate group, rather than classing them with PEO.

4.3.3.4. *SANTA CRUZ AUSTRONESIAN LANGUAGES*

The languages of Santa Cruz and the Reef Islands which are believed
to be Papuan (and members of the East Papuan Phylum - see (I) 2.13.1.)),
though very heavily influenced by Austronesian are dealt with in a sep-
arate chapter of this volume by S.A. Wurm (4.5.3.) and therefore need
not be discussed in this chapter. The Austronesian languages of the
islands of Vanikoro and Utupua do at any rate appear not to be parts
of the PEO group, but standing very largely by themselves.

4.3.3.5. *WESTERN SOLOMONS AND SOUTH BOUGAINVILLE*

The languages of the area between Ysabel Island and Bougainville
Island in the Solomon Islands stand out as non-PEO in a number of as-
pects. They are not particularly different in their sound systems, but
a number of phonological features are to be noticed. Their morphology
is different from that of languages farther south and farther west, and
so, for that matter, does their syntax, although this last may not be
diagnostic. Vocabulary items are very different from those that were
thought of in 4.3.3.3., although there are some obvious connections with
the Banks Islands and NNH languages to be seen in Roviana.

The subjects to be considered in the present section are (1) Phonology,
(2) Morphology, and (3) Lexicon. Any of these could be studied in
greater detail; the present section is an indication rather than an
exposition.

4.3.3.5.1. Phonologies of the Western Solomons

The languages here grouped for convenience sake as 'Western Solomons'
are by no means a unity. The languages of New Georgia are distinct from
those of Choiseul, although there are resemblances that link them rather
closely. The Mono languages of the Bougainville Straits stand quite
apart from both New Georgia and Choiseul though just as far from PEO.
The few Austronesian languages of southern Bougainville are different
again but show traits that suggest close connection with, if not origin
from, the Western Solomon Islands. Another fairly well documented lan-
guage is Mandegusu of Eddystone Island.

A short lexicostatistical study of the languages of New Georgia and
Choiseul was published by Capell (1968), and notes are included in the
same author's 'Austronesian Languages of Australian New Guinea' (Capell
1971:274-82) for Buka and Bougainville only.

The phonologies of these languages show agreement in having /z/, which is otherwise rare in Oceania and is not presumed to be part of PEO. It is limited to the Western Solomons (WS) and does not appear either in Mono or in Bougainville. The Choiseul languages also have a mixed vowel transcribed generally as ö, which is an unrounded central- ised vowel that varies slightly in different areas. Kuboro on Choiseul shows also ü. The languages agree in rejecting closed syllables and final consonants.

The lexicostatistical study showed an 11.5% agreement between Roviana and Babatana, 22% agreement between Roviana and Kia on the western end of Ysabel, and 17% agreement between Kia and Babatana. Mono, however, registers only 6% with Babatana and 13% with Kia. It is noteworthy that almost all the cognates on which these figures rest are AN words. Although the percentage of AN in all the languages seems to be compar- atively small, it depends almost wholly on AN; if they were uninfluenced by AN sources, and were "NAN" languages, they would appear to be almost totally unrelated. S.H. Ray made a similar remark, concerning Babatana: he wrote: "The vocabularies show a connection with Roviana in which a majority of similar words are apparently of Indonesian (= AN) origin". (Ray 1926:567).

Of the Babatana words in Capell's 100-word list, only about half a dozen can be regarded as AN and this allows for some difficult sound changes. It is presumed for instance that *kutu *louse* is represented in Babatana vutu, Ririo vüc, Sisingga votu, through Kuboro and Varise utu. The percentage of AN in Mono seems higher, but again there are difficult sound changes, e.g. lulu *breast*, would represent *susu only through a mediating *ruru, which is documented elsewhere than in the Western Solomons. Similarly, ulili *skin* < *kulit raises problems, as does voi *night* if it is to be linked with *(m)beŋi. Roviana, on the other hand, shows 21 AN roots in the 100-word list. For Kia the number of AN roots does not seem to be more than 15, and the phonetic changes are not as great as in Mono.

The retention of final consonants from AN words has already been mentioned in this chapter in several connections, and this Western Solomons region is characterised by this type of word. PAN *ikan *fish*, for instance occurs as iɣana, iʔana throughout most of the region and in the Bougainville, Buka languages also (Capell 1971:278). Languages that do not permit final consonants must either drop them or strengthen them, and in the Western Solomons region the preferred choice is their strengthening through the addition of a vowel that tends to harmonise with the root vowel, as in Roviana mataɣutu *fear* < PAN *matakut. In some cases there have been shifts of meaning: one such is Vagua (Choiseul)

manava *liver*. This root is treated by Dempwolff as *ma+ñawa, and it
comes into Polynesian as manawa *belly*, which is entered by Grace (1969)
in his finder list as a PEO root in this sense. The change of meaning
may have something to do with local ideas about the seat of life: the
question has apparently not been asked. The word manawa occurs very
sporadically in Oceanic as *belly* apart from PN - for instance in some
languages of the north-eastern coast of Papua, but in Melanesia it re-
mains rather rare. *Liver*, however, is in Babatana mömöni, and Kuboro
mümüni, which seems to compare with PAN *miñak, POC *mona(k) *fat*. The
normal PAN *qatay *liver* is found only in Mono in this region.

On the whole the differentiating feature is not the type of sound
system - apart from the mixed vowels that mark off the Western Solomons
languages, but the small proportion of observable AN words. This indi-
cates that some attention should be given to the lexicon, as has been
said above, but structure will be considered briefly first.

4.3.3.5.2. Morphology of the Western Solomons Languages

Of the many points in morphology where the Western Solomons languages
do not agree with PEO, the first outstanding point is the pronoun. A
few examples are given in the following Table 5:

TABLE 5
PRONOUNS IN SOME WESTERN SOLOMONS LANGUAGES

English	Kia	Roviana	Varise	Babatana	Mono	Teop	Halia
I	aro	arau	ira	ra	maha	ena	alia
thou	ago	agoe	aro	re	malto	ean	alö
he	mani	asa	ia	göi	-	eve	all
we (incl.)	igita	gita	ita	zita	maita	eara	ara
we (excl.)	gai	gami	rami	rami	mami	enam	alam
you	gau	gamu	ramu	ramu	maaŋ	eam	alimiu
they	maneri	arini	irla	zira	-	eori	nori

The g's in the above are all fricatives; Kia 3rd singular and plural
are loans from Bugotu.

These sets of pronouns are characteristic of the Western Solomons
including Bougainville and Buka languages, in their deviation from the
common AN forms, but the types of the deviations differ from language
to language. The differences are chiefly in the singular forms. The
southern languages have introduced an -r- before the stem: Roviana
a-r-au for PAN *aku, for which the PEO is *i-n-au. In each case the
PAN *aku has shrunk to -au, which in PEO is preceded by the 'personal
article' i, plus an -n- which could represent the common noun marker na

(though one would not commit oneself to this); the Western Solomons
languages have added a, another very common 'personal article'. The
-r- is peculiar and so far not explained. If Roviana arini *they* is
broken down into a- + rini, the -ri- would invite comparison with PEO
*(k)ida + ni, which latter could be a demonstrative. It lies within
the PEO group rather than the si group of Papua and EIN. In the north-
ern Bougainville series, Teop uses a base e- on which to construct its
pronouns; the endings, -na, -an, -ve are suffixed pronouns which serve
as possessives: with e-ve *he* compare te-ve *his*. The change of -t- to
-r- in the 1st plural inclusive is shared by the northern languages but
not by the southern. Mono, again, has its own forms; a base ma- serves
to build the pronouns on, and the roots undergo certain changes. In
fact ma-ha *I*, even if divided m-aha (less likely) would not seem to be
cognate with *aku. The Torau inau is quite PEO, but Uruava aria fits
the Western Solomons pattern better.

None of these languages except New Georgia seem to have the food and
drink possessives ke- and ma- and even New Georgia does not have the
drink forms. In fact, Roviana has quite deviant forms of possessive
expression, which cannot be studied here. They seem to be purely local
formations and are certainly not in the PEO tradition, nor for that
matter in any other OC tradition either.

Verbal systems also are peculiar to the area; they differ from region
to region and do not seem to be of AN origin, by and large, at all.
Roviana marking of future time by preposed kangu and completive by pre-
posed ele are examples of these differences. The northern languages of
Teop and Buka have different systems again, all of which appear to be
local formations, probably pre-AN. For brief remarks on these see Capell
1971:276-7.   The Buka systems are particularly interesting. Petats
is illustrated in the article just mentioned; Halia is simpler and is
shown in Allen 1971:65.   It is based on a division of past and non-
past, in which the past is unmarked except for the occurrence of a
verbal pronoun before the verb. Non-past is marked by the same verbal
pronouns, but a suffix is added to the verb - it is identical with the
possessive suffixes used with inalienably possessed nouns.

The Oceanic SVO order prevails in the syntax of all these languages,
whose morphological structure and syntax are both quite simple. They
draw the student's attention by the extent of their departure from PEO
types.

What has been said above is sufficient to mark these Western Solomons
languages off as a group by themselves. The southern and northern sub-
groups do not seem to be dependent on each other, and grouping them
both together here as Western Solomons languages is linguistically

inaccurate and not final. It is done only by way of exclusion from
PEO. The problem of their real nature has not yet been considered.

4.3.3.5.3. Lexicon in the Western Solomons Languages

The discussion of sound systems has already carried with it inci-
dentally some discussion of the words in which the phonemes occur. The
point was made that the AN content in the Western Solomons languages
seems to be relatively small - Ray made this observation in his *The
Melanesian Island Languages* (Ray 1926) - and it is necessary to add that
a different selection of AN vocabulary seems to have been made in dif-
ferent parts of the western islands. This point is brought out in
Capell 1968, where it is remarked in one place that

> The Mono-Sisingga comparison is also 12% but the content of
> the agreements is considerably different from those of the
> previous lists; the (shared) words are almost all AN, but
> are a different set, including now 'ashes', 'belly', 'ear',
> 'head' and 'tree' which have not appeared before. (Capell
> 1968:16)

This means of course that they are chosen from a whole POC language, not
just words picked up from passers-by. Moreover, the words as they came
to this region were complete, inasmuch as some final consonants are
strengthened with the usual added harmonic vowel, as in Mono lamutu
root PAN *be hairy*, which is an alternative to *vakaḷ, and the only
occurrence of this root in the Western Solomons: *vakaḷ did not obtain
currency anywhere, but *lambut did so in this one language.

Of the twenty words in these languages given in Capell 1971:277-8,
most of the Western Solomons languages seem to agree in having or not
having a certain PAN root; thus *ʀumah occurs in all of them for *house*
and the other possible roots *balay and *banuma do not appear. On the
other hand *bulan *moon* does not appear at all - the words are all NAN.
In the case of *quzan *rain* the word occurs only in the north (Timputs
and Hahon) and south of Bougainville (Torau and Uruava), but the bulk
of the Buka languages use *laŋit *sky* as laŋits in a transferred meaning
and with retention of final consonant with a supporting vowel only in
Lontis laŋitsi. Words for *water* are based on *danum, not on *wayeʀ
where they are AN at all, and this recalls northern New Guinea usage.

Some less common AN roots (as far as Oceania is concerned) appear
here also; for *dog* *asu is found in Buka and north Bougainville, where-
as Grace's PEO *(ŋ)kaun seems to be present in Torau kaukau and possibly
in Mono auwau (which suggests Wedau - Papua - auwou, Mukawa kakou and
Gapapaiwa koukou). There is a chance, however, that these words are
onomatopoeic rather than derivatives of the PEO root. The general
Western Solomons word for *dog* is siki, which is NAN. *Head, ear,* and

hand are present almost without exception but with considerable phonetic
change in some areas of the Buka-Bougainville subgroup. In New Georgia
all three roots are present but with exceptions; in Choiseul *hand* is
rare but the other two words are common, while in Mono and the islands
west of New Georgia the situation is much as in Choiseul. Torau and
Uruava contrast strongly with Buka both in structure and in vocabulary.
Teop provides a sort of stepping-stone between them. It has been sug-
gested that the Torau people and their relatives along the Bougainville
east coast have come from the Western Solomons region as migrants.
Considering the older warfare, carried out in large and well-fitted
canoes - whose very manufacture is now largely forgotten - this could
well be true, though there is no direct evidence for it. One important
point in assessing this is the existence in the Western Solomons of the
infix -in- which, so frequent in Indonesia and especially the Philippines
as a passive formant, is present in the Western Solomons languages as
an active formant of verbal nouns, and is applied to words which are
NAN: Babatana kera *sing*; k-in-era *song*. The root *kera is found in the
Bougainville area, but no evidence is shown for *kinera, but this may
be only part of the imperfect documentation.

These remarks are sufficient to make it clear that in Buka-
Bougainville-Western Solomons there is a different 'basic' AN involved,
one that is widespread and apparently originally in use as a language,
from which the local peoples have taken a good deal, but which they
seem to have learned only indifferently.

4.3.3.6. *NEW GUINEA AUSTRONESIAN*

The present writer has already written so much about NGAN both in
earlier work (Capell 1969, 1971) and in this present volume (see 4.1.)
that only a more or less diagrammatical summary is called for now, with
some comments where necessary.

First, with regard to his subdivision into AN_1 and AN_2. This has
been controverted by some writers, including those in the present
volume. It does, however, seem to represent something real. As a
phenomenon it is certainly a fact. Some languages do have an SVO order
and some do have SOV. Even though there is not a complete dichotomy,
it will seem clear that SOV is usually accompanied by postpositions
and SVO by prepositions, and there are often different arrangements in
the equational and descriptive sentences, so that if it is recognised
that AN_2 may involve a complex of features, the absence of one of them
does not invalidate the division. It is therefore maintained in the
present chapter, and it does serve to point out certain specific types

Geelvink Bay Vogelkop,
Bomberai Peninsula

Sarmi Coast

Humboldt Bay

Jayapura

Wewak

ADMIRALTY IS

Manus I

AN₁

NEW IRELAND

Rabaul

Buka I

IRIAN JAYA

PAPUA
NEW GUINEA

Madang

Sio

NEW BRITAIN

BOUGAINVILLE

Markham R   Lae
            Huon Gulf

AN₂

TROBRIAND IS

Port Moresby

MILNE BAY

Sudest I

—··—··— Intermediate between **AN₁** and **AN₂**
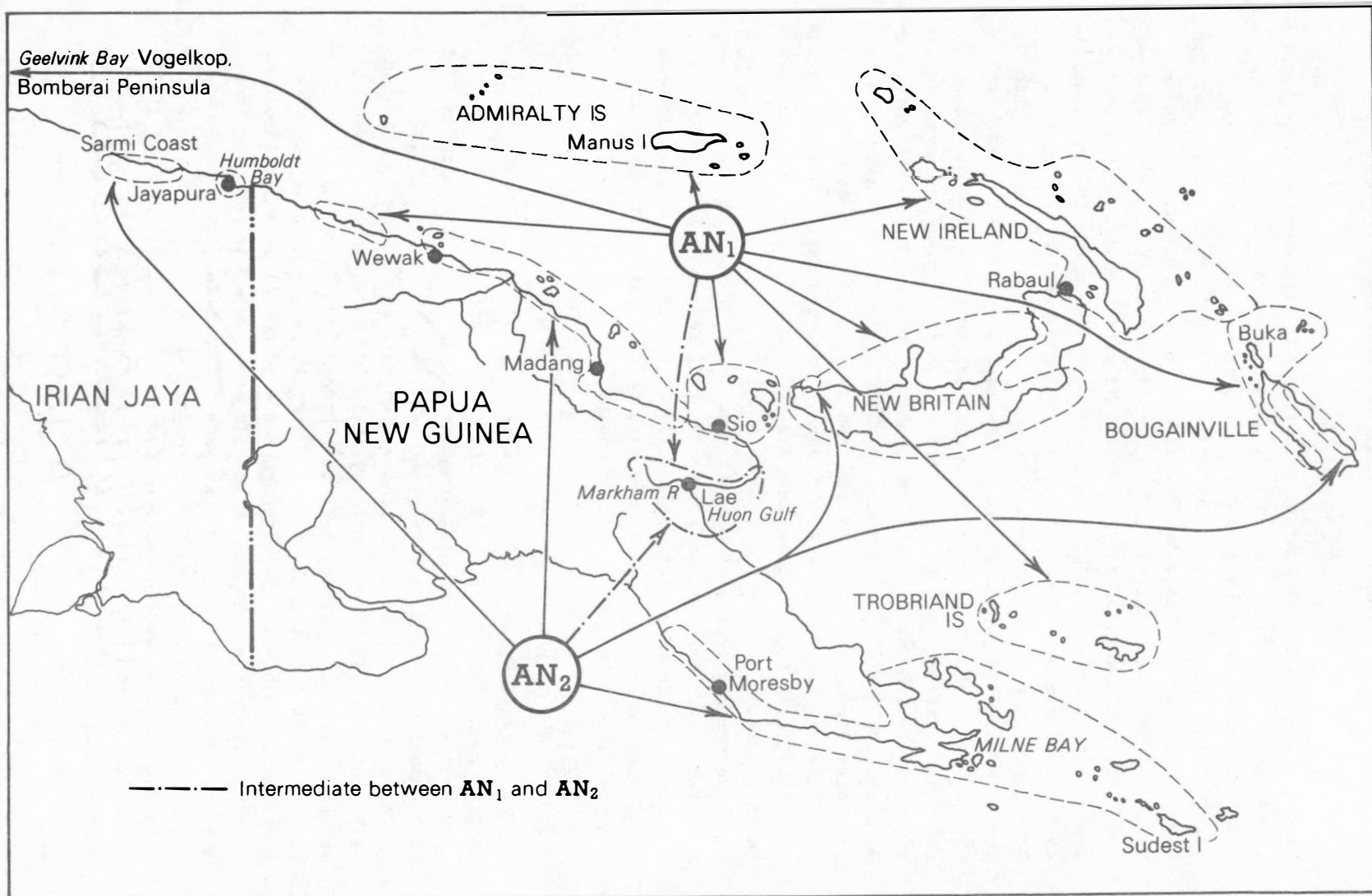
MAP I: AUSTRONESIAN LANGUAGES, PAPUA NEW GUINEA

of AN languages which have had different histories from others. In
fact, all these AN_2 languages would be candidates for being classed as
'mixed' if the term is accepted as used in chapter 4.5.1. of this vol-
ume, in which the idea of 'mixed language' is treated. In all the AN_2
languages the AN element seems to be more superficial than in the AN_1.
Whether it is also quantitatively less cannot be said until full lexi-
cal studies have been done on a much larger scale than at present.
Structurally the situation is as indicated above, and seems to justify
subgrouping. In AN_1 types there is usually a difference between equa-
tional and descriptive sentences from the corresponding forms in AN_2;
AN_2 verbal systems tend to be more complex - e.g. Dobuan or Mukawan
verbal systems compared with Tuna or Manus are much more complex. The
verb in Bel is much more complex than in Vogelkop Peninsula languages
to the far west.

The AN_2 subgroups consist of:

1) South-eastern Papua, divisible into (a) mainland and (b) islands off
South Cape as far as Sudest. (a) is again subdivisible into (a.i) coast
from Yule Island eastwards to South Cape and Milne Bay, and (a.ii)
north-east coast from north side of Milne Bay to Tufi (Cape Nelson).

2) North-eastern coastal Bougainville.

3) Bariai in Western New Britain.

4) North-eastern areas: (a) Some Rai Coast languages such as Swit and
others, less so Mindiri, (b) languages of the Madang area, as well as
languages further west as far as Kairiru, north-west of Wewak.

5) North-western areas; (a) Humboldt Bay, (b) Sarmi Coast.

The languages of the Huon Gulf area and of the Markham Valley such
as Yabêm, Atsera and others occupy an intermediate position between
AN_1 and AN_2 in containing features of both types.

The remainder of the NGAN area will then be AN_1, divided into the
following subgroups:

1) Northern New Britain, and New Ireland, with the islands off New
Ireland certainly separate from the New Ireland mainland languages.

2) North-western Solomons: (a) Buka Subgroup, (b) Bougainville Sub-
group.

3) Remainder of New Britain (except Bariai, see above) with subdivisions:
see A. Chowning's contribution in this volume (4.4.6.).

4) Trobriand area: Kiriwina and dependencies.

5) Sio and adjacent areas north of the Huon Peninsula.

6) Admiralty Islands.

7) Northern coastal and insular languages in Papua New Guinea, west of Kairiru near Wewak.

8) Western Irian Jaya: (a) Geelvink Bay and Vogelkop, (b) Bomberai Peninsula. These link more closely with EIN.

A few comments on these groups are in place. As stated, the languages of western Irian Jaya are more closely akin to those of Eastern Indonesia such as Buli, and to the langauges of Buru, Seran and Amboyna, and possibly those of the Kei and Tanimbar Islands. These, along with Aru, still await linguistic examination. There are very clear differences in type between the Vogelkop Peninsula languages (Numfor, etc.) and those of Geelvink Bay area - Windesi on the west and the Waropen area on the east, and the Bomberai languages; some of the latter seem to incline more towards the Numfor type.

Another area on which analytical work is still required is that about New Britain. Chowning's contribution to the present volume, as well as earlier papers, have shown that there is considerable diversity in New Britain, and demonstrated that it is still too early to make definitive statements about them. The language of the Rabaul area, variously known as Kuanua, Tuna or Tolai, is the best known. One point of interest in regard to this is the number of Philippine features involved, such as infixed -in-, plural indication by means of umana, which seem to link with Philippines maŋa, Wolio (South Celebes) maŋa, and to be taken up in its turn in the Central New Hebrides by Nguna maŋa, all of them markers preposed to the noun, but following the article. Even the syntax of these pluralisers is the same as in the Philippines.

Even the AN_1 languages often contain features which are rather deviant from Oceanic types in general. Yabêm which shows AN_1 and AN_2 characteristics has developed tones which can be semantic. One example is a reflex of PAN *kulit *skin*, and another of PAN *(m)beŋl *buy*. In Yabêm *skin* is óĺf and *buy* is òĺĺ. The original initial voiceless consonant is lost but results in a high tone; the original initial voiced consonant, although lost, is replaced by a low tone. This phenomenon tends to happen elsewhere in languages where tone is involved. Yet in this case surrounding NAN languages are not tonal. At what point this intonation system (two tones) developed it is not possible to say, but at least the initial consonants of the AN roots were still present when the words came into this region - quite likely the final consonant of *kulit also was still present. At the same time, the Markham Valley languages represent a somewhat different tradition, in which *t, kept in Yabêm, becomes r, as in Wampar naro-n *child, son* < POC *natu (PEA *natu) (Blust 1974).

Classification of the Admiralty Islands is indicated in Healey's contribution to this volume (see 4.4.5.). Here there is much more information to hand, but unfortunately most of it has not yet been published. The languages of the Sissano region are not well known, but a paper by Laycock (1973) has added to previous knowledge.

None of these languages can be fitted into the PEO group. One outstanding feature is the fact that NGAN as a whole uses as person markers of the 2nd sg. and pl. the morphemes I and si respectively, as against the na and ra- established by Pawley for PEO. This feature links them directly with the eastern group of WAN languages: those of the Moluccan region almost without exception have third person pronouns of this shape. So does Tuna, but east of New Britain ra marks the 2nd person pl., although I still appears for the singular i in many of the more easterly AN languages. In Eromanga, for instance, the 3rd sg. marker is yi- or ye- for past tense (u- for present), and du- for 3rd pl. past (u- for present). It would look as though the AN source for SNH might also be EIN, but this would need to be proved by examination of the lexicon which has not yet been done.

4.3.4. SUMMARY

In the present sections the discussions of the earlier sections will be summarised and an attempt made to suggest some results of the examination. These will be only tentative, because the examinations themselves have not been as thorough as final conclusions would necessitate, and in many cases the information available must be added to before finality can be hoped for. They will deal with the subgrouping suggested above, representing Oceanic (or Eastern Oceanic, if the term proves to be justified) and the results here put forward will be compared with those of Pawley in his 1972 work. The more recent works of Pawley and Green (1973) are less fully integrated, although their importance is not intended to be minimised in any way.

4.3.4.1. *THE NON-PEO LANGUAGES*

The preceding discussion was based on the presumption that there was something to be called Proto-Eastern Oceanic. Pawley is commendably clear as to what is involved in such a term:

> First the term 'proto-language' refers only to the *end-point* in the period (italics his) of common development shared by a group of languages. Proto-X, then, is the stage immediately prior to the differentiation of the languages of group X into separate languages, and does not refer to the entire period of ancestral unity. For this the term pre-X is properly used and refers to the period of development up to the point of

> differentiation. The claim that Tonga is the homeland of
> the Polynesian languages is no more than the assertion that
> at the time of separation Proto-Polynesian was spoken in
> Tonga. It does not entail the claim that some earlier stage
> of Polynesian was also spoken in Tonga. (Pawley 1972:140)

The importance of this definition lies in the fact that it is generally
understood - through earlier usage - that the 'homeland' of the
Polynesians would be the area from which they **originally** dispersed into
Oceania. In fact, a question will be asked on this subject at a later
point of this section.

Pawley admits that there are many languages in the AN area that are
excluded from his PEO. In fact they are not really the major group in
Oceania. This paper has examined some of these in outline. A combin-
ation of Pawley's work and the present extension of it would present a
diagram of the following type:

```
                                  ┌── Guadalcanal-Nggela
       PAN → POC → PEO → SES ──<
                                  └── S. Cristobal-Malaita

                                  ┌── North New Hebrides
                          NNH ──<
                                  └── Central Pacific
```
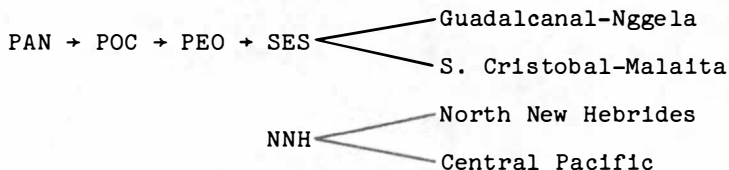
The additional study in the present chapter would diagram in the
following way:

```
                        ┌──────── New Guinea subgroup
                        │
                        │                 ┌─ Buka-Bougainville
                        ├─ W. Solomons ──<── New Georgia
                        │                 └─ Choiseul, etc.
                        │
                        │               ┌─ AN element in the Reef Islands-
                        │               │    Santa Cruz Family Languages
                        │               │    (see (I) 2.13.1.)
                        ├─ Santa Cruz ──<── Vanikoro
                        │               └─ Utupua
 (Proto-)Western OC ────┤
                        │                 ┌─ North
                        ├─ N. Caledonia ──<── South
                        │
                        │                 ┌─ South
                        │                 ├─ Central
                        └─ New Hebrides ──<── Malekula
                                          ├─ E. Santo
                                          └─ (NNH ?)
```
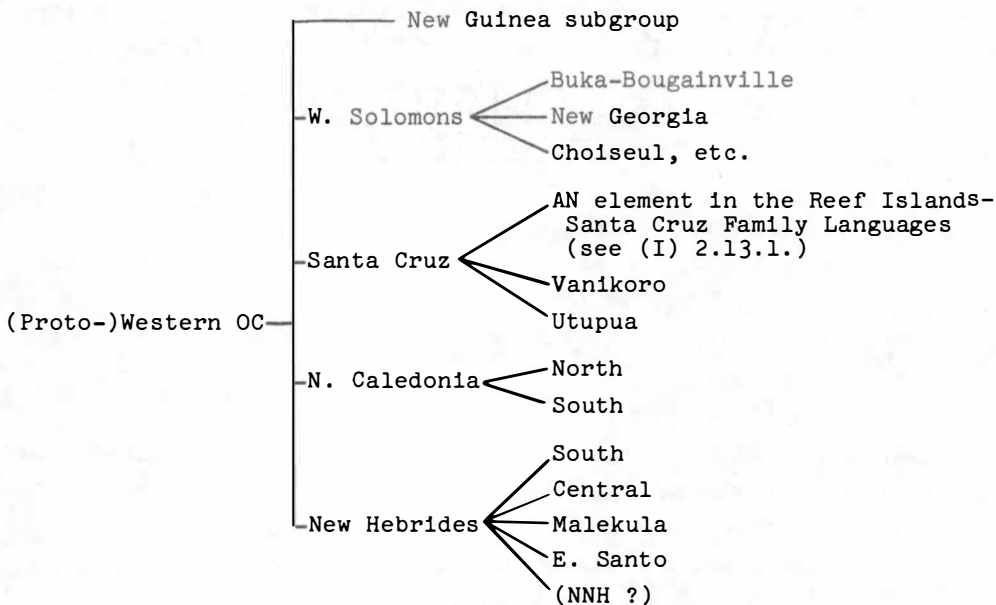
Always, of course, on the presumption that there was such a unity as
(Proto-)Western Oceanic. It might then be possible to combine the two
diagrams thus:

```
                              ──────── WOC
          PAN → POC ◄────────
                              ──────── EOC
```

The stage intended by POC is difficult to relate directly with PAN,
largely because there is no agreement yet as to what POC or even PAN
really means. In diagram form it would seem:

```
                      ───────── Formosa-Philippines
          PAN ◄─────── ───────── Central (Sumatra-Celebes)
                      ───────── Southern
```
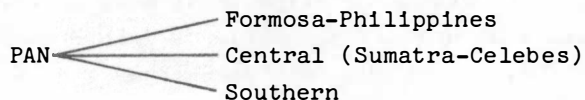
The content of 'southern' was dealt with in an unpublished paper by
Capell at the First International Conference on Austronesian Linguistics,
at Honolulu in 1974 (Capell 1974). Roughly it comprises the islands
west of Sumatra, and the whole trail of southern islands from Flores-
Timor to Seran, Halmahera (south) and those about New Guinea. This is
a possible analysis in terms of present knowledge, and it allows for
the close connection between the AN languages of New Guinea (especially
western New Guinea but also the eastern half) and those of eastern
Indonesia. The question now is, which of these most nearly represents
POC, if any do?

Seeing that NGAN leans quite heavily on southern PAN, then NGAN would
derive largely from the more easterly languages, which differ in many
regards from the others. In southern PAN we already begin to find words
compounded in ways that carry over into Oceania. One of the best known
examples is the word *tamata *man*, which is found as far east as Fiji,
and seems to be the basis of PN *taŋata: when and why it changed -m-
into -ŋ- is not known, but this matter is linked with the problem of
OC /ŋm/ and other labiovelars. This still is not decided. The pronouns
I/si of 3rd sg. and pl. – and the mixed set I/da all belong to this
southern or eastern part of PAN.

There is also strong evidence for a movement using a Philippine type
of language passing through the Pacific. It is not fully a 'Philippine'
language, but something in which certain elements that are today present
chiefly in the Philippines, were present then. Its marks are: (1) the
infix -In- which usually forms a noun from a verb. In Tuna (Tolai) and
Roviana this is still a fully productive infix: Tuna mat *die* > m-In-at
death is a normal process in the language; so is Roviana mae *come* >
m-In-ae *arrival*. In Babatana of Choiseul there is kera *sing* > k-in-era
song. It is so much part of the languages that it is not limited to AN

roots.   Farther east, it occurs in a petrified form in some words, such as Nguna, v-In-aŋa *food* which is < *p-inaŋan < *paŋan < pa + ka(e)n *eat.* (2) The pluraliser maŋa found in the Philippines and Wolio (Celebes), Tuna and Nguna. (3) Mutations of some verbs in the Epi-Nguna languages and apparently in Eromanga also - although the last has not been worked out in detail yet.   For instance in Makura, Tryon (personal communication) points to nIndow *I went or go*, future nimbarow; nIlo?ohiak *I see or saw you*, future nimbaio?ohiak showing the future marker -mba- used when no mutation is allowed; in Tasiko, nepano *I went*, but nevano *I will go*.   Mutation here seems actually to mark irrealis as against realis, not simply future as against past-present.   In Eromanga there is a complicated use of all these devices: oriŋi *hear* > ya ɣumandiŋi *I hear*, ya ɣandIŋi *I shall hear*, but yau moriŋi *I heard* - note a cardinal pronoun, not a verbal pronoun in this past tense: it seems to be a nominalisation *I am he who heard*.   A full study of these changes, their effects and their origins, still waits to be done, but they seem to link with processes that are active chiefly in Philippine languages.

The last feature is geographically limited, but it was pointed out by Dempwolff fifty years ago in a discussion of Epi grammar, and it should not have been overlooked by linguists as it has been.   Sufficient material about it is to be found in Ray 1926:240-1; 251-2 to make the situation fairly clear.   It was discussed further by Capell in a paper presented to the Pacific Science Congress in Bangkok in 1957 (Capell 1963), but in this case a blind eye seems to have been turned to it by linguists, who have never even tried to controvert it.   Philippine influences could not have been present so far east.   Also in his 1943 work Capell discussed a "Philippine movement" as a possibility.   At that time also the claim was largely rejected but not formally refuted.   It still stands.

If all these points have any cogency at all, the picture presented by a gradual development of one basic language from PAN through what might be called natural stages to the present-day Oceanic languages becomes more difficult to accept.

4.3.4.2. *POLYNESIA AND PROBLEMS OF MIGRATIONS*

Polynesia provides another problem. Difficulties arise in regard to deriving PN from PEO or any other intra-Oceanic source. Since the development of comparative Oceanic studies along the lines set out by Dempwolff, it has been taken for granted that PN developed from some branch of PAN already located in the Central Pacific. Many assumptions involved in this theory have been bypassed or disregarded. Some of

these deserve mention if only to be brought into daylight and disposed
of - or else allowed a weight hitherto denied them.   They may possibly
have more serious content than has been admitted, especially as archae-
ologists and prehistorians, so far as the present writer can ascertain
through conversing with them, are not happy with a theory that derives
PPN from PEO sources anywhere about the New Hebrides.

The physical character of the Polynesians is a difficulty, even when
it is admitted that language and race do not coincide.   Yet to brush
these questions aside as irrelevant to the linguist is merely to close
one's eyes to a real problem.   It may be a matter for the physical
anthropologist; language may vary independently of race - but sometimes
it does not.   AN languages spoken by two types of peoples so different
physically as New Hebrideans and Polynesians - especially Central New
Hebridean peoples: the northern ones seem to be closer to the Polynesians
in physical type - needs explanation.

Secondly, and more strongly, the theory at present current regarding
PN origins implicitly denies any possible element of truth in the
accounts Polynesians themselves traditionally give of themselves.   In
part, this may be a swing of the pendulum against the overemphasis laid
on these at the beginning of the present century.   Perhaps the pendulum
has swung too far against the overemphasis of the earlier period, and
the claim of autonomy for linguistics has been advanced too strongly.
The archaeologist and the linguist are learning to be friends and fellow
workers.   Polynesian tradition begins at Savaiki.   This would be the
'homeland' in the older sense of the word, not in the sense that sees
the location of proto-X as a 'homeland'.   Perhaps there has been some
misunderstanding by reason of a double use of the same word.   Yet Tonga
or any other part of modern Polynesia could not be Savaiki, even
if the earlier interpretation of the word as 'Little Java' is rejected
and a spot in modern Indonesia is not looked upon as any sort of 'home-
land'.   On the other hand there may well be a 'Savaiki' somewhere, and
it is very unlikely to be in the New Hebrides.   The word savaiki is
common Polynesian: all the languages have a form of it.   Samoan has
Savaiʔi as one of the island groups; Hawaiʔi is well known, Maoris refer
to Hawaiki.   The basic form would be *savaiki.   This term yet exists in
Futuna and Aniwa of the New Hebrides, and it is nearer the source,
phonetically, than any other including Samoan.   It is the only spot
where such a form is still kept.

It is in western Futuna that PN pronouns still have four numbers:
singular avau *I*; dual incl.: akitaua *you and I*; trial incl.: akitatou
we three, and in addition a plural akitea (a'kitia) *all of us*.   The
last is a lineal descendant of PAN kita.   It could not possibly be a

reverse reception from eastern Polynesia, because no other Polynesian
language has it. It could not be a borrowing from Tanna, because al-
though Tanna languages have four numbers, their plurals are quadruples,
not the original PAN plurals: East Tanna has incl. katar, excl. kamar,
which do not resemble the Futuna-Aniwa forms. The only explanation of
them is that they are retentions from the earliest stratum of the lan-
guage, and there seems to be no way of circumventing this conclusion.
But to any current theory of PN movements it is disastrous to admit
such a conclusion. A 'throw-back' cannot bring with it something it
does not possess. Until that fact is recognised the PN question cannot
be solved. The Futuna-Aniwa forms make it more than likely that the
Polynesians who settled the eastern Pacific still had four numbers in
their pronouns - or had lost them in the New Hebrides!

This is not to deny local influences on Futuna-Aniwa - they can be
traced; it is only to postpone them till after the settlement of the
islands. The intensely PN pattern of Aneityum syntax should not be
overlooked, especially as it contrasts so sharply with Tanna, Eromanga
and the rest of the New Hebridean languages.

In Dempwolff's vocabulary, of the approximately 2,200 PAN words,
some 600 are found only in IN and PN, i.e. they miss 'Melanesia' alto-
gether. This is about one quarter of the word store. With the recog-
nition of PAN roots not accepted by Dempwolff because they do not occur
in IN languages, the proportion may decrease somewhat, but not appreci-
ably.

PN grammar has important elements that have no correspondences farther
west: (a) apart from the cardinal pronouns lacking a true plural (their
roots are PAN but their developments are different), PN articles differ:
ta, te, ke, le, re have no counterparts in the west, either in Indonesia
or Melanesia (using the term Melanesia as a geographic rather than a
linguistic term for the moment). The commoner *na does not appear -
unless the PN plural article ŋa is to be equated with it. Personal
articles are similar in both areas, but not the common articles. (b)
The suffixed pronouns survive only as a petrified element in a few kin-
ship terms of third person singular, as Samoan telna *younger brother* <
PAN (t)aŋ'i + -na. Futuna-Aniwa has a full set at least in the singu-
lar: what has happened to them elsewhere in PN? They are not borrowed
in Futuna-Aniwa from surrounding languages, for these have -mu in the
2nd sg. while Futuna-Aniwa has the typical PN -u. (c) The system of
noun classification in PN is quite different from that of other PN
languages. Again, why? Where did the 'active-passive' classification
come from, no matter whether this name or some better one is applied
to it? (d) PN verbal systems do resemble some of those farther west,

especially those of South-East Solomonic, but the differences are still
quite deep. Can they all be explained in terms of historical develop-
ment? (e) PN syntax is very different from 'Melanesian' types. The
difficulty here is that Futuna-Aniwa has a principally SVO order, while
Aneityum and NC have VOS or VSO - all this needs investigation before
a decision is made.

In addition to these purely linguistic matters, the anthropologist
is no more to be disregarded than the archaeologist. PN kinship,
chieftainship, and other organisations must surely rest on history, not
to mention other elements of PN social life.

It is, of course, possible that all this can be fitted into a theory
that allows the PN languages to have developed in the New Hebrides.
At least the attempt should be made. At present linguistic theory is
operating under bias very similar to that which led Dempwolff to reject
any roots that did not appear in IN languages. He is acknowledged to
have been wrong in imposing that limitation. The least the linguist
can do is to take other possible origins of PN into account in his
researches.

An article by S.A. Wurm (1967) might well be reviewed in this con-
nection. In this he suggested that the AN immigrants may have come
first into the islands, and been followed by non-ANs (Papuans). This
seems very unlikely, but one point of grammar at least may become ex-
plicable on this basis. It was pointed out in the discussion of the
Western Solomons languages that the infix -In- is applicable to NAN
roots, e.g. Roviana zama *say*, zinama *speech*; it is just possible that
this type of application might operate more easily if the infix came
in earlier than the special vocabulary of the language - if, that is
to say, it was already there and was applied to incoming words, rather
than vice versa. The whole theory of migration, as it were in reverse
(as compared with other theories) is not easy, but is at least worth
reconsideration, and it does help to account for the different physical
bases of speakers of PN and other AN languages. It also avoids some
of the difficulties of a general pidginisation theory, while providing
a special type of 'pidginisation' that may be completely possible.

In the course of his argument, Wurm suggests by way of criticism of
the earlier theory put out by Grace, that the latter

> does not mention the presence in Melanesian languages of
> Austronesian words with petrified prefixes still living in
> Indonesian languages, though they require explanation.
> Above all, it is not answered why the Polynesians on the
> one hand, and the Fijians and Central New Hebrideans on the
> other, are racially different from each other. (Wurm 1967:32)

Later he says:

> Whether the members of the Melanesian geographical race who
> migrated into the areas occupied by the Austronesian speakers
> spoke Papuan languages or had already adopted an Austronesian
> language in a modified form cannot be established with any
> degree of certainty...

- if so, that would be the original pidginisation. That there has been,
somewhere and at some time, some pidginisation, is hard to deny. He
does add, however, a little later:

> In some areas the melanid immigrants may not have encountered
> and mixed with a local population, or may have killed it off,
> and these may be the areas in which the present-day Melanesian
> languages show the smallest Austronesian word content, aberrant
> phonologies, and in some cases even aberrant grammatical struc-
> tures. Significantly, perhaps, the author has gained the
> impression that the highest Austronesian word content in
> Melanesian languages is found in some areas in which the ad-
> mixture of the Polynesian geographical race in the (speakers
> of) present-day Melanesian languages is rather marked. (Wurm
> 1967:34)

Dempwolff himself found a Papuan substratum in Sa'a - see his
Vergleichende Lautlehre, 2:192-3 (Dempwolff 1937). The idea of
'mixture' is thus recognised by the man whose work has turned most later
students away from the idea. There is yet much to be done before the
answer to the questions raised here can be firmly established.

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PART 4.4.

INDIVIDUAL AUSTRONESIAN GROUPS IN THE NEW GUINEA AREA

4.4.1. AUSTRONESIAN LANGUAGES: MADANG PROVINCE

John A. Z'graggen

4.4.1.0. INTRODUCTORY REMARKS

The Madang Province is located at the central north coast of the
New Guinea mainland. The aim of this paper is to briefly describe the
Austronesian languages within this province. Sixteen Austronesian
languages are found within the Madang Province, all of them near coastal
areas except Ham which is located inland, east of the Gogol River, and
Mari (Hop) situated in the Upper Ramu Valley next to the border of the
Morobe Province. Mari (Hop), which links with the Azera language
family in the Markham Valley (Morobe Province), will be excluded from
the remainder of this study. For the history of research of the same
area see 4.2.3. in this volume.

In 4.4.1.1., a tentative classification into families and sub-
families is given. The classification is entirely based on the author's
work periods from January 1967 to March 1968 and from January 1971 to
November 1973, while working on a linguistic survey of the Madang
Province. His method of collecting vocabulary has been described in
Z'graggen 1971b. The division into languages and dialects is based on
the informants' opinion and on a partial inspection of the material.
This paper was prepared shortly after the author's last fieldwork period
and at that time it had not yet been possible to compare systematically
all of the approximately 300 items collected and count their common
vocabulary by a computer. However, sixty words were compared by the
inspection method, and the tentative series of cognates tabulated.
From this, the tentative classification presented in 4.4.1.1. emerged.
In 4.4.1.2. and 4.4.1.3., the free pronouns and a comparative wordlist
of nineteen items are given and their phonetic differences briefly
discussed. A cognate series will be marked by a number, variations
with similar phonetic shape will be marked by a letter following the

numbers.   The nineteen-item wordlist was selected because of its com-
parability with other sources.   The items will be compared with G.
Grace's *Proto-Oceanic Finder List* (Grace 1969) and, where it is of
interest, also with O. Dempwolff's Proto-Austronesian forms (Dempwolff
1925-26).

The following abbreviations have been used in this study:
POC   Proto-Oceanic from Grace 1969
D   Dempwolff
x   unexplained elements
R   residue
⧺   overlap into the neighbouring province

4.4.1.1. TENTATIVE CLASSIFICATION

4.4.1.1.1. *THE MESEMAN LANGUAGES*

The Meseman languages (Manam-Sepa-Medebur) are located in the
westernmost section of the Madang Province and link with the Austro-
nesian language groups in the Sepik Province (Laycock 1973) (see also
Laycock's contribution in 4.4.8.).   This group migrated from west to
east and in this migration occupied Manam Island.   Two groups split
up, probably because of internal trouble: the Sepa-Manam went to the
area of the Bogia Station and the Medebur further east to near Ulingan
Harbour.   Informants insisted on there being a difference among these
three languages which is also supported by some differences in their
vocabulary.

4.4.1.1.2. *THE SIASSI FAMILY*

The Austronesian languages in the central and eastern part of the
Madang Province are part of the Siassi language family which extends
into the Morobe Province (see Hooley's contribution in 4.4.4. in this
volume).   Hooley (1971) links only Gedaged with this group.   This
group migrated from east to west, settled down in some coastal areas
in the Saidor District and on the islands around Madang town,
occupied Bagabag Island and the southern half of Karkar Island and
got as far as Megiar-Serang.   The Ham group was pushed away from the
sea and settled inland east of the Gogol River.

For the Madang Province area, three subgroups can be distinguished:
the Belan, Astrolaban and Vitiazan Sub-Families.

4.4.1.1.2.1.   The Belan Sub-Family consists of the Gedaged, Bilbil,
Takia, Megiar, Matukar and Ham languages.   The division into languages
is based on the informants' opinion, but is also supported by some

differences in their vocabulary and structure (see also Dempwolff
1925-26:1) Gedaged, for instance, is characterised by the voiceless
[ʂ]. Informants also distinguished four dialects within Gedaged:
Kranket, Siar, Riwo and Sek. At the same time, Belan appears to con-
stitute a communalect chain and all its members retain close social
ties.

4.4.1.1.2.2. The Astrolaban Sub-Family - named after Astrolabe Bay -
with Mindiri, Biliau and Wab as its members, is of a rather hetero-
genous nature and has only very tentatively been grouped as a sub-family.
Ham is geographically and socially isolated from the remainder of the
Austronesian speaking area, but there are some lexical grounds for
grouping it with the Astrolaban Sub-Family. Biliau is also referred
to as Swit or Sengam ('what') and Wab as Som ('what'). Villages
speaking Mindiri, Biliau and Wab are all in near-coastal areas in the
Saidor District.

4.4.1.1.2.3. The Vitiazan Sub-Family - named after Vitiaz Strait
between Umboi Island and the New Guinea mainland - extends east of the
Nankina River into the Morobe Province (Hooley 1971). Arop is spoken
on Long Island and in parts of the Mur and Sel villages on the main-
land. Roindji is spoken in Roindji (population 83) in the Morobe
Province and Gali (population 113) in the Madang Province.

4.4.1.1.3. *NOTE ON STRUCTURE*
     In the Meseman, Belan and Astrolaban languages the object is preposed
to the verb, whereas in the Vitiazan languages in the Madang Province
the object is postposed to the verb.

4.4.1.1.4. *LANGUAGE LIST*

     The languages, with the numbers of speakers, can be listed as follows:

Meseman	6,647		X8	Matukar	219
X1	Manam	5,950	X9	Ham	1,495
X2	Sepa	268	**Astrolaban Sub-Family**		857
X3	Medebur	429	X10	Mindiri	93
Siassi Family[+]			X11	Biliau	622
Belan Sub-Family	16,999		X12	Wab	142
X4	Gedaged	2,764	[++] **Vitiazan Sub-Family**		
X5	Bilbil	700	X13	Arop	966
X6	Takia	10,962	X14	Malalamai	341
X7	Megiar	859	X15	Roindji	196

[+] For language groups extending into the Morobe Province, no reliable population
figures could be obtained.

4.4.1.2. THE FREE PERSONAL PRONOUNS

4.4.1.2.1. TABLE A: PRONOUNS

Language	I		thou		he		we excl.		we incl.		ye		they	
Manam	ŋʌu	la	kaiko	1b	ŋai	2	kɛka	R	kita	la	kam	la	di	1b
Sepa	ŋa	1b	ki:ko	1b	ai	2	ka:mi	la	kita	la	kamu	la	ndia	1x
Medebur	ŋa	1b	kai	1b	ani	R	kam	la	ki	1b	kom	la	adi	1c
Gedaged	ŋa	1b	o	2b	i	1b	am	1c	id	1c	aŋ	2b	i:	1d
Bilbil	ŋa	1b	o	2b	i	1b	am	1c	id	1c	aŋ	2b	i:	1d
Takia	ŋai	1c	oŋ	2a	iŋ	1x	maŋ	1b	id	1c	aŋ	2b	iŋ	2
Megiar	ŋai	1c	oŋ	2b	i	1b	ŋa:m	1b	id	1c	aŋ	2b	di	1b
Matukar	ŋau	1d	oŋ	2b	i	1b	ŋam	1b	id	1c	aŋ	2b	di	1b
Ham	aya	1x	ð:	2b	i:	1b	ama	1c	ada	1x	aŋ	2b	idi	1c
Mindiri	ŋa	1b	kuo	la	ni	R	kamin	1x	ninde	1x	kaŋ	2a	ndi	1b
Biliau	nam	1x	wun	R	i:n	1x	mam	R	id	1c	a:n	2c	in	2
Wab	ne	1b	ɔ	2b	i	1b	mɛ	1d	ɛr	1c	a	2d	idɛ	1c
Arop	au	la	oŋ	2a	ya	la	am	1c	id	1d	aŋ	2b	di	1b
Malalamai	you	R	yu	R	i:	1b	yei	R	ita	1d	yam	R	itizi	la
Roindji	ŋa	1b	oŋ	2a	i	1b	am	1c	aro	1d	aŋ	2b	di	1b
POC (Grace)	*au		*koe		*ia		*kami		*kinta		*kamu		*sida	
PAN (Dempwolff)	*aku				*ija				*kita				*tida	

4.4.1.2.2.   COMMENTS ON THE PRONOUNS

Pronoun	Series	Cognate	Comments
1. *I*	Grace	*au	
	Dempwolff	*aku	
	1a	au	
	1b	ŋau	ŋ- added
		ŋa	-u → ∅
	1c	ŋai	-u → -i
	1x	nam	
		ne	
	R	aya	
		you	
2. *thou*	Grace	*koe	
	1a	kuo	
	1b	kaiko	reduplication
		kiko	
		kai	
	2a	oŋ	
	2b	ð	-ŋ → ∅
		o	
	R	wun	
		yu	
3. *he*	Grace	*ia	
	Dempwolff	*ija	
	1a	ya	
	1b	i	-a → ∅
	1x	iŋ	
		in	
		ni	
	2	ŋai	
		ai	
	R	ani	
4. *we* excl.	Grace	*kami	
	1a	kami	
		kam	
	1b	ŋam	k- → ŋ-, i- → ∅
		maŋ	ŋ- ⇄ -m
	1c	am	
		ama	
	1x	kamin	
	R	kɛka	
		yei	

Pronoun	Series	Cognate	Comments
5. *we* incl.	Grace	*kinta	
	Dempwolff	*kita	
	la	kita	
	lb	ki	-ta → ∅
	lc	id	k- → ∅, -t → -d, -a → ∅
	ld	ita	k- → ∅
		idε	-t- → -d-
	lx	ada	
		aro	
		ninde	
6. *ye*	Grace	*kamu	
	la	kamu	
		kam	-u → ∅
	2a	kaŋ	
	2b	aŋ	k- → ∅
	2c	an	k- → ∅, -ŋ → -n
	2d	a	only -a retained
	.R	yam	
7. *they*	Grace	*sida	
	Dempwolff	*tida	
	la	itizi	
	lb	di	s- → d-, -da → ∅
	lc	idε	s- → ∅
	ld	i-	only -i- retained
	lx	ndia	
	2	iŋ	
		in	

4.4.1.3. A COMPARATIVE WORDLIST

4.4.1.3.1. TABLE B: MADANG AUSTRONESIAN WORDLIST

Language	1. *man*		2. *woman*		3. *head*		4. *ear*		5. *eye*		6. *nose*		7. *tongue*		8. *arm*		9. *bone*	
Manam	tamoata	la	aine	1c	sɛma	R	kuŋi	2b	mata	la	mogaruŋa	R	mɛmɛ	1	dɛbu	1x	tapo	R
Sepa	tamota	la	waine	1c	kapora	R	taliŋa	la	ma:t	la	ŋgaŋa	R	mɛmɛ	1	lima	la	tuatua	la
Medebur	tomat	1c	weidik	R	kotoŋa	1x	tiliŋa	la	mata	la	kamu	R	mɛmɛ	1	nima	1b	pakon	R
Gedaged	tamol	1b	pain	1b	gate	la	taliŋa	la	mala	1b	wi	1c	bale	2	nima	1b	dog	1x
Bilbil	tomol	1b	pain	1b	gatɛ	la	tiɲila	la	mala	1b	wi	1c	balɛ	2	nima	1b	tua	la
Takia	tamol	1b	pain	1b	gurma	1x	kukudo	2a	mala	1b	ŋudu	1b	balɛ	2	tuwo	1x	tatu	1b
Megiar	tamot	1c	pain	1b	kimelou	R	kododo	2a	mata	la	ŋudu	1b	balɛ	2	ŋama	1b	tatu	1b
Matukar	tamat	1c	pain	1b	garma	1x	kudude	2a	mata	la	nidu	1b	balɛ	2	numa	1b	tutu	1b
Ham	tamo	1d	kayau	R	muduro	R	wɛdɛrɛ	R	mala	1b	uyu	la	balɛ	2	ima	1c	tua	1b
Mindiri	koi	R	pɛn	la	kusa	la	tolŋa	1b	mulo	1x	uyu	la	mbalɛ	2	ma	1c	tuŋatu	1x
Biliau	tamol	1b	pɛn	la	təbana	2	talaŋa	la	mala	1b	uyu	la	balɛ	2	dima	1b	tutua	1b
Wab	tamol	1b	pain	1b	tabɔn	2	talŋe	1b	mal	1b	uyo	la	bal	2	im	1c	duw	1x
Arop	tamota	la	garup	R	kuto	la	talŋa	1b	mata	la	kadu	1x	mɛ	1	bai	R	tura	1b
Malalamai	ŋɛlo	R	liwa	R	dawa	2	taliŋa	la	mata	la	izu	la	ama	1	nima	1b	tua	la
Roindji	limu	1x	pain	1b	duga	1x	teleŋa	la	mara	1b	lu	1x	mole	2x	dima	1b	tua	la
POC	*taŋmata (tamole)		*pine		*qulu		*taliŋa		*mata		*isu(ŋ)		*(a)me(a)		*lima		*tu(dr)(i) *(t)ulaŋ D	

TABLE B (cont'd)

Language	10. *bird*		11. *banana*		12. *tree*		13. *fire*		14. *moon*		15. *sun*		16. *sleep, lie down*		17. *die*		18. *give*		19. *eat*	
Manam	maŋ	1b	udi	1b	kai	1a	ɛwa	1a	kalɛa	2c	amari	2	eno	1a	matɛ	1a	an	1b	kani	1a
Sepa	manu	1a	undu	1b	kai	1a	ɛwa	1a	kalɛwa	2c	ŋamali	2	eno	1a	matɛ	1a	wan	1a	kani	1a
Medebur	nɛpa	R	ud	1b	ka	1b	yo	1x	lam	2b	uyɛm	R	ɛŋ	1b	mat	1b	an	1b	kan	1a
Gedaged	ma	1c	fud	1c	ya	1d	ya	1b	fulei	1a	ad	1c	en	1b	mat	1b	pan	1a	ani	1b
Bilbil	daruk	R	hundi	1a	ai	1c	ya	1b	hulɛw	1a	ad	1c	ɛn	1b	mat	1b	pan	1a	ɛni	1b
Takia	anakanak	R	fud	1c	ai	1c	yai	1c	kalam	2a	ad	1c	ɛn	1b	mat	1b	pan	1a	ani	1b
Megiar	karu	R	fud	1c	ai	1c	yai	1c	kalam	2a	abaŋ	R	ɛn	1b	mat	1b	pan	1a	ani	1b
Matukar	mam	1x	fud	1c	ai	1c	yau	1b	kalam	2a	sa:bi	R	ɛn	1b	ma:t	1b	pan	1a	ɛni	1b
Ham	nina	R	udi	1b	ai	1c	ya	1b	ogoŋ	R	ga	1b	ɛn	1b	la:pɛ	R	ꝑ	1c	õ	R
Mindiri	ma	1c	funda	1a	ka	1d	ya	1b	file	1a	kanda	1a	kiɛn	1c	mat	1b	pan	1a	kani	1a
Biliau	man	1b	aniŋ	2	ai	1c	yau	1b	tabud	3	aad	R	ɛn	1b	mat	1b	pan	1a	aŋ	1c
Wab	man	1b	aniŋ	2	ai	1c	yab	1b	dabui	3	lu:ŋ	R	ain	1x	mɛt	1b	pan	1a	aŋ	1c
Arop	man	1b	pur	1d	kai	1a	ei	1x	taudu	3	kɛ	1b	kiɛn	1c	mat	1b	kap	2	kan	1a
Malalamai	man	1b	pundi	1a	yei	1x	yap	1b	ayon	R	wa:zo	R	geno	1c	matɛ	1a	wan	1a	kan	1a
Roindji	maŋ	1b	saula	R	kai	1a	yap	1b	ambɔk	R	kazab	R	kina	1c	mati	1a	kap	2	kaŋ	1a
POC	*manu(k)		*puti		*kai		*api		*pulan		*qanso		*eno		*mate		--		*kani	

4.4.1.3.2.   COMMENTS ON THE COMPARATIVE WORDLIST

Word	Series	Cognate	Comments
1. *man*	Grace	*taŋmata (tamole)	-ŋm- → -m-
	la	tamota	-a- → -o-
		tamota	
	lb	tamol	-ta → lØ (or tamole)
	lc	tamot	-a → Ø
	ld	tamo	-ta → Ø
	lx	limu	
	R	koi	
		ŋɛlo	
2. *woman*	Grace	*pine	
	la	pɛn	-i- → -e-, -e → Ø
	lb	pain	-i- → -ai, -e → Ø
	lc	waine	p- → w or Ø, -i- → -ai-
		aine	
	R	weidik	
		garup	
		liwa	
3. *head*	Grace	*qulu	
	la	gate	q- → g-, -l- → -t-, change
		kuto	of vowels
	lx	kotoŋa	
		duga	
		gurma	
	2	tabon	
		dawa	-n → Ø
	R	kapora	
		kimelou	
		muduro	
		sɛma	
4. *ear*	Grace	*taliŋa	
	la	taliŋa	
		tiŋila	-l- → -ŋ-
	lb	talŋa	-i- ⇄ Ø
	2a	kukudo	
	2b	kuŋi	-k- → -ŋ-, -do → Ø
	R	wɛdɛrɛ	

Word	Series	Cognate	Comments
5. *eye*	Grace	*mata	
	1a	mata	
		mat	-a → ∅
	1b	mala	-t- → -l- or -r-
		mara	
	1x	mulo	change of vowels
6. *nose*	Grace	*isu(ŋ)	
	1a	izu	-s- → -z-
		uyu	-s- → -y-, i- → u-
	1b	ŋudu	-s- → -d-, ŋ- or n- added
		nidu	
	1c	wi	
	1x	kadu	
		lu	
	R	mogaruŋa	
		ŋgaŋa	
		kamu	
7. *tongue*	Grace	*(a)me(a)	
	1	mɛmɛ	m- added
		mɛ	
		ama	
	2	bale	
		bal	
	2x	mole	vowels differ
8. *arm*	Grace	*lima	
	1a	lima	
	1b	nima	l- → n- or d- or ŋ-
		dima	
		ŋama	
	1c	ima	remnants
		ma	
		im	
	1x	tuwo	
		dɛbu	

Word	Series	Cognate	Comments
9. *bone*	Grace	*tu(dr)(i)	
	Dempwolff	*(t)ulaŋ	
	la	tua	-l- → Ø
		tuatua	reduplication
	lb	tutu	-l- → -t-
		tatu	
		tura	
	lx	dog	
		tuŋatu	
		tuw	
	R	tapo	
		pakon	
10. *bird*	Grace	*manu(k)	
	la	manu	
	lb	man	-nu → -n or -ŋ
		maŋ	
	lc	ma	-nu → Ø
	R	nɛpa	
		daruk	
		anakanak	
		karu	
		nina	
11. *banana*	Grace	*puti	
	la	hundi	p- → h- or f- or p-,
		funda	-t- → -nd-
		pundi	
	lb	udi	p- → Ø, -t- → -d- or -nd-
		undu	
		ud	
	lc	fud	p- → f-, -ti → -d
	ld	pur	-ti → rØ
	2	aniŋ	
	R	saula	
12. *tree*	Grace	*kai	
	la	kai	
	lb	ka	-i → Ø
	lc	ai	k- → Ø
	ld	ya	k- → Ø, metathesis
	lx	yei	

Word	Series	Cognate	Comments
13. *fire*	Grace	*api	
	1a	ɛwa	-p- → -w-
	1b	ya	y- added, -p- → -u- or -p-,
		yau	-i → ø
		yap	
	1c	yai	y- added, -p- → ø
	1x	yo	
		ei	
14. *moon*	Grace	*pulan	
	1a	file	p- → f- or h-, -n → ø or
		fulei	-i or -w
		hulɛw	
	2a	kalam	
	2b	lam	ka- → ø
	2c	kalɛwa	-m → wa or -a
		kalea	
	3	tabud	
		tabu	-d → ø
	3x	taudu	
	R	ogoŋ	
		ayon	
		ambɔk	
15. *sun*	Grace	*qansu	
	1a	kanda	q- → k-, -ns- → -nd-
	1b	ad	remnants
		ka	
	1x	kasab	
	2	ŋamali	
		amari	
	R	uyɛm	
		abaŋ	
		sa:bi	
		lu:ŋ	
		wa:zo	

Word	Series	Cognate	Comments
16. *sleep, lie down*	Grace	*eno	
	la	ɛno	
	lb	ɛn	-n- → -ŋ, o → Ø
		ɛŋ	additional kɛ- element
	lc	kiɛn	
		kina	
		gɛno	
	lx	aɪn	
17. *die*	Grace	*mate	-e → Ø
	la	matɛ	
	lb	mat	
	R	la:pɛ	
18. *give*	--		
	la	pan	
		wan	p- → w-
	lb	an	p- → Ø
	2	kap	
19. *eat*	Grace	*kani	-ni- → ŋØ
	la	kani	
		kaŋ	
	lb	ani	k- → Ø
	lc	aŋ	k- → Ø, -ni → Ø
	R	õ	

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THE LANGUAGES OF THE MADANG DISTRICT, PAPUA NEW GUINEA

TRANS NEW GUINEA LANGUAGES : MADANG - ADELBERT RANGE SUB-PHYLUM

Legend:
- Phylum boundary
- Sub-phylum boundary
- Super-stock boundary
- Stock boundary
- Family boundary
- Language boundary
- ? Unknown - uncertain
- * Overlapping into the neighbouring district

MADANG SUPER-STOCK

ADELBERT RANGE SUPER-STOCK

B — RAI COAST STOCK

EVAPIA FAMILY
B1 Sinsauru
B2 Asas
B3 Sausi
B4 Kesawai
B5 Dumpu

KABENAU FAMILY
B6 Arawum
B7 Kolom
B8 Suroi
B9 Lemio
B10 Pulabu

YAGANON FAMILY
B11 Yabong
B12 Ganglau
BX Dumun (Bai)
B13 Saep

PEKA FAMILY
B14 Usino
B15 Sumau
B16 Urigina
B17 Danaru

NURU FAMILY
B18 Usu
B19 Erima
B20 Duduela
B21 Kwato
B22 Rerau
B23 Jilim
B24 Yangulam

MINDJIM FAMILY
B25 Bom
B26 Male
B27 Bongu
B28 Songum

C — MABUSO STOCK

KARE FAMILY IS.
C1 Kare

KOKON FAMILY
C2 Girawa
C3 Munit
C4 Bemal

GUM FAMILY
C5 Sihan
C6 Gumalu
C7 Isebe
C8 Amele
C9 Bau
C10 Panim

HANSEMAN FAMILY
C11 Rapting
C12 Wamas
C13 Samosa
C14 Murupi
C15 Saruga
C16 Mawak
C17 Mosimo
C18 Garus
C19 Yoidik
C20 Rempi
C21 Bagupi
C22 Silopi
C23 Utu
C24 Mewan
C25 Baimak
C26 Matepi
C27 Gal
C28 Garuh
C29 Kamba

D — MUGIL STOCK IS.
D1 Mugil

E — ISUMRUD STOCK

DIMIR FAMILY IS.
E1 Dimir

MABUAN FAMILY
E2 Malas
E3 Bunabun

KOWAN FAMILY
E4 Korak
E5 Waskia

F — PIHOM STOCK

KAUKOMBARAN FAMILY
F1 Pay
F2 Pila
F3 Saki
F4 Tani

KUMILAN FAMILY
F5 Ulingan
F6 Bepour
F7 Moere

TIBORAN FAMILY
F8 Kowaki
F9 Mawak
F10 Hinihon
F11 Muser
F12 Wanambre

OMOSAN FAMILY
F13 Koguman
F14 Abasakur

NUMUGENAN FAMILY
F15 Wanuma
F16 Yaben
F17 Yarawata
F18 Bilakura
F19 Parawen
F20 Ukuriguma

AMAIMON FAMILY IS.
F21 Amaimon

G — JOSEPHSTAAL STOCK

SIKAN FAMILY
G1 Sileibi
G2 Katiati

OSUM FAMILY IS
G3 Osum

POMOIKAN FAMILY
G4 Pondoma
G5 Ikundun
G6 Moresada

WADANGINAM FAMILY IS
G7 Wadaginam

I — BRAHMAN GROUP
I1 Isabi
I2 Biyom
I3 Tauya
I4 Faita

H — WANANG STOCK

ATAN FAMILY
H1 Atemple
H2 Angaua

EMUAN FAMILY
H3 Emerum
H4 Musak

PAYNAMAR FAMILY IS
H5 Paynamar

AUSTRONESIAN LANGUAGES

*WEWAK GROUP
X1 Manam
X2 Sepa
X3 Medebur

*SIASSI FAMILY

BELAN SUB-FAMILY
X4 Gedaged
X5 Bilbil
X6 Takia
X7 Megiar
X8 Matukar
X9 Ham

ASTROLABAN SUB-FAMILY
X10 Mindiri
X11 Biliau
X12 Wab

*VITIAZAN SUB-FAMILY
X13 Arop
X14 Malalamai
X15 Roindji

*AZERA FAMILY
X16 Man

*TORRICELLI LANGUAGES
P1 Monumbo
P2 Lilau

UNCLASSIFIED
U1 Wuiabuk
U2 Aramaue

SEPIK - RAMU PHYLUM
RAMU SUB-PHYLUM
RAMU SUPER-STOCK

L — RUBONI STOCK

OTTILIAN FAMILY
L1 Watam
L2 Kaian
L3 Gamei
L4 Awar
L5 Bosman

MISEGIAN FAMILY
L6 Mikarew
L7 Sepen
L8 Giri

M — GOAM STOCK

ATAITAN FAMILY
M1 Tangu
M2 Igom
M3 Tanguat
M4 Andarum

TAMOLAN FAMILY
M5 Itutang
M6 Midsivindi
M7 Akrukay
M8 Breri
M9 Romkun
M10 Kominimung
M11 Igana

N — ANNABERG STOCK

AIAN FAMILY
N1 Anor
N2 Aiome

RAO FAMILY IS.
N3 Rao

O — KERAM STOCK

PORAPORA FAMILY
O1 Gorovu
O2 Adjora

BANARO FAMILY IS.
O3 Banaro

*TRANS NEW GUINEA LANGUAGES : WESTERN - CENTRAL PART

*FINISTERRE - HUON SUPER-STOCK

FINISTERRE STOCK

*MOT FAMILY
A1 Gira
A2 Ngaing
A3 Neko
A4 Nekgini
A5 Nahu
A6 Rawa

WARUP FAMILY
A7 Yagomi
A8 Asat
A9 Forak
A10 Degenan
A11 Morafa
A12 Dahating
A13 Guiarak
A14 Bulgebi

*YUPNA FAMILY
A15 Gabutamon
A16 Domung
A17 Bonkiman
A18 Wandabong
A19 Isan
A20 Nokopo
*A21 Kewieng
A22 Nankina
A23 Mebu

*EAST NEW GUINEA HIGHLANDS STOCK

*EAST CENTRAL FAMILY
K1 Gende

*CENTRAL FAMILY
K3 Maring
K6 Kuman

KARAM FAMILY
K2 Gants
*K4 Karam
*K5 Kobon

LONG ISLAND
X13

MANAM I.
X1

KARKAR I.
X6

BAGABAG I.
X6

Uninhabited

JOHN A Z'GRAGGEN, ANTHROPOS INSTITUTE AND THE AUSTRALIAN NATIONAL UNIVERSITY, 1975

0   20 kilometres
0   20 miles
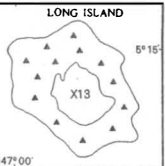
4.4.2. AUSTRONESIAN LANGUAGES: WESTERN PART
OF SOUTH-EASTERN MAINLAND PAPUA

Andrew Pawley

4.4.2.1. INTRODUCTORY REMARKS

The ten distinct Austronesian languages spoken in the western part
of South-eastern Mainland Papua all lie within the Central Province
and will be referred to here as the 'Central Province languages'.[1]
The easternmost, Magori, is spoken by a small community at the eastern
end of Table Bay, near the Central-Milne Bay Province boundary. The
other nine occupy a more or less continuous stretch of territory, on or
near the coast, from Cape Possession (146° 24' E) to Cheshunt Bay (148°
17' E) some 150 miles to the east. For the relevant map see 4.4.3. Cape
Possession marks the westernmost extension of the Oceanic division of
the Austronesian family on the south coast of New Guinea - other
Austronesian languages do not occur until the neck of the Bird's Head
is reached and they are not Oceanic.

4.4.2.2. INDEX OF LANGUAGES

The following is a list of the Central Province language names to
be used here, together with alternative names in common use, information
about location, population and dialect variation, and the main descrip-
tive sources. For a list of the villages speaking each language, see
Dutton 1973. Basic vocabulary lists for all languages appear in Pawley
and Dutton eds. (forthcoming); comparative vocabularies and some mor-
phological data are given by Ray (1895, 1907, 1929). Sources for
individual languages are given below.

AROMA. See **HULA-AROMA.**

DOURA. Spoken by several hundred in three to six villages around the
eastern side of Galley Reach. No published grammar or dictionary.

HULA. See HULA-AROMA.

HULA-AROMA. A string of intergrading communalects, totalling more than 16,000 speakers, extends along the coast from Hood Bay to Cheshunt Bay. Extremes of the chain show as little as 65 percent cognation in a 200-word basic vocabulary list. Dutton (1970) suggests the name **KEAPARA** for this dialect chain but there is no conventional name. The best-known dialects (each embracing several villages) are Hula, Keapara and Aroma, and the name Hula-Aroma, taken from the westernmost and eastern-most of these dialects, will be used here (see Table 2 in 4.4.2.4.1. for sound correspondences of the three major dialects). There is a grammar and wordlist of Hula by Short (1939); Aroma is being studied by John Lynch of the University of Papua New Guinea.

GABADI (KABADI). Gabadi is spoken by about 1,400 people occupying five villages between Galley Reach and the Aroa River a few miles to the west. There is no published grammar or dictionary, other than Timoteo's (1897) and Strong's (1912) brief notes.

KEAPARA. See HULA-AROMA.

KUNI. Spoken entirely inland around the upper Angabunga (St Joseph) and Aroa Rivers; much of the Kuni population has resettled at Bakoiudu (population 1,200). There is some regional variation, lexical and phonological. Lapeka regularly shows n for Bakoiudu l. There is no published grammar or dictionary, but a comparative vocabulary is given by Blyth (n.d.) and A. Pawley of the University of Hawaii has manuscript materials. Some information about Kuni dialects appears in van Rijswick 1968.

LALA (NARA, POKAU, POKAO). Called Lala by its speakers, who occupy six to nine villages between Galley Reach and Hall Sound. There is a short grammatical sketch by Lanyon-Orgill (1941).

MAGORI. Spoken by about 160 people in two villages, and perhaps in one or two other villages, around the lower reaches of the Bailebo-Tavenai River at the eastern end of Table Bay. Believed until recently to be a Papuan language, Magori shows massive borrowing from surrounding Papuan languages in its basic vocabulary. A grammatical sketch and vocabulary appear in Dutton 1971. See also chapter 4.5.2. in this volume.

MEKEO. Spoken by upwards of 7,000 people occupying the hinterland north of Roro, around and west of the middle Angabunga (St Joseph) River. There appear to be at least three very distinct dialect regions: the largest dialect, (East) Mekeo shares a little below 80 percent basic vocabulary with West Mekeo (Bush Mekeo), and 65-71 percent with Kovio, spoken in two villages on the slopes of Mt Yule. There is a complex

but poorly understood set of phonological isoglosses, e.g. in some but
not all comparisons, West Mekeo k corresponds to East Mekeo glottal
stop or zero (from Proto-Oceanic (POC) *t), p to f (POC *mp), and g to
k (POC *s, *ns).   There is a manuscript dictionary and a grammar by
members of the Roman Catholic Mission at Beipa'a, and a discussion of
the language by Strong (1914).

MOTU.   Much the best documented language of Papua, Motu is spoken by
more than 14,000 people in coastal villages from Manumanu, at the mouth
of the Galley Reach, to Kapakapa, some 70 miles east.   Dialect variation
is comparatively slight.   Tatana n corresponds to l in other communa-
lects; h is lost in the Pari and Manumanu communalects.   A pidgin form
of Motu developed in pre-contact times and was used extensively along
the Papuan coast during Motu trading voyages - see (III) 7.4.3.1.   A
relexified version of this was later adopted as an official lingua
franca by the Australian Administration and is known today by close to
200,000 people in the Papuan and Southern Highlands Provinces.   Major
references for Motu: a grammar and dictionary by Lister-Turner and
Clark (1931a, 1931b), as revised by P. Chatterton, and a syntax by
Taylor (1970).   For Hiri Motu, there is a grammar and vocabulary by
Wurm and Harris (1964), a short introduction by Chatterton (1972) and
a detailed course book by Dutton and Voorhoeve (1974).   For further
details see (III) 7.4.3.1. as already indicated.

RORO.   Spoken on Yule Island and along the coast between Cape Possession
and Hall Sound by more than 7,000 people, who recognise two main dia-
lects, Waima and Roro.   Lexical divergence is slight, but Waima has h
for Roro t ([ts] before high vowels).   Other phonological isoglosses
cross-cut this division.   Dialect differences are discussed by Davis
(n.d.).   There are sketch grammars by Chatterton (n.d.) and (more
comprehensive) by Strong (1914).   Bluhme (1970) describes the phonology
of Roro and its dialects.

SINAGORO (SINAUGOLO, SINAUGORO).   Beginning immediately east of the
Motu region, a collection of intergrading communalects extends inland
for some fifteen miles to the north of the Hula-Aroma chain.   Speakers
total more than 12,000.   Extremes of the chain show around 70 percent
cognation on a 200-word basic vocabulary list.   Lists for 16 communa-
lects are given in Dutton 1968, and show a complex pattern of sound
correspondences.   A short grammar and fairly extensive wordlist for
the Balawaia dialect exists, by Koloa and Collier (1972).   A revised
version of this appeared as Kolia 1975.

4.4.2.3. CLASSIFICATION AND ORIGINS

The first detailed historical study of the Central Province languages was made by Capell (1943) in his *Linguistic Position of South-Eastern Papua*. Following Ray (1929), he argued that the 'Melanesian' languages (i.e. the non-Polynesian Austronesian languages of New Guinea and Island Melanesia) are of hybrid or pidgin origins. Austronesian peoples originating in different parts of Indonesia and the Philippines entered Melanesia, according to Capell, in four or five separate movements. The languages of these colonising populations were adopted by Papuan-speaking peoples in many different parts of Melanesia, including South-eastern Papua, in each case with a Papuan substratum which differed from region to region. In positing derivation from separate Austronesian languages, Capell rejected Dempwolff's (1934-38) claim that all the Austronesian languages of Melanesia and Polynesia, and all but a couple of the Micronesian languages, belong to a single subgroup apart from Austronesian languages spoken to the west of New Guinea. Chrétien (1956) accepted Capell's pidginisation thesis as providing a satisfactory explanation of the small common vocabulary shared by the Melanesian languages, but both he and Milke (1961) found the hypothesis of several movements out of Indonesia, each bringing certain words from certain regions, to be unwarranted by the facts.

Recent scholarship has accepted Dempwolff's subgrouping theory as the most reasonable explanation of the common sound changes, and other common innovations shared by most of the languages of Oceania (this is instanced by the writings of Milke, Grace, Haudricourt and Blust): the subgroup concerned is now known as Oceanic. A recent study (Pawley 1975) attempts a genetic classification of the Central Province languages, based primarily on comparative phonological evidence but with consideration of some lexical and morphological evidence. The following conclusions are reached.

The Central Province languages belong to the Oceanic division of Austronesian, and form a closed subgroup within Oceanic. According to glottochronology, the immediate common ancestor of the Central Province group (Proto-Central Province) began to diverge into three primary divisions between 3,400 and 2,500 years ago. The disintegration of Proto-Central Province was evidently a gradual process. A central dialect, ancestral to Motu, was transitional between a Western dialect group (ancestral to Doura, Gabadi, Kuni, Lala, Mekeo and Roro) and an Eastern dialect group (ancestral to Sinagoro, Hula-Aroma and possibly Magori), and probably remained mutually intelligible with Eastern and Western dialects for a considerable time after the latter had diverged

beyond mutual intelligibility. That pre-Motu had this intermediate
status is indicated by several facts: Motu shares several innovations
and many isoglosses with the Western group apart from the Eastern group,
but at the same time also shares other innovations and isoglosses with
Eastern languages exclusively of the Western group. Motu is lexico-
statistically much closer to all members of the Western and Eastern
groups than any Western language is to any Eastern language (see Table
1). This is not however explainable as resulting from an unusually
high retention rate in Motu, whose retention rate is no higher than
several other Central Province languages'; it must therefore be attri-
buted to undetected borrowing. The inflation of 7-17 percent in Motu's
percentages is evidently due largely to lexical diffusions which
occurred at a time when Motu was phonologically less distinct from its
neighbours than now.

TABLE 1

Percentages of Definite Cognates in 200-Word List Shared
by Some Pairs of Central Province Languages

	AROMA	KEAPARA	HULA	SINAGORO	MOTU	DOURA	GABADI	RORO	KUNI
KEAPARA	74								
HULA	65	78							
SINAGORO		49	50						
MOTU		47	45						
DOURA		33	32	52					
GABADI		31	32	37	46				
RORO		25	23	39	35	36			
KUNI	30	28	25	41	42	32	40		
MEKEO		22	21	30	26	29	32	32	

The closest relatives of the Central Province group are to be found
among the languages of the Milne Bay Province. The Suau group of the
south coastal region, and Dobuan and Molima of the D'Entrecasteaux group,
for example, represent a large group of Milne Bay languages which share
with the Central Province group the merger of Proto-Oceanic (POC) *d
and *R, and the merger of *s and *ns, and several apparent lexical and
morphological innovations (see following sections). There is a small
body of evidence suggesting that the Suau group of dialects and closely
related languages shared a period of common development with the Central
Province group after diverging from Molima and Dobuan. As the Central
Province languages represent the westernmost extension of Oceanic speech

communities on the south coast of New Guinea, and have their immediate
relatives in the Milne Bay Province, they almost certainly derive from
a population movement from the south-eastern tip of New Guinea into the
Central Province. The centre of diversity within the Central Province
group is in the area between Yule Island-Hall Sound and Hood Bay, making
this the likeliest location of Proto-Central Province. Although its
position is not certain, Magori appears to be an offshoot of the main
group to the west, and is most likely a member of the Eastern subgroup
(see above).

Archaeological excavations (summarised in Allen 1972) show that an
intrusive cultural tradition, of a general type strongly associated
with Austronesian languages in Island Melanesia and Polynesia, had be-
come established some 2,000 years ago in the coastal region and on off-
shore islands between Yule Island and Port Moresby. The linguistic
evidence suggests that the ancestor of the Central Province languages
arrived in approximately this area somewhat earlier than 2,000 years
ago, and possibly more than 3,000 years ago. Suau-Motu comparisons
yield a glottochronological date of separation of about 37 centuries
ago; the break-up of Proto-Central Province is dated as most probably
beginning between 34 and 25 centuries ago (the separation of the Eastern
and Western subgroups), with Motu remaining the link in a gradually
disintegrating dialect chain for some centuries after this.

4.4.2.4. STRUCTURE AND DEVELOPMENT

Some information - necessarily sketchy - about the structure and
development of the Central Province languages is given in the following
paragraphs. Diachronic and synchronic facts will not be kept rigidly
separate; joint presentation will avoid some repetition and footnoting,
and will allow the contemporary languages to be seen as continuations
with change of an earlier system ancestral to all Oceanic languages.
Because its phonological and grammatical structure is better understood,
and closer to those of the Central Province languages, Proto-Oceanic
rather than the temporally more remote Proto-Austronesian will be taken
as the point of departure in discussing historical change.

4.4.2.4.1. *PHONOLOGY*

Sound correspondences between Proto-Oceanic (POC), Proto-Central
Province (PCP), and the contemporary Central Province languages, are
shown in Table 2. It can be seen that the Central Province group ex-
hibits at least nine changes to the POC system, namely: (1) loss of *k,
(2) merger of *u with *i as i after *oi or *ui, (3) coalescence of *d,

*nd and *ʀ, (4) loss of *l before *i and *u, (5) merger of *s and *ns as a lingual stop or as r, (6) loss of stem-final consonants in word-final position, (7) loss of *y in the context a_u, (8) merger of *n and *ñ, (9) loss of *q.

The fact that no other Oceanic language is known to show a similar combination of developments is strong evidence for a Central Province subgrouping.

TABLE 2
Main Reflexes of POC Phonemes in Central Province Languages[1]

(The raised footnote numbers refer to the notes immediately following Table 2.)
Abbreviations of language names: POC = Proto-Oceanic, PCP = Proto-Central Province, MEK = Mekeo, ROR = Roro, DOU = Doura, GAB = Gabadi, KUN = Kuni, LAL = Lala, MTU = Motu, SIN = Sinagoro, HUL = Hula, KEA = Keapara, ARM = Aroma, MAG = Magori.

	*p	*mp	*t	*nt	*k	*ŋk	*q
POC	*p	*mp	*t	*nt	*k	*ŋk	*q
PCP	*p	*b	*t	*d[2]	*ø	*g[2]	*ø
MEK	p	f	',ø	'[2]	ø	ø[2]	ø
ROR	b	p	h	k[2]	ø	ø[2]	ø
DOU	h	p	k,s	t[2]	ø	ø[2]	ø
GAB	v,ø	b	k,s	ø	ø	ø[2]	ø
KUN	b	f	k,s	ø	ø	ø[2]	ø
LAL	v	b	k,s	t[2]	ø	'[2]	ø
MTU	h	b	t,s	d[2]	ø	g,k[2]	ø
SIN	v,ø	b	t,s	r[2]	ø	g,k[2]	ø
HUL	v,ø	p	t,ø	r[2]	ø	g,k[2]	ø
KEA	v,ø	p	ø,'		ø	k,'[2]	ø
ARM	v,ø	p	ø,'		ø	g,k[2]	ø
MAG	v,ø	b	t	d[2]	ø	g[2]	ø

TABLE 2 (cont'd)

	*s *ns	*d	*nd	*R	*l/-{a o}	*l/-{i u}
POC	*s *ns	*d	*nd	*R	$*l/-\{^a_o\}$	$*l/-\{^i_u\}$
PCP	*D	*r	*r	*r	*l	*ø
MEK	k	g	g²	g	l	ø
ROR	t,ts	r	r²	r	ø	ø
DOU	t	r	r²	r	ø,i	ø
GAB	d,g	r		r	ø	ø
KUN	d	l	l²	l	l,j	ø
LAL	d	l	l	l	l	ø
MTU	d	r	r²	r	l	ø
SIN	r	l	l²	l	ø	ø
HUL	r	l	l²	l	ø	ø
KEA	r	l	l²	l	ø	ø
ARM	r	l	l²	l	ø	ø
MAG	k			l	ø²	ø²

	*m	*n *ñ	*ŋ	*w	*y[3]	*ŋm
POC	*m	*n *ñ	*ŋ	*w	*y[3]	*ŋm
PCP	*m	*n	*ŋ	*w	*y	*m
MEK	m	ng	ng,n	v	l	
ROR	m	n	ø	b,w	e	
DOU	m	n	ø	v	r	
GAB	m	n	ø	v	r	
KUN	m	n	ø	v	j	
LAL	m	n	n	v	l	
MTU	m	n	ø	v	l	
SIN	m	n	ø	w	ø	m²
HUL	m	n	ø	w	ø	m²
KEA	m	n	ø	w	ø	
ARM	m	n	ø	w	ø	m²
MAG	m	n				

Notes to Table 2

[1] These consonant correspondences refer only to word-initial and -medial position. Word-final consonants are lost in all Central Province languages. Ø indicates loss, a blank that the reflex is not known. The POC vowels *a, *e, *i and *o are regularly reflected as a, e, i, and o, respectively, in each Central Province language. POC *u is reflected in each language as l in the context $*\{^o_u\}l\_\_$, and as u elsewhere.

[2] This reflex is tentative, resting on a very small number of attestations.

[3] Except in the context *a_u, which is attested only in the reflexes of POC *kayu *tree*, where all Central Province witnesses have a zero reflex.

Most of the changes can be assigned to the period between the di-
vergence of the pre-Central Province language from its nearest relative,
and the breakup of PCP. However, as POC *d and *ʀ, *s and *ns, and *n
and *ñ, respectively, are each merged in some other languages, including
many Milne Bay languages, it is likely that these three mergers took
place before the divergence. PCP preserved the five-vowel system, but
only 13 of the 21 consonants reconstructed for POC. Some of the gaps
in the system left by losses or mergers were filled by phonemes not
traceable to POC. For example, POC *k was lost, but PCP *k is recon-
structable in a body of words not traceable to POC (although in some
cases shared with certain Milne Bay languages); PCP *g, *kw, and
possibly *gw, can also be reconstructed in this way.

As a result of the loss of word-final consonants, all syllables are
open in the Central Province languages. No consonant clusters are
permitted (labiovelars acting as unit phonemes), and a high proportion
of bases are bisyllables of the form (C)V(C)V.

Further simplifications have occurred in most of the Central Province
languages. PCP *k, *g and *kw are either lost or merge as glottal stop
in all members of the Western group. *n is lost in all languages except
Mekeo and Lala, where it falls together with *ŋ. The Eastern languages
appear to have lost *l and *y in all positions. PCP *l and *r merge as
l in Lala. In Mekeo, PCP *r falls together with *n and *ŋ, as n, at
least word-initially.

Noteworthy among the sound changes in Central Province languages is
the frequency with which lingual consonants have shifted from apical
to dorsal articulation (Krohn 1973). In all Western languages save
Roro POC *t has become k (with some Mekeo dialects showing a further
development to glottal stop or zero). POC *s and *ns fell together in
PCP as an apical stop or flap. In Magori and some Mekeo dialects the
reflex is k; geography and subgrouping indicate the Magori development
to be independent of the Mekeo one. Some Mekeo communalects show a
velar nasal as the reflex of PCP *n, *ŋ and *r, almost certainly as the
outcome, first, of the merger of *n, *ŋ and *r, as n, then n > ŋ.

4.4.2.4.2. GRAMMAR

4.4.2.4.2.1. General Remarks

The Central Province languages have not diverged greatly from one
another in grammatical structure, as far as can be judged from the
available descriptions. They appear to have preserved the POC struc-
ture with less change than most Oceanic languages of the New Guinea
mainland, though they have not been as conservative as some languages

of Island Melanesia, such as Nggela, Kwara'ae and Fijian. The following
discussion treats some features of simple sentence structure in the
best described Central Province language, Motu. In some illustrative
Motu sentences a slash / is used to mark a constituent boundary.

Whereas in POC SVO was the preferred order in transitive sentences,
it is SOV in the Central Province group. The change to SOV order,
usual in New Guinea Oceanic languages, has been plausibly attributed
to the influence of Papuan languages. A residue of POC word order
exists in the obligatory placement of subject and object pronouns im-
mediately before and after the verb, as, e.g.

> (1) sisia ese / boroma / e   kori-a
>   *dog*   subj:mkr *pig*   it   *bite-it*
>   (subj.)   (obj.)
>
>   *'the dog bit the pig'*

Along with SOV order go a post-nominal subject marker **ese** (see (1)),
postpositions, modifier-head order in relative clauses, sentence-final
negative verbs, and (under certain conditions) attribute-head order
(see Taylor 1970 for fuller information).

4.4.2.4.2.2. The Verb Phrase

The typical Oceanic division of verbs is maintained. Stative verbs
take as subject the thing which is in the state denoted by the verb,
active verbs take as subject the actor of action verbs or the experi-
encer of psychological verbs. Statives may be transformed into actives
by addition of the causative prefix **ha-**, in which case the set of nom-
inals which occurs as subject of the stative becomes the set of nominals
which occurs as direct object of the derived active verb, e.g.

> (2) honu *be full*   ha-honu-a   *fill something, make something full*
>   dika *be bad*   ha-dika-i-a *spoil something*
>   pou *be burst*   ha-pou-a   *burst something*

Active verbs fall into at least three classes: obligatory transitives,
optional transitives and intransitives. Obligatory transitives form a
large class which require an overt direct object: either a pronominal
suffix or full noun phrase. Optional transitives can occur either with
or without a direct object. Intransitives cannot take a direct object.

The two transitive suffixes which did much of the case-marking work
in POC, -*i and -*akin, are retained in Motu but with some modifications.
In POC -*i marked a 'close object' (patient or location of an action,
stimulus or goal of a psychological verb). In Motu -*i remains as -i
only after verbs ending in a, becoming zero elsewhere (e.g. (1) and (2)
above, and in the following):

(3) io   amo / na gwadai-a
    spear   with   I   pierce-it
    'I pierced it with a spear'

(4) e   kara-i-a
    he   make-tr-it
    'he made it'

In POC –*akin marked a 'remote object' (instrument, cause, benefactor, referent or concomitant). The Motu reflex –(C)ai appears to perform at least some of these functions, e.g.

(5) e   lao-hai-a
    he   go-tr-it
    'he goes with it/he takes it'

(6) vanagi[2] herevana / memero / e   hamaoro-lai-dia
    canoe   talk   boys   he tell-tr-them
    'he told the boys about the canoe'

(7) ina   moni   baita   gaukara-lai-a[2]
    this   money   we-fut. work-tr-it
    'we will use/make use of this money'

When the direct object denotes a person or animal, a pronominal suffix marking person-and-number of the object nominal is obligatory, e.g. (1) in 4.4.2.4.2.1. above, and:

(8) hahine ese / natu-na / e   ubu-dia
    woman   subj. child-her she feed-them
    'the woman fed her children'

but a pronominal suffix is not present when the object nominal is inanimate, e.g.

(9) kékeni ese / nadi / e   gogo
    girls   subj. stone   they gather
    'the girls gathered the stones'

A pronominal suffix may denote the indirect object, when the direct object is inanimate.

Optional transitives may occur intransitively, as simple bases, or transitively, with the addition of a transitive suffix and/or object pronominal suffix:

(10) helai *sit*   helai-a   *sit on something*
     abi *hold*   abi-a   *hold, obtain something*
     diba *know*   diba-i-a   *test, get to know something*
     lao *go*   lao-hai-a   *go with, take something with one*

A formally intransitive verb implying a plural or reciprocal subject,
or object as well as subject, may be derived from some obligatory
transitives by prefixing he-, e.g.

(11) nanadai-a *ask something*   he-nanadai *ask, the act of asking*
    gima-i-a *watch something* he-gima   *watch, act of watching*

Preverbal particles include the subject pronouns and markers of
indefinite future (b- ∿ ba-), near future (a-), subjunctive (-ma) and
past (zero) tense or mood which follow the pronoun, and in some cases
fuse with it, e.g. ba, bo, be, '1st, 2nd, 3rd person sg. indefinite
future', bama, boma, bema '1st, 2nd, 3rd sg. subjunctive'.

Postverbal elements include the transitive and objective pronominal
suffixes, aspect markers -mu 'present progressive' and -va 'past pro-
gressive', vada 'perfective', dō 'continuity', and a set of particles
marking direction. heni (< POC *pani) marks direction towards the
object of the verb, tani (< POC *tani) direction away from the object
of the verb, mai (< POC *mai) direction towards the subject, vasi (<
POC *(w)atu) direction from subject to addressee, and diho (< POC *nsipo)
direction down from subject. heni and tani can perhaps be regarded as
subordinate verbs, introducing an embedded clause with the same subject
as the main verb (heni occurs as an independent verb meaning *to give*),
because they take object pronominal suffixes, as in:

(12) lao heni-a   raka   tani-a
     go   towards-it   *leave away:from-it*

     'go towards it'   'go away from it'

     hereva heni-dia   heau   tani-dia
     speak   towards-them *run   away:from-them*

     'speak to them'   'run from them'

4.4.2.4.2.3. The Noun Phrase

The structure of Motu noun phrases is not known in detail. The POC
markers *na and *i, distinguishing common and personal nouns, are lost,
and the basic distinction is perhaps between animate and inanimate
nouns. As in POC, a common noun phrase containing an animate noun
(denoting a person or at least certain kinds of animals) consists min-
imally of the noun plus a pronoun, whereas a phrase containing an in-
animate noun may, in most contexts, consist of the noun alone, and in
contexts where the pronoun is required, only the third person singular
pronoun can occur. The function of the pronoun in animate noun phrases
is to mark person and number of the noun. There are a number of move-
ment rules which determine the position of the pronoun according to
syntactic context. In subject noun phrases the pronoun is embedded in

the verb phrase as a preverbal particle. In object noun phrases the
pronoun is suffixed to the verb. For possessive phrases see below.
When an adjective follows a noun the pronoun is suffixed to the adjec-
tive. Elsewhere the pronoun is suffixed to the noun. Only animate
nouns can act as possessor in the 'dominant' and 'edible' relations
(see below).

The POC contrast between three types of possessive relation is re-
tained, with minor changes. The 'edible' relation (possession of things
for eating, drinking, smoking, chewing) is marked by a particle a- (<
POC *ka-), and the 'dominant' relation (things over which the possessor
exerts control or choice, other than edibles) is marked by e- (func-
tionally equivalent to but not cognate with POC *na-). Only animate
nouns may act as possessor in the edible and dominant relations. The
markers a- and e- are attached to the possessive pronoun, and the
sequence is preposed to the head noun. If a nominal possessor is
present, it occurs initially in the possessive phrase. The structure
is thus:

(NOMINAL) {$\begin{smallmatrix}a\llap{-}\\e\llap{-}\end{smallmatrix}$} PRONOUN   NOMINAL$_{head}$

e.g.

(13) a-gu   boroma
      ed:poss-*my* *pig*
      'my pig (for eating)/my pork'

(14) e-gu   boroma
      do:poss-*my* *pig*
      'my pig (as property)'

(15) háhine e-dia   biku
      women   do:poss-*their* *banana*
      'the women's banana (as property)'

An inalienable relation is marked, as in POC, by suffixing the
possessive pronoun directly to the head noun, as in:

(16) natu-dia
      child-their
      'their children'

(17) ima-gu
      hand-my
      'my hand'

(18) ruma   lalo-n-ai
      house   *inside-its-at*
      'inside the house, the inside of the house'

This marking not only applies to parts of a whole, kin relations, and positional relations, but has been extended in Motu to include 'possession' of attributes or actions over which the possessor exercises no control or choice, but is rather the sufferer or involuntary possessor, e.g. the opposition between:

(19) sivarai-gu
      story-my
      'my story (told about me)'

and

(20) e-gu   sivarai
      do:poss-my story
      'my story (which I tell or make up)'

The terms 'subordinate' or 'involuntary' perhaps describe more accurately than 'inalienable' the category marked by direct suffixation.

Attributive relations between nominals are marked by the structure attribute + head, as in:

(21) hanua   tau-dia
      village   person-they
      'the villagers, people of the village'

Adjectives, however, follow the noun, as in:

(22) ruma   bada-na ta na-ita-i-a
      house   big-3sg a   I-see-tr-3sg
      'I see a big house'

N O T E S

1. I am indebted to Andrew Taylor for corrections to and commentary on a draft of this paper.

2. $\bar{g}$ indicates /ɣ/ in the Motu orthography.

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4.4.3. AUSTRONESIAN LANGUAGES: EASTERN PART OF SOUTH-EASTERN MAINLAND PAPUA

T.E. Dutton

4.4.3.1. INTRODUCTION

The Austronesian languages to be discussed here - Sinagoro, Keapara, Ouma, Magori, Yoba, and Bina - belong to a large group of closely related languages found in other parts of Papua and its offshore islands - see 4.1. in this volume. The first two of these languages and Magori have been the best studied and fall together with other Austronesian languages of the Central Province (Motu, Doura, Kabadi, Kuni, Nara (or Pokau), Roro (or Waima), and Mekeo) as an areal subgroup within Oceanic (hereafter called the Central Province languages after Pawley 1975), and are distinguished from other subgroups in Papua and elsewhere by certain common phonological innovations, common vocabulary and grammatical features.[1] Within the Central Province languages, Sinagoro and Keapara are the most closely related and Magori the most distantly related to one another and other member languages. Ouma, Magori, Yoba, and Bina also fall together as a closely-knit subgroup and occupy a linking position geographically and in many respects linguistically between their nearest subgroup, Suau, and related languages to the east, and the remaining Central Province languages to the west. This subgroup, hereafter the Magori Group, also shows considerable lexical, and to a lesser extent phonological, interference fron non-Austronesian languages of the Mailuan and Dagan Families that surround them and with which they have been in close contact.

Of the languages discussed here, Sinagoro and Keapara are the largest, but yet, at the same time, least distinct, being interconnected by a series of mutually-intelligible dialect chains which blur their borders in the west around the villages of Ginigolo, Kemabolo, and Alomarupu,
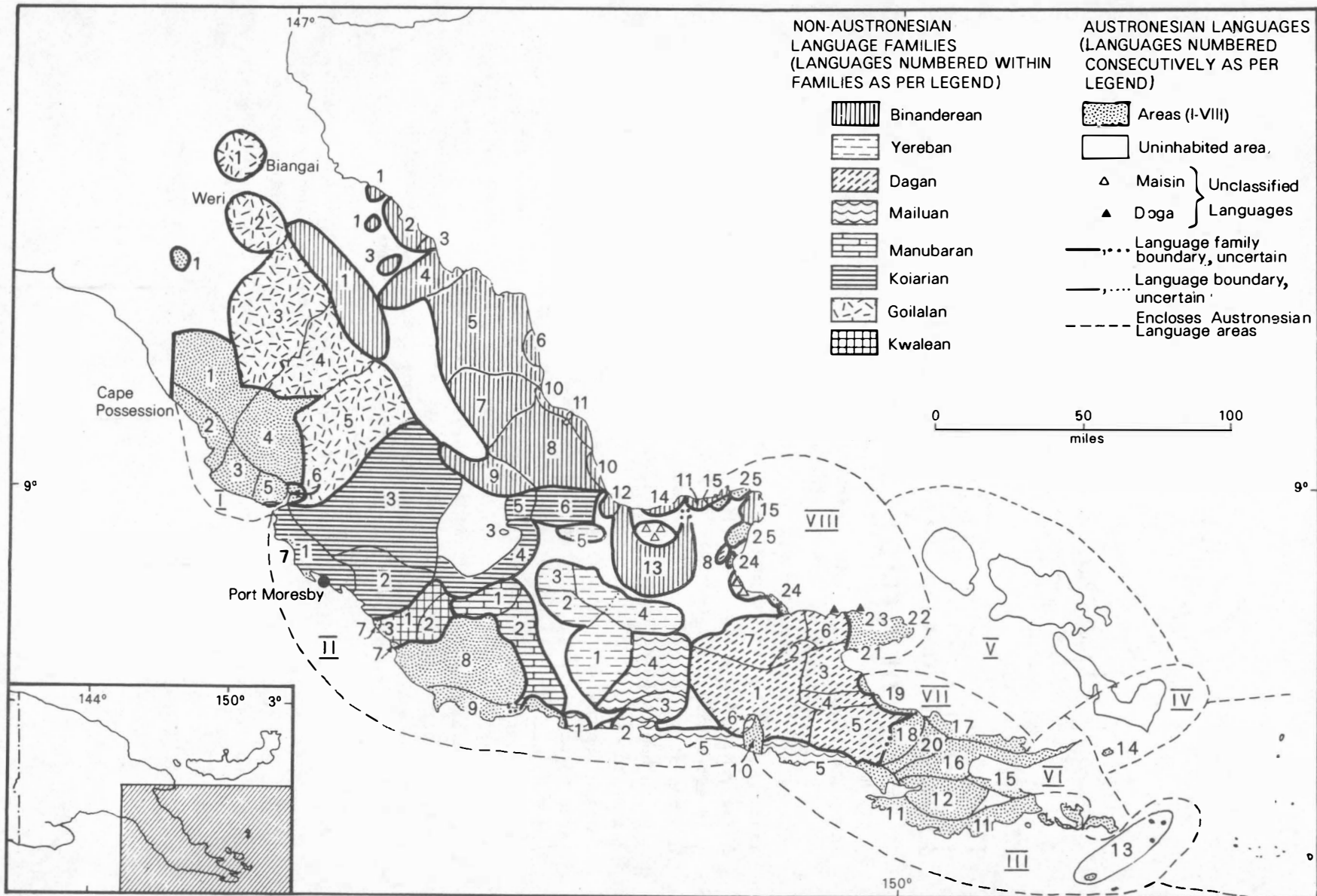
SKETCH MAP OF LANGUAGES OF CENTRAL AND SOUTH-EAST MAINLAND PAPUA

NON-AUSTRONESIAN
LANGUAGE FAMILIES
(LANGUAGES NUMBERED WITHIN
FAMILIES AS PER LEGEND)

- Binanderean
- Yereban
- Dagan
- Mailuan
- Manubaran
- Koiarian
- Goilalan
- Kwalean

AUSTRONESIAN LANGUAGES
(LANGUAGES NUMBERED
CONSECUTIVELY AS PER
LEGEND)

- Areas (I–VIII)
- Uninhabited area

△ Maisin } Unclassified
▲ Doga } Languages

——,··· Language family boundary, uncertain
——,···· Language boundary, uncertain
— — — Encloses Austronesian Language areas

0   50   100
miles

Biangai
Weri
Cape Possession
Port Moresby

9°   9°

147°
150°

144°   150°   3°

LEGEND TO MAP

A) NON-AUSTRONESIAN (or PAPUAN) LANGUAGES

(Notes on this list are given in (I) 2.9.1.)

FAMILY/STOCK	LANGUAGE	POPULATION	SOURCE
1. Goilalan Family	1. Biangai	900	Healey (1973:2)
	2. Weri	3500	Healey (1973:10)
	3. Kunimaipa	8000	Healey (1973:6)
	4. Tauade	8619	Steinkraus and Pence (1964:1)
	5. Fuyuge	9615	Steinkraus and Pence (1964:1)
2. Koiarian Family	1. Koita	2260?	Dutton (1969:82)
	2. Koiari	1176?	Dutton (1969:82)
	3. Mountain Koiari	3734?	Dutton (1969:82)
	4. Barai	3008?	Dutton (1969:82)
	5. Ömie (or Aomie)	1100	Healey (1973:7)
	6. Managalasi	4000	Healey (1973:6)
3. Kwalean Family	1. Humene	438	Dutton (1970:882)
	2. Kwale	719	Dutton (1970:882)
	3. Mulaha	(Extinct)	Dutton (1970:889-90)
4. Manubaran Family	1. Doromu	841	Dutton (1970:882)
	2. Maria	2105?	Dutton (1970:882)
5. Mailuan Family	1. Domu	482	Dutton (1971a:20)
	2. Morawa	755	Dutton (1971a:20)
	3. Binahari	770	Dutton (1971a:20)
	4. Bauwaki	378	Dutton (1971a:20)
	5. Magi (or Mailu)	4662	Dutton (1971a:20)
	6. Labu	51?	Dutton (1971a:22;Thomson 1975b)
6. Dagan Family	1. Daga (or Dimuga)	5326?	Dutton (1971a:15)
	2. Mapena	274	Dutton (1971a:15)
	3. Gwedena	2161?	Dutton (1971a:15)
	4. Ginuman (or Dime)	775	Dutton (1971a:15)
	5. Sona	1661?	Dutton (1971a:15)
	6. Jimajima	542?	Dutton (1971a:15)
	7. Maiwa	1298?	Dutton (1971a:15)
	8. Onjob	160	Dutton (1971a:15)
7. Yareban Family	1. Abia	579?	Dutton (1971a:12)
	2. Doriri	571?	Dutton (1971a:37)
	3. Sirio	363?	Parlier (1974:Personal Com.)
	4. Yareba	1100?	Dutton (1971a:36-7)
	5. Bariji	256	Dutton (1971a:12)

FAMILY/STOCK	LANGUAGE	POPULATION	SOURCE
8. Binanderean Stock	1. Guhu-Samane	5000	Dutton (1973:5)
	2. Suena	1400	Wilson (1969:66)
	3. Yekora	300	Wilson (1969:66)
	4. Zia	3300	Wilson (1969:66)
	5. Binandere	3000	Wilson (1969:66)
	6. Ambasi	1200?	Estimated
	7. Aeka	2000?	Estimated
	8. Orokaiva	25000	Wilson (1969:66)
	9. Hunjara	4265?	Dutton (1973:5)
	10. Notu (or Ewage)	10000	Wilson (1969:66)
	11. Yega	900	Wilson (1969:66)
	12. Gaina	128?	Dutton (1971a:33)
	13. Baruga	1051?	Dutton (1971a:34)
	14. Dogoro	119	Dutton (1971a:35)
	15. Korafe	4194?	Dutton (1971a:35-6)

B) AUSTRONESIAN LANGUAGES

FAMILY/STOCK	LANGUAGE	POPULATION	SOURCE
Group I	1. Mekeo	6000?	Estimated
	2. Roro (or Waima)	7000?	Estimated
	3. Nara (or Pokau)	7627	Bluhme (1970:867)
	4. Kuni	1700?	Estimated
	5. Kabadi (or Gabadi)	1400?	Estimated
	6. Doura	800?	Estimated
II	7. Motu	13000+	Taylor (1970:1)
	8. Sinagoro	12026	Dutton (1970:882)
	9. Keapara	16423?	Dutton (1970:882)
	10. Magori	194	Dutton (1971a:9;1971b)
III	11. Suau	?	
	12. Buhutu	?	
	13. Tubetube	?	
IV	14. Nuakata	?	
VI	15. Wagawaga	?	
	16. Kehelala (or Basilaki)	?	
VII	17. Wedau	1228+?	Dutton (1971a:32)
	18. Dawawa	1627?	Dutton (1971a:32)
	19. Boianaki (or Galavi)	1175	Dutton (1971a:32)
VIII	20. Igora	449?	Dutton (1971a:33)
	21. Paiwa (or Gapapaiwa)	1321	Dutton (1971a:33)
	22. Mukawa (or Are)	1231	Dutton (1971a:33)
	23. Gabobora (or Anuki)	532	Dutton (1971a:33)
	24. Ubir	912	Dutton (1971a:33)
	25. Arifama-Miniafia	2147?	Dutton (1971a:30-1)

        (V   Bwaidoga
             Dobu
             Enataulu
             Galeya
             Gilagila?
             Kukuya
             Lakulakuia
             Mataita
             Molima
             Nada
             Sewa Bay)

C) UNCLASSIFIED LANGUAGES

Unclassified Austronesian: Doga, (pop?),Dutton (1971a:7-8). Population figures included in Gabobora (or Anuki) figures given above.

Unclassified: Maisin, 1773?, Dutton (1971a:29).

   Maisin is an Austronesian-Papuan "mixed" language of doubtful status (see 4.5.1.).

and, to a lesser extent, in the east around Mamalo village inland of
Hood Lagoon. Here villagers speak dialects which contain slightly more
Keapara 'basic' vocabulary but are more akin phonologically to inland
Sinagoro dialects in certain respects, e.g. in the correspondence be-
tween the sounds l, r, t, d, γ, and h. This situation undoubtedly
reflects considerable historical contact between the various groups at
this point. Native sentiment and migratory tradition (so far as these
have been properly tapped) suggest that Ginigolo and the other villages
just mentioned belong to Sinagoro, and for the purposes of this paper
that is how they are classified.

Further details of the individual languages are given in the sections
that follow.

4.4.3.2. SINAGORO

This is spoken by some 12,000 villagers living along and inland of
the coastal strip between Kapakapa and Hood Bay and up the valleys of
the Kemp Welch (or Wanigela) and Ormond Rivers and over the intervening
foothills of the Owen Stanley Range. It consists of a large number of
dialects, possibly as many as seventeen (Dutton 1970), of varying
sizes. Lexically these dialects form chains that suggest borrowing in
certain directions.[2] However, cross-cutting these and suggesting a
different pattern of borrowing are phonological differences and simi-
larities that largely divide the dialects into eastern and western
groups which occupy the valleys of the two rivers just mentioned. The
eastern group is the more diverse phonologically. Those around the
middle reaches of the Ormond usually have the voiced velar fricative γ
heavily nasalised, and velar stops are strongly backed as one moves
downstream. Furthermore the sounds l, r, and g in the western dialects
often have no corresponding sound in (apparent) cognates in the eastern
dialects.

As already noted in 4.2.5. in this volume, Sinagoro has been known
for a long time although it has not been well studied. The only mat-
erials on the language that are available (apart from published and
soon-to-be-published vocabulary lists) are a short sketch by Seligman
(1913:184-90), comparative notes in Capell 1943, and a sketch on the
Balawaia dialect by Kolia (1975). This latter sketch is a revision of
earlier unpublished mimeographed materials put together by Koloa and
Collier in 1972. It provides the best materials available on Sinagoro
containing as it does a complete coverage of the main phonological and
grammatical features of the language as well as long Balawaia-English
and English-Balawaia vocabularies. Some mission school books and

literature have also been published in the language but the orthography
used is not completely phonemic[3] - see 4.2.5. in this volume. Village
lists, population figures, and a detailed map are given in Dutton 1970.

4.4.3.3. KEAPARA

Keapara is the largest of the languages dealt with in this section.
It is spoken by between sixteen and seventeen thousand inhabitants of
villages that stretch along the coastal strip between Hood Point in the
west and Laloura on the edge of Cheshunt Bay in the east.

Like Sinagoro, Keapara consists of a large number of mutually in-
telligible dialects, probably as many as nine (Dutton 1970), which are
related lexically in chains with the extremities of the chains sharing
about 80% (apparent) cognation.[4] Phonologically the dialect around
Wanigela (in Marshall Lagoon) is distinct in often having d/t corres-
ponding to l/r in other dialects. In this feature it is akin to
Sinagoro. In the eastern dialects the voiced interdental fricative ð
also corresponds with r in other dialects, e.g. in Aloma, Maopa, and
Laloura the word for *shoulder* is ðalo compared with ralo and alo in
Wanigela and Hula respectively. Other evidence showing phonological
differences between dialects around Hula, the best-known dialect, is
also given by Short (1939:115-18) who described the Hula dialect in
some detail in an unpublished Master of Arts thesis at the University
of Adelaide in 1939. This thesis contains a discussion of the phonetic
features of Hula speech (pp.1-5), a short grammar (in the paradigm
model (pp.6-38)), Hula-English and English-Hula vocabularies (pp.39-
113), some notes on dialectal variation in Keapara with map (pp.114-18),
and some Hula texts (9pp.). In Dutton 1970:888 I suggested a phonemic
analysis of Hula based on the phonetic details and vocabulary given by
Short and used the phonemic symbols suggested there to transcribe the
wordlist published in the same paper.

Materials in other dialects have also been collected by various
scholars from the University of Papua New Guinea but none of these has
yet been published. Other materials published or forthcoming in the
language are mentioned in 4.2.5. in this volume. Village lists, popu-
lation figures, and a detailed map are given in Dutton 1970.

4.4.3.4. MAGORI, OUMA, YOBA, AND BINA

These are remnants of Austronesian languages that apparently once
dotted coastal Papua between Table Bay in the west and Orangerie Bay
in the east. Three of these languages - Ouma, Yoba, and Bina - were only
'discovered' in 1971 when N.P. Thomson, following up suggestions made

in my description of Magori in that year (Dutton 1971b), contacted the
surviving speakers (four, two, and two respectively) and collected
wordlists and some grammatical materials from each. These materials
showed that they were like Magori in structure and some of their vocab-
ulary, and in having borrowed heavily from the neighbouring non-
Austronesian languages Magi (spoken along the coast on either side)
and Daga (spoken inland).[5]   These languages are in grave danger of
becoming extinct as children no longer learn them but learn Magi, the
dominant non-Austronesian language nearby, and/or Daga further inland,
instead.

Ouma was formerly the language spoken in villages of the same name
reported by early Government officers and missionaries as being several
miles inland of Table Bay but now represented by only four speakers
living in the small village of Labu (population 51) near the larger Magi
village of Darava (with which it is generally associated linguistically
and administratively) on the coast in Table Bay. No more than ten
miles away was Yoba which was apparently formerly spoken inland of
Magori along the middle-Bailebo River but is now only remembered by two
speakers, a man, Aruba Inabe, and his mother, Bo'odi, at present living
in Laua village in the same area. Much further east was Bina, inland
of the western end of Orangerie Bay. Today the only surviving speakers
of this language are an old man, Tabi Koakoa, married into and living
at Nabai, and his sister living at Gogosiba, both Magi villages in
Orangerie Bay.

Compared with these three now-almost-extinct languages, Magori is
a relatively large language spoken in two small villages - Magori (pop-
ulation 124) inland and Deba (population 39) on the coast - along the
lower reaches of the Bailebo-Tavanei River at the eastern end of Table
Bay. However, it too is in danger of disappearing as most speakers
now also learn Magi (and some even Daga) nearby.

Further details on these languages are given in 4.5.2. in this
volume.

N O T E S

1. See 4.5.2. in this volume.

2. Consider, for example, the following percentages of (apparent) cognation between various representative villages. These percentages are taken from Dutton 1970:912 but rounded to the nearest full percent.   The villages are arranged in a roughly west-east order but in an arc that passes through the headwaters of the Kemp Welch and Ormond Rivers.

	Alomarupu	Kemabolo	Ginigolo	Gomore	Karekadobu	Boku	Ikega	Wiga	Memekakomana	Maipiko	Bukuku
Alomarupu											
Kemabolo	88										
Ginigolo	86	96									
Gomore	73	76	79								
Karekadobu	75	79	82	89							
Boku	76	82	85	91	90						
Ikega	67	71	74	81	80	91					
Wiga	70	74	75	83	79	88	90				
Memekakomana	68	72	73	75	76	86	88	88			
Maipiko	66	69	70	75	75	85	82	82	82		
Bukuku	64	66	67	70	71	83	79	80	79	88	

3. Further details are given in Dutton 1969:111-12).

4.   Consider, for example, the following percentages of cognation be-
tween various villages. These figures are taken from Dutton 1970:912,
but rounded to the nearest full percent. The villages are arranged in
a west-east order reading down and across the table.

	Hula	Kalo	Mamalo	Kerepuna	Paramana	Maopa	Wanigela	Laloura
Hula								
Kalo	86							
Mamalo	75	75						
Kerepuna	92	84	73					
Paramana	77	73	71	78				
Maopa	78	74	72	78	94			
Wanigela	81	74	70	80	85	86		
Laloura	80	77	74	81	91	92	89	

5.   Thomson (1975) gives the following cognate percentages between
these four languages:

	Magori	Ouma	Yoba	Bina	Total AN Content
Magori					
Ouma	47				24
Yoba	62	45			
Bina	54	–	66		

But see 4.5.2. in this volume for further details.

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4.4.4. AUSTRONESIAN LANGUAGES: MOROBE PROVINCE

Bruce A. Hooley

4.4.4.0. INTRODUCTION

Although it has been known for many years that there are a number of
Austronesian languages spoken in the Morobe Province of Papua New Guinea,
it is only recently that attempts have been made to classify these into
smaller groups. Salzner's *Sprachenatlas*, published in 1960, gives a
classification of Morobe Province languages which roughly parallels
that presented in Hooley and McElhanon 1970, but his classification
appears to be geographically rather than linguistically based, and there
are a number of discrepancies (McElhanon 1970:1190).

Earlier attempts to classify the languages were sketchy and of limited
extent, and will not be discussed here. Capell, approaching the problem
from a typological viewpoint, separated the Austronesian languages of
the whole area into two main groups. Since he has outlined this hypo-
thesis extensively in his published works, it will be discussed in some
detail.

4.4.4.1. CAPELL'S CLASSIFICATION

Capell's attempt to classify the Austronesian languages of the Papua
New Guinea region into two major groups AN1 and AN2 has been described
in A *Survey of New Guinea Languages* (Capell 1969) and in 'The Austro-
nesian Languages of Australian New Guinea' (Capell 1971).[1]

The following discussion will be concerned with his theory mainly as
it applies within the Morobe Province. Its basic feature is summarised
in the following quotation (Capell 1971:241):

> The Austronesian languages of New Guinea also fall into
> two subgroups,... This subdivision is based on a typological
> feature manifested in two contrasting types of syntax.
> Austronesian languages in general, apart from New Guinea,
> have the order

<div align="center">Subject + Verb + Object</div>

in the simple declaratory sentence. In part of the New Guinea
Austronesian field this order holds good, but in part the order
is

<div align="center">Subject + Object + Verb</div>

i.e. SOV against the more normal SVO. This typological feature
permits a first dichotomy of the languages into those which
place the verb before the object, and those which place the
object before the verb.

Capell calls the first group AN1 and the second AN2.

Other features which he lists as typically AN2 include:

The occurrence of the demonstrative after the noun in noun phrases,
in contrast to AN1 languages where the demonstrative is said to occur
before the noun.

The fact that dual and trial pronouns do not occur, or if they do
occur that they are secondary formations.

Capell only applies this system to the Austronesian languages in the
Morobe Province to a limited degree. He lists the languages of the
south coast of the Huon Peninsula from Lae to Finschhafen (Bukaua, Yabêm,
Tami) as being AN2. He lists Sio among the AN1 languages, and says
regarding the other languages on the islands between the Huon Peninsula
and New Britain that, because of lack of data, it is impossible to tell
whether they are AN1 or AN2. He includes Adzera[2] among the AN2 lan-
guages, saying (Capell 1971:289): "It is true that it does not have a
S + V + O syntactical pattern, but in every other regard it is nearer
the AN2 group and has been included here with them."

Capell's failure to mention the Buang languages at all is inexplic-
able, since he already had wordlists from the Mumeng area in 1960 or
earlier, and it was pointed out in print in 1964 (Hooley 1964:247, foot-
note 24) that he had incorrectly classified the Mumeng languages as non-
Austronesian in his survey (Capell 1962).

The Adzera and Buang Families do in fact demonstrate clearly the
weakness of Capell's dichotomy. His principal criterion for setting up
the AN2 group is the SOV word order in clauses, yet these two large
families quite definitely have the SVO order.

Capell says that in every other regard the Adzera languages are AN2.
The Buang languages also show other features which would link them with
his AN2 group: the demonstrative occurs following the noun and marks
the closure of the noun phrase, and the dual and trial pronouns are
clearly secondary formations based on the numbers two and three (Hooley
1970:186 and 144).

The Yabêm language, which he even more definitely identifies as AN2,
also contradicts his criterion, since it too has the SVO order which
should put it among the AN1 languages.

Since these discrepancies do relate to his principal identifying criterion, his whole theory is called into serious question. At least for the Morobe Province the classification of the Austronesian languages into AN1 and AN2 groups is inconsistent, and not particularly helpful. At the present stage of our knowledge therefore, a classification based on lexicostatistical studies would seem to be more enlightening.

Using that method, the writer has grouped the languages into families of related languages the composition of which will be discussed more fully below. Before proceeding, however, it is necessary to digress briefly and take up another problem.

4.4.4.2. CRITERIA FOR DISTINGUISHING LANGUAGES AND DIALECTS

It is obvious to anyone with even a superficial knowledge of the languages of Papua New Guinea, that neat categorisation of linguistic groups into dialect and language is impossible. Differences between adjacent villages range all the way from zero to complete unintelligibility. It is therefore difficult to find some consistent, easily applied, formal criterion for distinguishing separate languages from mere dialects.

Our intuitive guess might be to say that dialects are mutually intelligible, whereas separate languages are not. This does not really help because it gives us no formal test which can be consistently applied. Social factors of various kinds and the degree of contact found between different groups greatly influence so-called mutual intelligibility.

So far, to my knowledge, no simple identification test has been devised, and I do not anticipate that it will be. Researchers are usually compelled to use some criterion arbitrarily chosen to meet their own particular needs. In the following description of the families of Austronesian languages in the Morobe Province, the criterion for identifying a linguistic group as a language rather than a dialect has been a shared cognate percentage of 77% or lower. Obviously this decision is arbitrary, and open to certain dangers. It depends, for example, on the size and accuracy of the wordlists available, and on the criteria used for identifying cognates, which in turn depend somewhat on the individual investigator. Nevertheless this approach has proved helpful and no apology is made for it here.

The techniques used in the study have been discussed more fully elsewhere (Hooley 1970; 1971), but briefly, the final classification was based on a comparison of 100 words collected from the principal Austronesian languages and dialects of the Province. The results clearly

divided the languages into several different groups. While further
information may tend to raise some of the cognate percentages, it is
unlikely to change the groupings significantly. These groups have been
designated families and sub-families as follows.

4.4.4.3. THE ADZERA FAMILY

The Adzera Family comprises 13 languages.[3] It covers the whole of
the Markham Valley from near the mouth up to the headwaters of the Ramu;
and in fact the Mari language is wholly in the Madang Province. It also
includes the lower reaches of most of the Markham tributaries. These
languages are:

Adzera	In the Markham Valley proper
Dangal	In the Lower Watut Valley
Guwot	In the Busu Valley
Mari	In the Ramu headwaters and actually in the Madang Province
Maralango	In the Lower Watut
Musom	In the Busu Valley
Onank	In the Waffa Valley
Silisili	In the Lower Watut Valley
Sirak	In the Busu Valley
Sirasira	In the Leron Valley
Sukurum	In the Leron Valley
Wampar	In the Lower Markham Valley
Wampur	In the Wanton Valley

Of these languages Adzera itself is by far the largest with more than
14,000 speakers. Wampar and Silisili are the next biggest groups, with
2-3,000 speakers each, while the others are quite small, being spoken
by only a handful of villages or less. The total number of speakers
for languages of the Adzera Family is approximately 22,000.

Three sub-families may be recognised within the Adzera Family. These
are:
The Lower Watut Sub-Family comprising Dangal, Maralango, and Silisili.
The Markham Sub-Family comprising Onank, Mari, Wampur, Adzera and
Sirasira.
The Musom Sub-Family comprising Musom and Sirak.

Languages of each of these groups are clearly more closely related
to each other than they are to other members of the family.

Another interesting feature of the Adzera Family languages is that
Mari, Wampur, Sirasira, and Onank are more closely related to each other
than they are to Adzera itself, although they are each contiguous to
Adzera while being widely separated from each other.

THE ADZERA, BUANG
AND HOTE LANGUAGE FAMILIES
MAP 1
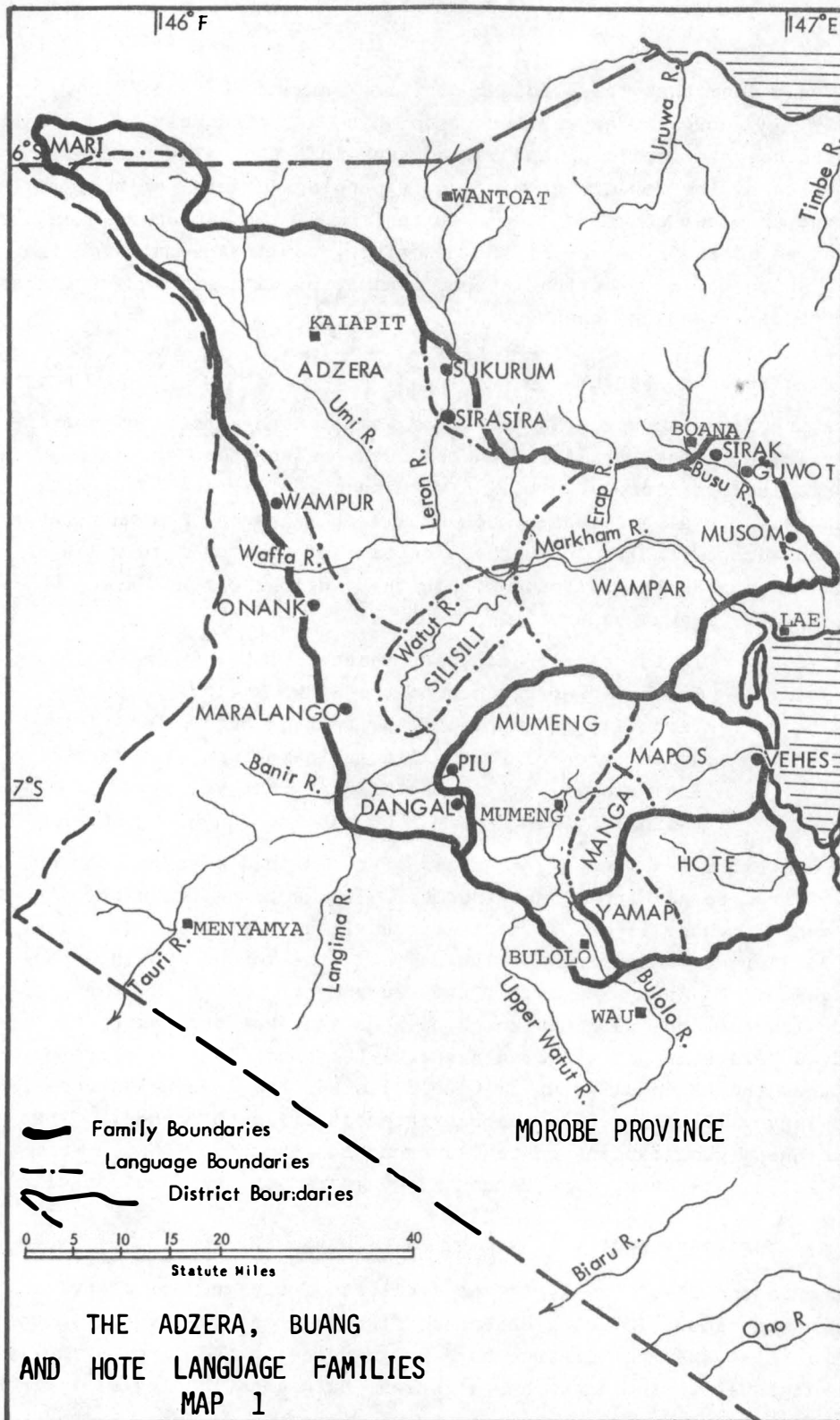
Reproduced from Map 1 in B.A. Hooley, 'Austronesian Languages of the
Morobe District, Papua New Guinea'. *Oceanic Linguistics*, vol.10, no.2
(Winter 1971). Reproduced with the kind permission of *Oceanic Linguistics*.

It would seem that these four groups are remnants of some kind.
Possibly they represent an earlier group which occupied most of the valley
and which has been split up and forced back into the valleys of the
tributaries by the rapidly growing and expanding Adzeras; or they may
represent an older and more conservative form of the language which has
not changed in the same way as the powerful group in the main fertile
valley, which has much better intercommunication with subsequent faster
(and more far-reaching) changes.

4.4.4.4. THE BUANG FAMILY

There are five languages in the Buang Family with a total of approx-
imately 18,000 speakers. Although not much smaller than the Adzera
Family it is more closely knit, and with much less spread of cognate
percentages. It also covers a much smaller total area than that taken
up by the Adzera Family. With the exception of four or five villages,
the whole Buang Family is found within the confines of the Mumeng
District. The languages are:

Central Buang	In the middle and upper reaches of the Snake Valley
Manga Buang	In the lower reaches of the Snake Valley
Mumeng	Virtually the whole of the rest of Mumeng District
	plus three or four villages in the Wau District
Piu	A single village in the Middle Watut Valley
Vehes	A single village near the mouth of the Buang River

The Central Buang language consists of two main dialects: what has
been referred to as Mapos Buang (Hooley 1970), and the headwater dialect.
The Mumeng language is really a dialect chain with six main dialects.

In most previous listings of languages in the Morobe Province the
languages of the Buang Family, if they were mentioned at all, were in-
cluded with the non-Austronesian group. Salzner has them correctly
listed as Melanesian in his *Sprachenatlas* (Salzner 1960:28) where he
calls them the Kaidemui group.[4] Capell listed them as non-Austronesian
in his survey (Capell 1962), and consistently omits reference to them
in subsequent publications on the Austronesian languages. Even Wurm
(1971:1261) lists Buang as a Papuan language rather than Austronesian.

4.4.4.5. THE SIASI FAMILY

Although the Siasi Family is the smallest of the groups, comprising
not more than about 10,000 speakers on figures presently available to
me, it is also the most diverse both geographically and linguistically.
In the list below, 16 languages (with Tuam-Mutu constituting a single

language) are attributed to it within the Morobe Province itself. The
family extends beyond the borders of the Province, however, and is known
to include Gedaged, a member of Z'graggen's Belan Family (Z'graggen
1970), Maleu from New Britain, and probably a number of others.[5] Some
questions have been raised concerning the large number of languages
listed for the islands and the north coast of the Huon Peninsula, and
it is possible that more careful collection and comparison of wordlists
may lower the number slightly. However, on the present figures avail-
able to me the languages within the Province are:

Barim	On Aronai and south-western Umboi Islands
Bukaua	Along the south coast of the Huon Peninsula and south along the coast almost to Salamaua
Gitua	On the north coast of the Huon Peninsula
Kaiwa	On the coast to the south of Salamaua and extending inland along the Francisco River
Kela	From Salamaua south along the coast nearly to the Paiawa River
Labu	Near the mouth of the Markham on the south side
Lukep	Tolokiwa Island and the northern tip of Umboi
Malasanga	On the north coast of the Huon Peninsula
Mangap	Sakar Island and eastern Umboi
Nengaya	On the north coast of the Huon Peninsula
Roinji	On the north coast of the Huon Peninsula
Sio	Sio Island
Sipoma	On the coast south of the Markham, nearly down as far as the Paiawa River
Tami	On the Tami Islands, and mainland villages south of Finschhafen
Tuam-Mutu	Mandok, Malai, and Tuam Islands, southern Umboi, and a small settlement on the north coast of the Huon Peninsula
Yabêm	On the coast near Finschhafen

It is possible to distinguish certain sub-families within this large
and diverse group. For example, Yabêm and Bukaua form a small local
grouping of two closely related languages, and it might be better to
consider that they form a single dialect chain rather than two distinct
languages. The question is complicated by the fact that the Lutheran
Mission has used Yabêm as a lingua franca throughout the area for many
years, which tends to blur the distinction for these two closely related
languages further.

The group of languages Bukaua, Yabêm, Kela and Labu, with perhaps
Sipoma and Kaiwa, form a sub-family of their own called the Gulf Sub-
Family (Hooley 1971). This group was originally treated as a separate

MAP 2

THE SIASI LANGUAGE FAMILY

Language Boundaries
Siasi Family Boundary
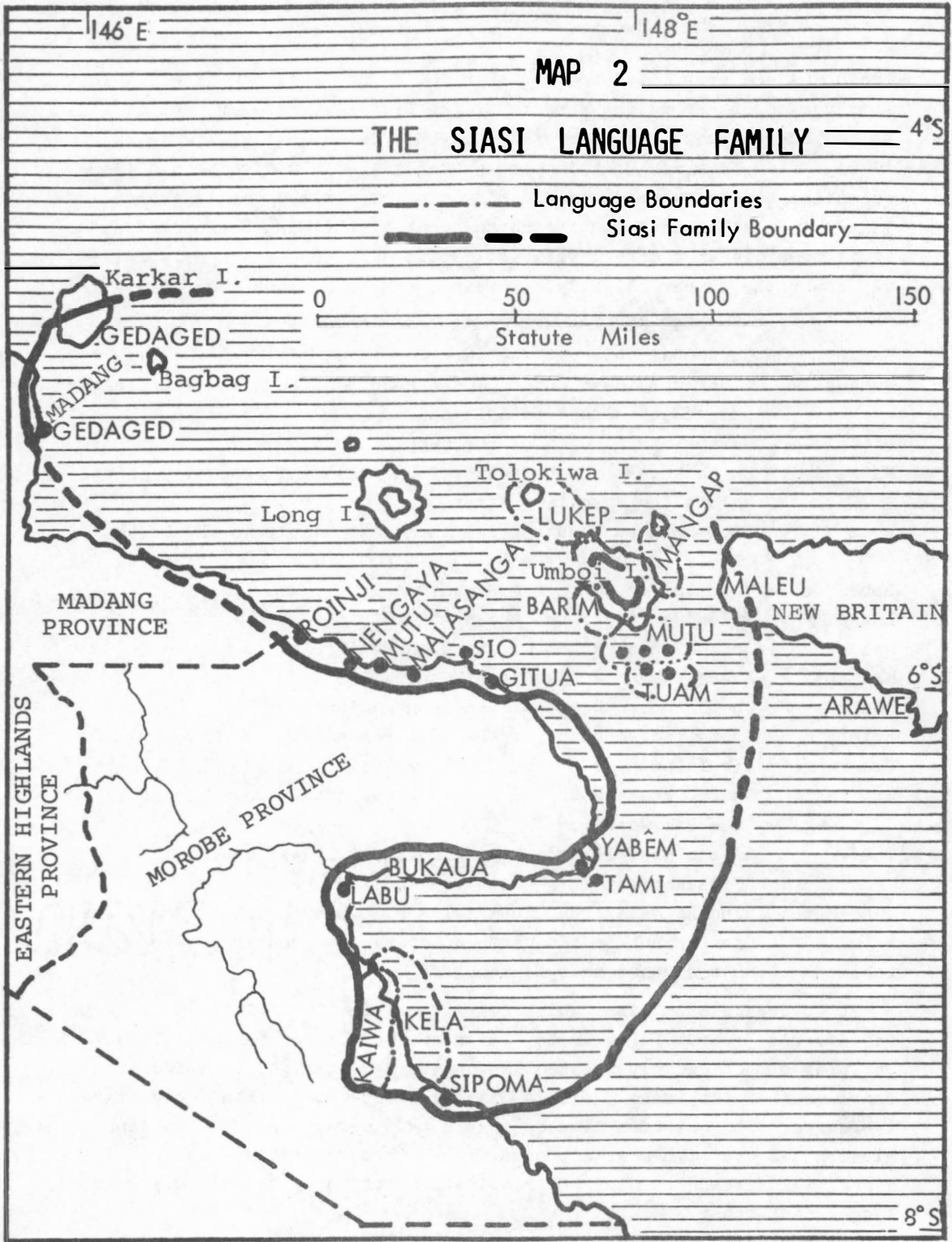
Based on Map 2 in B.A. Hooley, 'Austronesian Languages of the Morobe District, Papua New Guinea'. *Oceanic Linguistics*, vol.10, no.2 (Winter 1971). Reproduced with the kind permission of *Oceanic Linguistics*.

family in its own right, but closer study of the percentages of shared
cognates showed that they were linked to the island languages at the
family level through Tuam-Mutu and Tami. Since additional study of the
individual languages is likely to raise rather than lower the percentages
it is better to consider this group as a sub-family.

The other main sub-family, and the largest, is found mostly on the
islands and in a few scattered settlements along the north coast of the
Huon Peninsula. It is called the Island Sub-Family and comprises Barim,
Gitua, Lukep, Malasanga, Mangap, Nengaya, Roinji, Sio, Tami, and Tuam-
Mutu from within the Morobe Province. As mentioned above, other languages
such as Gedaged, from outside the province also belong to this sub-
family, and its full extent is not yet known.

Sipoma and Kaiwa constitute a problem at present. They form another
small subgroup of their own, being most closely related to each other.
They are approximately equally related to the Gulf Sub-Family and the
Island Sub-Family and closer study is necessary to elucidate their re-
lationships more fully. Kaiwa is especially interesting since it is
the only Austronesian language of the province known to have consonant
clusters.

4.4.4.6. THE HOTE FAMILY

This is a small group situated between Wau and Salamaua which is
divided on present evidence into the two languages Yamap and Hote.
These two are closely related to each other, but more fieldwork needs
to be done in the area to clarify the relationships. It may be that
more detailed research than has so far been possible will show that
there are really more than two languages in the group, or that it com-
prises a single dialect chain. Relationships to the other families also
await further study, but on present indications the percentages of
shared cognates are low, and about equal with respect to both the Buang
Family and the Gulf Sub-Family.

4.4.4.7. CONCLUSION

Although the overall picture of the Austronesian languages in the
Morobe Province is now quite well established, there remains much field-
work to be done in developing the details of the picture, especially in
carrying out in-depth studies of the individual languages. It is to be
hoped that many of these will be undertaken during the next few years.

N O T E S

1.   This classification is confused because, between the 1969 and 1971 publications, Capell has reversed the groups which he refers to by the terms AN1 and AN2.   He has done this without, as far as I can see, noting this fact anywhere.

2.   The name 'Adzera' has been spelled in many different ways (Azira, Acira, Atsera).   I have preferred the spelling Azera in earlier publications.   However, since Rev. K. Holzknecht who has worked among the Adzeras for many years has indicated a preference for the spelling used above, I have changed it accordingly.

3.   I am assured by Rev. K. Holzknecht and Dr H. Fischer that there are two more groups belonging to the Adzera Family.   These are the Yalu, a small group living about 12 miles out of Lae, and the Lahe (Lae) people, of whom only four or five old people still remain, living at Butibam village.   This means that the total number of languages in the Adzera Family should be increased to fifteen.   So far it has not been possible for me to confirm this personally.

4.   Kaidemui, Gaidemoe, or Kaidemoe, is a Bukaua expression meaning 'the bush people' (Hooley 1970, Preface).

5.   Chowning (1973) has now examined the relationships between the New Britain Austronesian languages and the Siasi Family in more detail.   It appears that Maleu is a rather divergent member of her Bariai Family. She shows clearly, by comparison with other members of that family (e.g. Kove which she lists as having 52-54% shared cognates with Tuam-Mutu), that the Siasi and Bariai Families should now be united.

CHART OF COGNATE PERCENTAGES

Based on Chart 2 in B.A. Hooley, 'Austronesian Languages of the Morobe District, Papua New Guinea'. *Oceanic Linguistics*, vol.10, no.2 (Winter 1971). Reproduced with the kind permission of *Oceanic Linguistics*.

	WAGAU	MAPOS	MANGA	KUMARU	VEHES	SAMBIO	DAMBI	PATEP	ZENAG	TOWANGARA	LATEP	PIU	DANGAL	MARALANGO	SILISILI	DUNGUNTUNG	BUBWAF	ONANK	MARI	WAMPUR	YAROS	AMARI	ADZERA	SIRASIRA	SUKURUM	SIRAK	MUSOM	WAMPAR	DAGIN	GUWOT	DUWET	LABU	BUKAUA	YABÊM	KELA	TAMI	TUAM	MUTU	GITUA	MANGAP	LUKEP	BARIM	MALASANGA	ROINJI	NENGAYA	SIO	GEDAGED	SIPOMA	KAIWA	YAMAP	HOTE
WAGAU																																																			
MAPOS	85
MANGA	69	77
KUMARU	59	66	66
VEHES	63	68	67	68
SAMBIO	59	61	60	79	64
DAMBI	56	61	59	86	61	76
PATEP	60	64	64	82	67	76	76
ZENAG	59	62	62	82	65	77	77	92
TOWANGARA	56	56	56	74	56	71	70	84	84
LATEP	54	59	60	81	65	73	76	85	85	75
PIU	50	52	49	57	49	54	54	55	56	55	53
DANGAL	23	21	23	26	24	25	23	23	22	25	21	27
MARALANGO	22	19	21	24	22	23	21	22	21	21	19	26	75
SILISILI	26	23	25	25	26	22	22	23	22	22	19	25	63	69
DUNGUNTUNG	25	22	25	24	25	21	21	22	21	21	18	25	60	65	94
BUBWAF	23	20	19	20	21	17	17	19	18	18	16	20	57	66	86	80
ONANK	20	17	20	19	20	20	16	18	17	19	14	21	50	57	70	67	62
MARI	20	17	18	16	17	14	14	14	13	15	12	15	35	34	42	40	38	47
WAMPUR	18	15	18	15	15	14	13	14	15	14	13	17	34	35	44	42	40	49	66
YAROS	17	15	18	17	16	15	15	16	15	16	13	19	38	38	44	42	43	45	55	65
AMARI	18	15	18	15	17	15	14	16	15	16	13	18	34	35	43	42	43	44	55	61	87
ADZERA	18	16	19	17	17	15	16	15	16	16	13	18	36	36	44	43	43	44	53	59	81	80
SIRASIRA	15	14	16	18	18	19	16	19	18	20	16	20	37	33	39	37	38	39	49	48	53	52	51
SUKURUM	14	14	17	20	18	18	18	20	19	20	16	17	30	29	31	30	29	35	46	40	44	44	43	54
SIRAK	16	15	16	18	16	15	17	16	18	14	18	18	46	38	48	47	44	42	38	34	43	40	42	42	36
MUSOM	16	15	18	16	16	17	18	17	19	15	19	19	47	43	47	45	44	44	40	38	42	39	40	42	37	65
WAMPAR	14	11	13	13	14	13	13	14	13	15	11	17	39	38	43	40	42	39	33	37	41	38	40	39	27	42	48
DAGIN	15	13	15	14	16	15	11	13	12	14	10	16	39	40	40	41	41	42	33	38	40	37	39	37	29	42	46	89
GUWOT	12	13	18	16	15	15	16	15	14	15	15	16	32	29	30	29	25	26	33	26	27	29	31	32	42	41	28	28
DUWET	12	13	17	15	14	15	14	13	14	14	13	15	27	25	26	25	21	22	26	22	28	26	28	29	23	39	39	27	27	89
LABU	12	14	15	16	16	13	14	13	13	12	12	10	23	21	27	25	26	23	23	20	25	22	23	24	16	27	29	27	24	21	21
BUKAUA	24	25	25	27	26	26	25	23	24	23	22	21	25	21	23	23	18	18	21	15	18	16	18	16	23	26	18	17	23	21	40
YABÊM	18	20	21	22	20	20	20	19	20	17	19	16	24	21	21	17	18	16	17	18	12	15	25	22	33	64
KELA	17	18	18	19	18	15	17	19	18	17	17	14	18	17	16	16	15	15	19	12	15	14	13	12	13	16	18	12	12	17	15	26	37	30
TAMI	20	22	22	22	22	20	21	21	22	18	22	15	20	18	17	16	16	15	19	16	17	18	17	16	14	17	16	13	12	22	20	24	38	40	27
TUAM	15	16	15	18	19	16	17	17	18	17	16	14	22	22	21	20	19	17	20	14	18	17	17	21	16	18	18	16	22	21	22	30	32	28	42
MUTU	15	16	15	17	19	15	16	15	16	14	14	13	20	20	18	17	16	15	20	14	17	14	17	16	16	20	16	17	16	15	20	21	25	29	30	26	39	84
GITUA	17	18	14	18	19	17	17	16	17	16	15	14	23	19	20	20	18	15	15	10	15	15	16	18	14	20	18	13	12	18	18	18	32	31	22	35	58	57
MANGAP	12	13	11	13	15	13	12	13	14	13	13	14	20	17	20	18	18	15	16	14	18	17	16	19	15	18	20	15	12	16	17	18	21	24	17	34	43	44	42
LUKEP	10	11	11	13	13	12	12	12	13	12	12	10	17	17	18	16	17	15	16	14	17	15	16	14	11	9	14	15	16	17	25	14	34	41	42	37	55
BARIM	12	12	11	12	14	12	12	12	11	12	10	11	18	17	20	17	19	16	17	14	17	17	15	17	15	15	17	17	15	16	17	19	22	17	37	38	43	35	50	68
MALASANGA	13	13	12	14	15	13	13	14	13	14	12	13	18	17	21	18	20	17	19	16	18	18	18	18	15	17	17	16	14	14	14	20	23	26	20	37	40	14	38	47	67	74
ROINJI	14	14	11	12	14	13	11	13	14	12	12	10	17	16	17	16	16	13	14	11	14	12	13	18	16	16	16	12	11	18	17	18	19	25	17	30	34	33	33	39	42	41	42
NENGAYA	12	14	11	12	14	13	9	13	14	11	12	9	14	16	14	16	16	14	13	11	14	11	14	21	25	20	29	28	27	27	30	31	30	33	54
SIO	13	13	12	13	16	14	12	13	13	13	12	11	17	14	14	14	14	16	18	14	17	14	17	20	17	15	16	15	13	13	16	20	21	17	29	38	35	35	42	35	32	34	34	25
GEDAGED	14	16	14	14	15	11	13	13	14	12	14	16	15	15	14	14	14	16	13	16	14	14	18	13	16	14	10	9	17	18	19	18	24	16	38	33	33	30	36	36	32	32	38	28	32
SIPOMA	22	23	21	24	24	18	22	22	22	18	22	16	16	16	15	16	16	16	16	12	13	13	14	12	10	14	13	12	11	15	13	27	36	39	30	32	31	27	25	27	25	26	25	27	25
KAIWA	24	27	26	28	27	25	25	28	26	25	25	23	24	24	21	21	17	16	19	13	15	15	14	17	14	18	24	16	15	21	18	25	36	36	37	33	33	33	27	26	24	25	26	24	23	20	24	38
YAMAP	18	19	22	21	21	18	19	21	20	20	19	17	17	16	15	14	12	11	10	8	9	9	9	8	9	13	15	12	13	11	10	16	28	22	17	25	17	17	17	15	14	16	18	13	14	8	13	22	32
HOTE	19	21	23	24	23	20	21	23	22	21	20	20	15	14	13	12	9	9	6	6	6	6	8	10	13	14	10	11	11	10	16	26	24	21	25	19	19	20	17	14	18	19	14	14	12	14	22	34	71
MALEU	10	9	6	9	9	6	9	10	9	10	9	8	14	10	14	14	11	7	10	5	10	11	10	12	12	12	12	7	7	10	10	9	14	16	12	20	30	30	24	34	29	27	28	25	18	25	24	18	18	8	9

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4.4.5. AUSTRONESIAN LANGUAGES: ADMIRALTY ISLANDS AREA

Alan Healey

4.4.5.0. INTRODUCTORY REMARKS

It has long been acknowledged that all of the languages of the Admiralty Islands and the small islands to the west are Austronesian.[1] However, because so little vocabulary and grammatical data have been published on the individual languages, uncertainty has persisted right up to the present time as to how they fit into the various schemes for subdividing the Austronesian Phylum into stocks and how they are sub-grouped among themselves.

4.4.5.1. EXTERNAL RELATIONSHIPS

Linguists have held many different viewpoints on the relationship of the Admiralty area languages to other Austronesian languages.

(a) Moseley (1877:387-90, cited in Ray 1891:10) sought to connect the language of Wild Islands (Sori or Harengan?) with the language of Yap in Micronesia rather than with the Melanesian group of languages. This was based on the marked similarity in form of certain of their words, especially the numerals 'eight' and 'nine'. Ray discusses Moseley's view approvingly.

(b) Hambruch (1908, cited in Smythe 1970:1230) refers to Wuvulu and Aua as being linked with Indonesia, but he seems to regard them as basically Melanesian with some Indonesian elements.

(c) Friederici (1912:228, cited in Bühler 1935:6) describes the languages of Lou, Pak, Baluan and Mouk as Melanesian.

(d) Thurnwald (1910:111) treats the language (*sic*) of the coastal people as Melanesian and the language (*sic*) of the inhabitants of the mountains on Manus, Rambutyo and Pam as non-Melanesian.

(e) Meyer (1932:188 map) treats all the languages and dialects of the Admiralty area as Melanesian.

(f) Bühler (1935:6) challenges Thurnwald's claim that the language spoken in the mountains is non-Melanesian.

(g) Grace (1955:339) lists Wuvulu-Aua and the remainder of the Admiralty area languages as two sections of his Eastern Malayo-Polynesian (now called Oceanic) subgroup of languages, which contains all Polynesian, Melanesian, and Micronesian languages in 19 sections.

(h) Capell (1954:29; 1962a:56) regards all of the languages of the Admiralty area as Melanesian.

(i) Smythe (1949:29; 1958; 1970) suggests that the languages of the Admiralty Islands area have multiple origins or strata, having incorporated in varying degrees vocabulary and grammatical features from Papuan, Melanesian, Micronesian, and Indonesian sources.[2] All of the languages, he says, are Melanesian in general outline.

(j) Salzner (1960:26-7) regards all of the languages of the Admiralty area as Melanesian.

(k) Schwartz (1973) believes that the languages of Manus and the nearby islands, including the Hermit Islands (Smythe's Group 3), constitute a single distinctive Melanesian language group at the present time, though their subgrouping may reflect diverse influences and origins.

(l) Z'graggen (1975:117) feels there is strong evidence that the Seimat and Kaniet languages (Smythe's Group 2) link with the Austronesian languages of the (Lesser) Schouten Islands near the mouth of the Sepik River. However, he feels that there is not enough evidence for positing a link between Wuvulu-Aua (Smythe's Group 1) and the Austronesian languages of the Aitape area.

(m) Blust (1975a; 1976) feels that there is a persuasive body of lexical and morphological evidence that all of the languages of the Admiralty area (including the western islands) constitute a subgroup within the Oceanic group of Austronesian languages. Investigation in the field did not uncover evidence for a post-Proto-Oceanic subgrouping connection with Mussau or Mendak (New Ireland), Gapapaiwa (Milne Bay), Wogeo, Manam (Schouten Islands), or Takia (Karkar Island). Subsequent work with a broad range of published materials on Oceanic languages has similarly failed to suggest a more inclusive genetic grouping short of Oceanic itself.

(n) Unfortunately Dempwolff (1937) and Dyen (1965) have not given us their opinions on this matter.

These various opinions should be considered in the light of the
vigorous debate of recent years (Capell 1962b) which has seriously
questioned the status and unity of the "Melanesian" languages as a stock
within the Austronesian Phylum.

Clearly, considerable research is still needed to resolve three main
areas of uncertainty.

(a) With which languages of Micronesia, Indonesia, and Melanesia do
the languages of the Admiralty area have the closest links?

(b) Are these links based mainly on chance similarities of lexicon and
grammar, or are they the result of borrowing, or of genetic relation-
ship?

(c) Does the division of the Admiralty area languages into two or three
main groups have approximately the same time depth as the oldest divi-
sions of the Oceanic languages?

4.4.5.2. INTERNAL SUBGROUPINGS

Estimates of the number of languages spoken in the Admiralty area
have ranged from 18 to 40. Dietsch (1971) reports that there are 14
languages in the Admiralty Islands proper so different that they are
not spoken by a neighbouring group. Schwartz (1973) reports that in
the Admiralty Islands proper there are approximately 20 languages that
are named, recognised, and treated by the inhabitants as separate lan-
guages which present varying degrees of difficulty to the speakers of
other languages. Smythe (1949, 1970) lists 21 languages in the Admiralty
Islands and 4 more in the islands to the west. Meyer (1932) (and
following him, Salzner (1960)) lists and maps 33 (34) "dialects" in the
Admiralty Islands and 6 more to the west. This large number can be
considerably reduced if one allows for (a) Manu Island being uninhabited,
(b) the pairings of Hus-Andra, Baluan-Lou-Pam, Titan-Ndrihol and Wuvulu-
Aua as dialects of single languages, and (c) the existence of two dia-
lect chains on Manus Island. Blust (1975a, 1975b) posits somewhere
between 19 and 23 languages in the whole Admiralty area, one of which
is a large dialect chain on eastern Manus. In Table 1 I have suggested
27 languages as a compromise estimate for the whole area.

There is considerable difference of opinion and uncertainty about
the subgrouping of these languages.

(a) Meyer (1932) (and following his, Salzner (1960)) lists his 39
"dialects" in five groups which appear to be geographically based but
which nevertheless show considerable correlation with the linguistic
classifications of later writers. His groups (see Figure 1) are the

western islands, Rambutyo Island, the smaller islands around Manus,
western Manus, and eastern Manus including Titan.

FIGURE 1
Meyer's Classification

Wuvulu	Ndrihol	Nauna	Titan	Mondropolon
Aua	Penchal	Pak/Tong	Kara	Tjudun
(Manu)	Lenkau	Loniu	Kuruti	Chechek
Seimat		Pityilu	Gele'	Levei
Kaniet		Hus	Ere	Paralevei
Hermit		Andra	Nane	Lindrou
		Ponam	E	Mandrelan
		Sori/Harengan	Okro	Pahavai
		Sisi	Elu	
		Lou	Pare	
		Baluan	Nali	
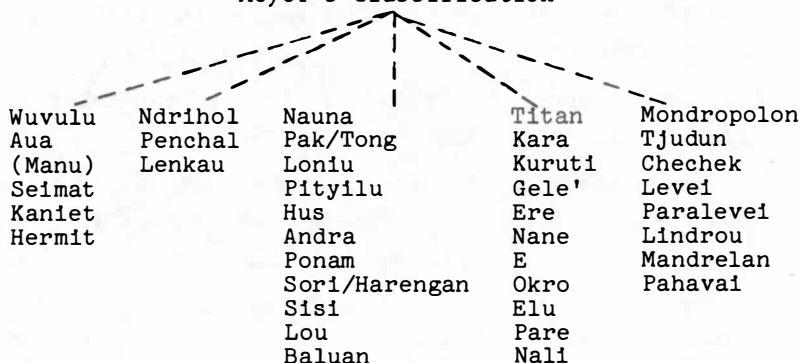
(b) Smythe (1970) divides the languages of the whole area into three
main "groups" and then splits two of them each into two "subgroups".
His classification (see Figure 2) is based on typology. .

FIGURE 2
Smythe's Classification

Wuvulu-Aua	Seimat	Kaniet	Sori/Harengan	Papitalai
			Hermit	Sisi/Bipi
			Nyada	
				Levei
			Hus	Tulu
			Andra	
			Ponam	
				Pak/Tong
			Gele'	Titan
			Pare	
			Kuruti	Baluan-Lou-Pam
			Ere	Rambutyo, Nauna
			Lele	
			Warembu	
			Nali	
			Pityilu	
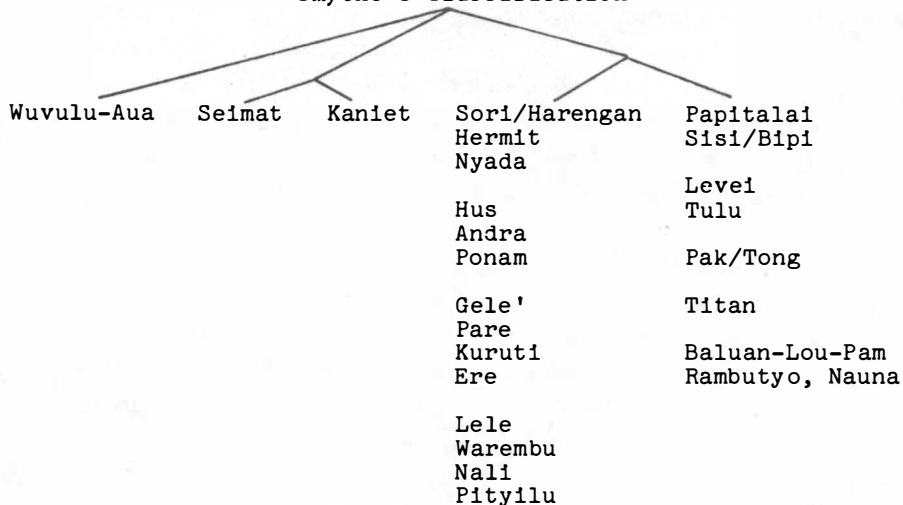
(c) Schwartz (1973) feels that the languages of the Admiralty Islands
proper fall into four or possibly five groups: a few of the small
islands including Baluan, the rest of the small islands with an east-
west division not very sharply marked, the mainland of Manus Island
divided rather sharply into an eastern and western group, and the Titan
(= Manus) language (spoken on the south coast of Manus and on several

of the small islands). He mentions that the situation is actually much more complicated than this. His classification is presumably based on his intuitive evaluation of speaker comments and of the extensive data that he has collected on several visits to almost every village. I have attempted to diagram Schwartz's view in Figure 3.

FIGURE 3

Schwartz's Classification

```
                                    _____
                            _ _ _ ↗|        | _____
                     _ _ _ ↗    ↗ |    |       |        \        \
              _ _ ↗    ↗  ↗    |      |     |       |       \      \
       _ _ ↗  ↗     ↗  ↗      |      |     |      |      /\     /\
Wuvulu  Seimat  Kaniet  Baluan   west    east   Titan  east   west
-Aua                     etc.   islands  islands       Manus  Manus
```
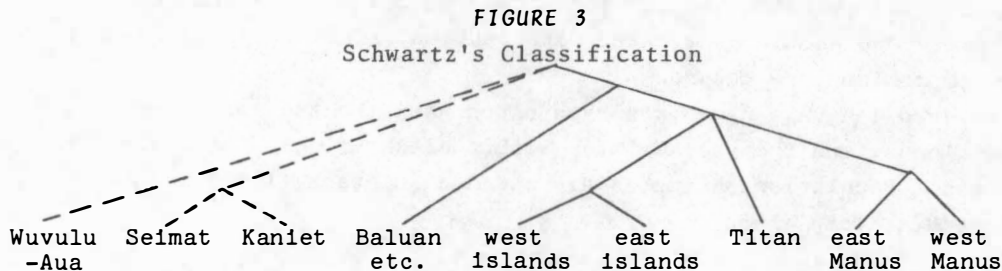
(d) Blust (1975a, 1976-77) divides the languages of the whole area into two first-order subgroups, and each one of these into two second-order subgroups (see Figure 4). His classification is based on lexicostatistics and on an examination of exclusively shared innovations.

FIGURE 4

Blust's Classification

```
                        _____
                      /    \                  /         \
                   /        \              /             \
             Wuvulu-Aua    Seimat    Baluan-Lou-Pam    Nali-Ere-Lele-Gele'-
                           Kaniet    Pak/Tong            Kuruti-Papitalai
                                     Lenkau              Titan
                                     Penchal             Loniu-Bipi
                                     Nauna               Lindrou-Levei-Ndrehet
                                                         Sori/Harengan
                                                         Likum
                                                         Pelipowai
                                                         Leipon (= Pityilu)
                                                         Hus-Andra
                                                         Ponam
                                                         Hermit
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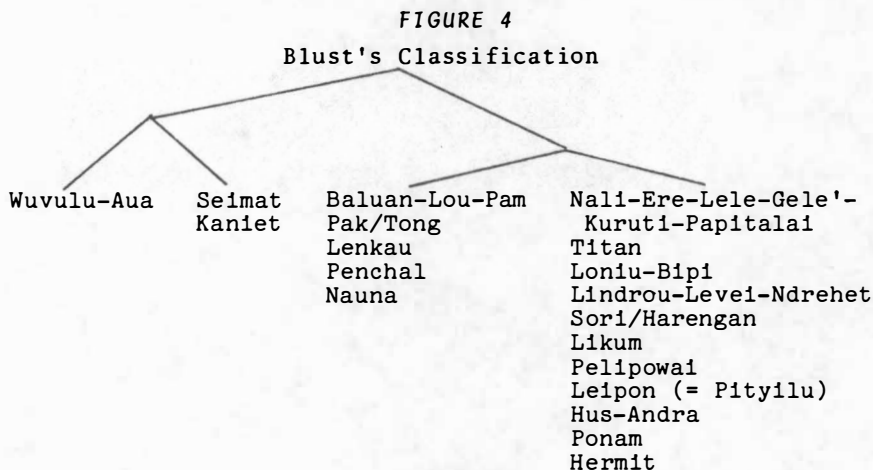
The classification I have suggested in Table 1 below is a tentative compromise between the four viewpoints described above.

4.4.5.3. CLASSIFIED LIST OF LANGUAGES

A list of "languages" is given in Table 1 along with the villages or islands where they appear to be spoken. Quite a few of the villages named may no longer exist, but they are included because Smythe (1970) listed them. In the spelling of names I have attempted to follow the 1968 edition of *The Village Directory*.

The villages have been grouped together as speaking one language or dialect on the basis of Meyer's map (1932:188), Smythe's village groupings (1970:1213-4), Lee's comments and maps (1974), Dietsch's census groupings (1971), and Blust's village groupings (1975b). There are many inconsistencies between these sources that still remain unexplained, especially in the last two sub-families. So the village groupings presented here should be treated with caution, since they involve several compromises and guesses.

Two-word language names are hyphenated when the two words represent two dialects, and they are written with a slash if only one dialect is involved. Population estimates are based on Dietsch (1971) and *The Village Directory* (1968).

LANGUAGE GROUPS
IN THE
ADMIRALTY ISLANDS
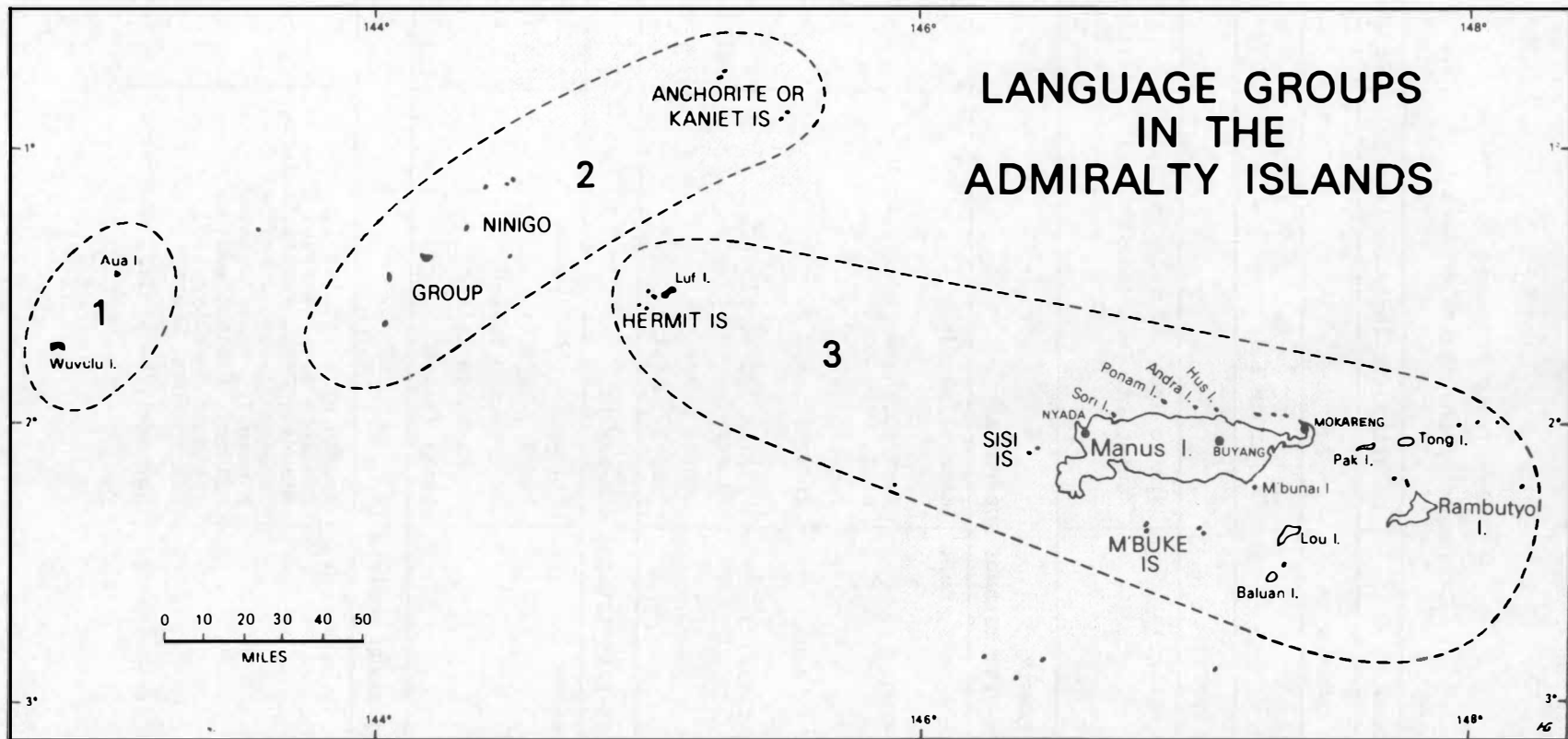
TABLE 1
Languages of the Admiralty Area

Names	Location (villages or islands)	Speakers

1. WUVULU ISOLATE

Names	Location (villages or islands)	Speakers
Wuvulu-Aua	Wuvulu I. (= Maty I.), Aua I. (= Durour I.)	850?

2. NINIGO FAMILY

Names	Location (villages or islands)	Speakers
Seimat (= Ninigo)	Ninigo Group of islands	450?
Kaniet[3]	Kaniet Is. (= Anchorite Is.)	extinct since about 1950

3. MANUS FAMILY
3.1. NORTH-WEST ISLANDS SUB-FAMILY

Names	Location (villages or islands)	Speakers
Hermit[4] (= Agomes, Luf, Maron)	Hermit Islands	20
Sori/Harengan	Sori I., Harengan I., Sori No.1, Sori No.2	570
Ponam[5]	Ponam Island	420
Andra-Hus (= Ahus, Ha'us)	Andra I., Hus I.	810
Leipon (= Pityilu)	Pityilu I., Ndrilo I., Hauwei I.	650
Loniu[6]	Loniu, Lolak	460
Sisi/Bipi	Sisi I., Bipi I.	530

3.2. SOUTH-EAST ISLANDS SUB-FAMILY

Names	Location (villages or islands)	Speakers
Baluan-Lou-Pam[7]	Baluan I., Lou I., Pam I.	1280
Pak/Tong	Pak I., Tong I.	970
Penchal	on Rambutyo Island	400?
Lenkau	on Rambutyo Island	400?
Nauna	Nauna Island	130?

3.3. EAST MANUS SUB-FAMILY

Names	Location (villages or islands)	Speakers
Titan[8] (= Tito, Moanus, Manus, M'bunai)	spoken by seafaring lagoon-dwellers at: Pomassau, Selalou, M'bunai, Peri, Patusi, Loicha, Timoenai (moved from Tawi I.), M'buke I., Mouk I. (near Baluan), Ndrihol and Bursu (both on Rambutyo I.), Langendrowa, Loamat	2550?
Papitalai[9] (= Mokareng)	Naringel, Papitalai, Mokareng	520

Nali (= Yiru)	Lauis (= Lawes),[10] Bulihan, Sonilu, Sirra, Kapor, Karon, Katin, Nohang, Lowaia, Yiru, Lahan, Malei	1300?
Ere-Lele-Gele'-Kuruti[11] (= Ere)	Drabito No.1, Drabito No.2, Pau, Londru, Loi (as second language), Metawari, Taui-Undrau, Dramdru, Hatwara, Pitira'it	600?
(= Lele, Elu-Kara, Sabon)	Sabon, Warobi (= Warambei), Lundret, Drano, Bowat No.1, Bowat No.2, Drelap, Yiringo, Ndrosun (= Rossun),[12] Labakan	1140
(= Gele', Kele, Buyang)	Buyang, Tingau No.1, Tingau No.2, Droia (formerly Kawa, then part of Pelikawa), Korunat	1000?
(= Kuruti-Pare)	Liap, Derimbat, Kari, Pundru, Waimundra, Mundiburio, Badlok, Lomoi, Sau, Koru, Kup, Lowa, Kawaliap (abandoned), Mundrau	1920?
Nane[13]	Patu, Lala, Loi	300?
E	Peli I., Pelikawa (abandoned)	50?
Okro	Warembu	200?

3.4. WEST MANUS SUB-FAMILY

Lindrou[14] (= Salien, Nyada)	Nyada, Alukuk, Apubei, Lessau, Sabandruem, Johan, Sopa, Nihon, Kali, Droli, Salien, Kogo, Sapondralis, Bundrahei, Kabuli, Korrojih	2220?
Mondropolon	Aran, Leihuwa (= Lehewa, Kokou), Saha, Matakau (abandoned?)	300?
Likum	Likum	100?
Levei-Tulu (= Lebej)	Levei, Lindro, Banum, Drehet, Puju	600
(= Chechek, Tjudun)	Tulu No.1 (= Yiri), Tulu No.2 (= Lowakai), Bundralis	560?
Bohuai[15] (= Pahavai, Pelipowai)	Bohuai No.1, Bohuai No.2, Pelipowai, Kupano, Lohe, Drabwi, Mandrelan (abandoned?)	400?

4.4.5.4. LANGUAGE USAGE

During the last century, and probably for many before it, there has been a considerable amount of migration of language groups within the Admiralty Islands (Smythe 1958:390). For instance there is the large separation of the Loniu and Sisi/Bipi groups, the founding of Labahan from Mokareng, the founding of Nyada from Buyang, the moving of several inland villages to the coast, and the settling of the Titan-speaking people on land. Most groups on Manus are still fond of moving somewhere else and giving their new village a new name. Very often (such as during the Paliau movement), a group will move to someone else's land. For a time all may go well; then the original inhabitants will start chasing the others off (Lee 1974). All of this has resulted in extensive bilingualism and borrowing, both of which make it difficult to identify language boundaries. In each village on Manus the people are able to understand the language of the next village, even if it is quite different (Lee 1974). In a few instances there are two different language groups living together in the same village. Each group speaks its own language, and yet understands the other well enough for people to converse freely (Lee 1976).

Pidgin English (New Guinea Pidgin, Neo-Melanesian) has been spoken in the area for a long time (Meyer 1932:191). Although Pidgin was widely known elsewhere, when Smythe visited Wuvulu and Aua he found many people, men included, who could not speak Pidgin at all (Smythe 1949:30). Schwartz (1962:223) reported that all of the population on Manus except a few old ladies were at least partially bilingual in Pidgin English. Lee (1974) says that everybody now speaks Pidgin and that even most seven-year-old children are familiar with it. Smythe (1949:31) went so far as to claim that a large part of the population is ignorant of any language other than Pidgin, while those familiar with the vernacular are at the same time all more at home in Pidgin. Lee (1974) disagrees; she insists that everybody speaks the vernacular freely, even at church services or while working. They use Pidgin for communication between themselves only when people from distant groups meet. Since 1973 they have shown an increasing interest in their own languages, both as a part of their cultural heritage that they want to preserve and as a symbol of their identity within the new nation (Lee 1976).

N O T E S

1. This paper has been written on the basis of library research and
correspondence; I have done no fieldwork in the Admiralty area. Professor
Theodore Schwartz and Sister Theodore Lee kindly wrote with detailed
information in reply to my enquiries. Dr Robert Blust read an earlier
draft of the paper and generously gave his comments and additional
information.

2. In his manuscript (1958) Smythe used the term "Indonesian" in two
ways: (a) an older original language from which the Melanesian, Micro-
nesian, Polynesian and Indonesian streams developed, and (b) the Indo-
nesian stream itself. While I was editing his manuscript for publication
(as Smythe 1970) it seemed to me that it would help the reader if the
term "Austronesian" were substituted for the first of these two usages.
In doing this I did not wish to impute to Dr Smythe any view of linguis-
tic history in the Pacific which he did not hold and which the use of
this term might imply to some readers.

3. Smythe (1970:1231) mentions a big discrepancy between his Kaniet
wordlist and Thilenius's. Blust (1976-77) suggests that more than one lan-
guage may have been spoken on the Kaniet Islands.

4. Smythe's limited lexicostatistics (1970:1217) suggest that Hermit
has had a close borrowing relationship with neighbouring languages of
both the North-west Islands Sub-Family and the West Manus Sub-Family.
If it is possible to identify the loanwords, the genetic relationships
of Hermit should become clear.

5. Smythe (1970:1213, 1217) and Dietsch (1971) mention that Ponam is
very similar to Andra-Hus.

6. Blust (1975a) was surprised to find in a preliminary lexicostatis-
tical count that Loniu and Sisi/Bipi could be regarded as dialects of
a single language. Smythe (1970:1214) treated them as two very similar
languages. In support of this, Lee (1976) reports that one group of
Bipi people claim that they own land at Loniu. This linguistic rela-
tionship is worthy of further investigation.

7. Smythe's lexicostatistical figures suggest that Baluan and Pak may
not be as closely related as one would expect in a sub-family.

8. Salzner (1960, map 41) shows Titan with five dialects, but Mead
(1930:220) and Blust (1975a) both say there are two dialects. Schwartz
(1973) feels that Titan has enough exclusive features to warrant
treating it as a separate sub-family within the Manus Family, even
though in other ways it is closely related to the neighbouring languages
of eastern Manus and the south-eastern islands. Smythe (1970:1228-9)
feels that Titan, more than any other language, exhibits some charac-
teristically Indonesian vocabulary and grammatical features. He finds
non-linguistic evidence that the Titan-speakers represent fairly recent
immigrants in the fact that until recent years they built their houses
on piles over the sea, were fishermen rather than gardeners, and were
seafaring traders throughout the south-eastern half of the Admiralty
Islands. However, I have not been able to find any obvious linguistic
connection between Titan and the language of the similar Sea Gypsies
(Orang Laut) of Indonesia.

9. The classification of Papitalai needs more investigation. The
lexicostatistical information in Smythe (1970:1217) points to a close
borrowing relationship with neighbouring languages of the North-West
Islands Sub-Family, the South-East Islands Sub-Family, and Titan.

10. Villages Lauis and Yiru diverge somewhat from the others according
to Blust (1975b).

11. Ere, Lele, Gele', and Kuruti are very similar and constitute either
dialects of one language (Lee 1974) or a dialect chain (Blust 1975a).
Blust considers that Nali and perhaps Papitalai are also part of this
chain.

12. Ndrosun is considered divergent according to Blust (1975b).

13. It seems likely that Nane and E are closely related. Lee (1974)
maps them and Okro as dialects of Ere-Lele-Gele'-Kuruti.

14.   Blust (1975a) suggests that Lindrou and Levei-Tulu probably con-
stitute a dialect chain.

15.   Bohuai and Levei-Tulu are presumably dialects or closely related
languages since they both originally came from the one group in the
central mountains (Lee 1974).

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4.4.6. AUSTRONESIAN LANGUAGES: NEW BRITAIN

Ann Chowning

4.4.6.1. INTRODUCTION

At present, the Austronesian languages of New Britain still seem to fall into the same subgroups ('families') as postulated in Chowning 1969. Relatively little new material has become available since then. Laufer (1966) published a list of New Britain languages, giving approximate locations, that helps solve the question of the probable identity of some languages he mentioned long ago (Laufer 1946-49:500). In view of the fact that he repeatedly says, referring to the speakers of these and several other languages, that "über sie und ihre Sprache ist noch kaum etwas bekannt", it is probably futile to worry about the correctness of the groups into which he puts these.

In 1971, Capell published a brief wordlist for fifteen New Britain languages, plus one from the Duke of Yorks. In most cases, he does not give his sources, but it is clear that some of the lists are from Chinnery (1926) and others from Friederici (1912). Of those he collected himself, two are new names, Solong and A Kolet, one from "near Arawe Island" and the other from "near Gasmata" (Capell 1971:268). Clearly they are both Arawe languages, and they help extend the known range of this family (see below).

Ray Johnston, of the Summer Institute of Linguistics (SIL), in an attempt to fill in gaps on the map in Chowning 1969, collected wordlists that greatly extend the boundaries of the Pasismanua dialects (Whiteman Family) to the east and north, and confirm that Getmata is a member of this group.

Work done by Hooley in the Morobe Province of New Guinea (1971) and Beaumont on the languages of New Ireland (1972) has made it possible to settle the question of the external affiliations of some New Britain languages, and to change the names of two families in order to indicate

their membership in wider groupings. I am grateful to both men for the
loan of wordlists. I have also had access to longer wordlists for
Mengen, but these have not altered my ideas about the language. Other-
wise, the data used here are essentially the same as those used for the
earlier paper.

4.4.6.2. THE AUSTRONESIAN LANGUAGES

I still find it necessary to assign the Austronesian languages of New
Britain to eight distinct groups. As before, I only mention the fact
that Nakgatai, a Polynesian language, is reported by Lanyon-Orgill
(1942) to have been spoken in a single village in New Britain. In the
absence of any confirmation, I have not included this as a member of a
separate, ninth group.

4.4.6.2.1. I. PATPATAR-TOLAI

By far the best-known language in New Britain, and that spoken by
the most people, is Tolai (Kuanua, Tuna, Gunantuna, etc.), located in a
coastal strip at the north end of the Gazelle Peninsula and on the
island of Watom. It contains several dialects, one of which, Birara,
is sometimes listed as if it were a separate language. Because the
earliest European settlements were made in the Tolai-speaking region,
the language is sometimes referred to as the language of New Britain.
In fact, however, it has long been clear that its closest affiliations
are with the languages of the adjacent part of New Ireland and the Duke
of Yorks, rather than with the other languages of New Britain. Beaumont
has recently (1972) proposed a Patpatar-Tolai subgroup of New Ireland
languages, of which Tolai is the only member in New Britain. This
designation supersedes my suggestion that the subgroup containing Tolai
should be called 'Blanche Bay'.

Several writers, notably Friederici (1912) and Milke (1965:332),
impressed by the fact that Tolai and the Kimbe languages (see below)
share common grammatical features such as the structure of the genitive
(*'the leaf of the tree'* rather than *'tree leaf-its'*) which distinguish
them from other New Britain languages, have suggested that the resem-
blances result from Tolai influence upon Kimbe-speakers. This sugges-
tion is almost certainly incorrect; the distribution and differentiation
of the Kimbe languages indicate that they have been in New Britain much
longer than has Tolai, and although the Tolai did trade with the eastern
(Nakanai-speaking) Kimbe peoples, it hardly seems plausible that grammar
would have been so affected when lexicon shows so little evidence of
borrowing.

4.4.6.2.2. *II. KIMBE*

This term was first proposed by Goodenough (1961b) to encompass the
Nakanai and Willaumez languages. He has since accepted my suggestion
that Bali-Vitu be added to the group (personal communication). These
are the three main subgroups within Kimbe. Of these, only Nakanai is
at all well-known in the literature.

In 1969, I described in detail the ways in which the term 'Nakanai'
has been used, in hopes of clearing up a certain amount of confusion
about it, but in vain: Capell (1971:255) excludes the best-known dia-
lect, Lakalai (Bileki, Muku), from the group while labelling the re-
mainder 'Lakalai Group'. Without duplicating the whole account (given
in Chowning 1969:25-6), I shall simply repeat that the Nakanai languages
extend along the central north coast of New Britain from the Toriu River
at the base of the Gazelle Peninsula to the west side of Cape Hoskins.
There are two major divisions: Melamela (Ubili, Open Bay Dialect) in
the east, and a group of closely related dialects farther west. In
most of the early literature, such as Parkinson (1907) and Friederici
(1912), any data labelled 'Nakanai' are from Melamela. (Laufer is in
error - 1966:123 - in suggesting that Friederici's 'Nakanai' lists are
from a Willaumez luaguage.) Hees (1915-16), however, who published many
texts along with a brief description of phonology and grammar, devoted
almost all of his attention to the westernmost dialect, Lakalai, which
is so called because it replaces the /n/ by /l/. The other members of
the West Nakanai dialects are Ubae, Vele, and Maututu; these last two
are called Tarobi and Babata by Laufer (1966). Only Ubae does not reach
the coast, although Vele extends well up into the Nakanai Mountains
(which also contain a number of non-Nakanai languages). Nakanai, like
the other Kimbe languages, is so distributed as to suggest, like Tolai,
that its speakers arrived by sea and spread inland to only a minor
extent from coastal settlements.

The Nakanai languages are separated from the Willaumez ones by Kapore,
of the Whiteman Family, which is otherwise confined to the interior and
south coast of New Britain (see below 4.4.6.2.7.). The easternmost of
the Willaumez languages is Xarua (Mai). Perhaps misled by the fact
that Lakalai and Mai both occur within the West Nakanai Census Division,
Laufer erroneously lumps them together; he also implies that only dia-
lectical differences are involved between some of the very divergent
languages spoken in the Central Nakanai Census Division (1966:123).
Goodenough has made the linguistic differences in this region clear
(1961a,b). Xarua belongs with the languages of the Willaumez Peninsula,
Bola (Bakovi), which occupies most of the peninsula, and Bulu, spoken
at the extreme tip.

The dialects or languages of the French Islands or Bali-Vitu group
are little known, though brief wordlists were published by Dempwolff
(1905) and Friederici (1912). Their closest resemblances seem definitely
to be to the Willaumez languages, and they are accordingly assigned to
the Kimbe Family. Some uncertainty about their placement may reflect
the complex history of the region, for which there is abundant ethno-
graphic evidence.

Milke (1965:332) has suggested that the Kimbe languages are linked
with the Bariai languages to the west of them. I have set out elsewhere
(Chowning 1973) my reasons for disagreeing with this suggestion. Instead,
the Kimbe languages seem to me to have their closest connections with
languages spoken to the east of New Britain, as in the Solomons south
of Bougainville. Goodenough made a similar point (1961a) in a somewhat
different form when he tried to ally them with the so-called Central
Pacific languages such as Fijian. His particular hypothesis can be
attacked (see Capell 1971:317-18), but I consider that the ties with
what Pawley calls Eastern Oceanic cannot lightly be dismissed.

4.4.6.2.3. III. SIASI (BARIAI)

Scattered along the remaining portion of the north coast, from the
western base of the Willaumez Peninsula to the extreme western tip of
New Britain, are the languages that I previously assigned to the Bariai
Family. From east to west, they consist of at least three main divisions:
Kove-Kaliai, Bariai proper, and Kilenge-Maleu. A number of sources
(Meyer 1932, followed by Capell, and Laufer 1966), place another lan-
guage, Sahe, between Bariai and Kilenge, but there are doubts about its
separate status (see Friederici 1912:26-7). If it does exist, it cer-
tainly belongs with Bariai and Kilenge.

The dialects of Kove and Kaliai (Lusi) are more closely related to
Bariai than any of these are to Kilenge-Maleu. Friederici published
considerable material on Bariai, concentrating on but not confining him-
self to lexicon, and also set out some of the regular sound shifts that
link all of these languages together. Phonologically, Kilenge-Maleu
are the most aberrant, and Kove the most conservative; the fact that
there has been some uncertainty about the connections between the Bariai
group and languages spoken in the Siasi Islands and on New Guinea reflect
the fact that investigators looked only at Kilenge-Maleu.

The wordlists collected by Hooley (1971) in fact make it clear that
there are close connections between Kove and some of the languages of
the Siasi Islands, such as Mangap, as well as with Gitua on the mainland
of New Guinea. The data are examined in some detail in Chowning 1973.

Hooley (see 4.4.4.5.) proposed a Siasi Family, extending from the north
coast of New Guinea through the islands of the Vitiaz Strait, with some
uncertainty as to whether it reached New Britain. I see no reason to
doubt, in view of the Kove evidence, that the Bariai languages indeed
belong to this Family, and specifically to its Island Sub-Family, and
have relabelled them accordingly. The fact that the Bariai languages
were probably linked to the New Guinea mainland has long been recognised,
most recently by Milke (1965) and Capell (1971), but it is worth pointing
out that, as far as I know, these are the only languages in New Britain
that show unmistakable evidence of such links.

4.4.6.2.4. *THE AUSTRONESIAN STATUS OF THE LANGUAGES*

Before proceeding further, I should note that only the languages
described so far have always been accepted as Austronesian, although
Capell has expressed doubts about Kilenge-Maleu (1962b:375), as well as
misclassifying Lakalai (Bileki) on his map of New Britain languages in
1962a. On the whole, the north coast languages show enough easily recog-
nisable reflexes of reconstructed PAN (or POC) forms and too few oddities
of phonology or grammar to depart from conventional ideas of what an
Austronesian (or Melanesian) language is. (Their confinement to narrow
coastal strips also suggests that they are all late arrivals in New
Britain.) By contrast, the remaining languages to be considered have
all been denied fully Austronesian (AN) status by one writer or another,
on the grounds that the phonology looks odd, the number of obvious AN
cognates is few, or, particularly for Mengen and Tumuip, that the grammar
contains non-Austronesian (NAN) constructions. It is difficult to coun-
ter these assertions, especially when dealing only with short wordlists;
only in the case of the Whiteman languages do I have enough data to
establish the existence of a considerable, though still not large, num-
ber of reflexes of PAN forms and to prove that the grammar can in no way
be called NAN. In the cases of the other language 'families', my clas-
sification of them as AN is based primarily on the lexical evidence; all
contain a fair number of PAN reflexes that cannot plausibly be attributed
to recent borrowing from other New Britain languages. How significant
this seems obviously depends on one's criteria for the classification
of languages. At the very least, the evidence suggests that speakers
of AN languages which were distinct from those now spoken along the north
coast arrived in the southern and interior parts of New Britain, a long
time ago.

4.4.6.2.5. *IV. LAMOGAI*

Lamogai designates a group of languages that extend across extreme western New Britain, apparently filling in the region not occupied by the Bariai languages (and the NAN language Anem) to the north and west, Arawe languages to the south, and Whiteman languages to the east. The region is very little known, the only published information being the Pulie River wordlist in Chinnery and, probably, the much shorter one in Friederici labelled 'Longa' (meaning *'interior'* in some Bariai languages). It is possible that the mysterious language called Idne, placed by Meyer and subsequently by Capell just east of the Maleu border along the Itni River, belongs to this group. Meyer evidently regards it as quite distinct from Arawe, but nothing has been published on it.

The known Lamogai languages, proceeding from north to south, are Mok-Aria (two different dialects, of which the latter reaches the north coast at the Aria River), Lamogai proper, and Pulie and Rauto, reaching the south coast. Mok and Aria, which contain a fair number of loans from Kaliai and Bariai, consequently have more obviously AN lexicon than do the other languages. Like its neighbours in West New Britain, Arawe and Whiteman, Lamogai contains consonant clusters that tend to look NAN, but there is a considerable AN component in the lexicon even when obvious loans are excluded. The numerals are much more obviously AN (apart from the word for *'two'*) than those in Whiteman languages. The sentences collected by David Counts though not ideal for comparative purposes, show no grammatical complexities that might undermine the possible AN status of these languages. Recent migrations of Lamogai-speakers have affected both the phonology and the lexicon of Kaliai, and it is possible that similar influences might have produced the apparently aberrant phonology of Kilenge-Maleu.

4.4.6.2.6. *V. ARAWE*

This is primarily a language, or group of languages, of the small islands off the south coast of New Britain, but there are an as yet undetermined number of settlements on the mainland, and at least one dialect, Gimi, extends well up into the interior west of the Alimbit River. Laufer states that the language extends from Cape Peiho to Lindenhafen (1966:121), and Johnston's material makes it clear that the language of Gasmata Island is Arawe. Probably all of the inhabited small islands in this region are occupied by Arawe-speakers, but the situation on the mainland is still unclear, and requires a village-to-village count. Capell has recently collected material from two dialects of Arawe, the locations of which are reversed between map and text, but

on the map (1971:255) the areas in which they are spoken on the mainland
are shown overlapping considerably with areas in which my information
places speakers of Lamogai and Whiteman languages. Laufer mentions,
but does not locate, a 'bush dialect', Kollet or Morohunga, which pre-
sumably is Capell's A Kolet (Laufer 1966:121). Also still unknown is
the exact number of separate dialects or languages within Arawe; cer-
tainly there are more than the eastern (Pililo) and western (Moewehafen)
divisions noted in the earlier literature.

In addition to Capell's lists for Solong and A Kolet, Chinnery pub-
lished an Arawe wordlist labelled 'Moewe-Haven'. Although there has
been some lexical interchange between Arawe and languages spoken on
adjacent parts of the mainland, it has not yet been possible to link
Arawe definitely with any other languages. Like the Pasismanua and
Lamogai Families, as well as Kilenge-Maleu, Arawe shows a strong ten-
dency for /*a/ of PAN forms to shift to /o/ or /u/, but whereas in the
other languages this always seems to be the result of umlauting, Arawe
is unique in having such forms as nimo *hand* and moto *eye*.

4.4.6.2.7. *VI. WHITEMAN*

This family is so called from its distribution around the southern,
eastern, and western sides of the Whiteman Range. Spoken mostly by
small scattered groups living in the interior, it resembles Lamogai in
being concentrated in one of the least explored parts of New Britain.
Its precise boundaries are uncertain, though it certainly extends to
both the north and south coasts. To date, it is known to have three
subdivisions. The most widespread, Pasismanua (which will have to be
renamed when its boundaries are known), is a dialect chain extending at
least from Miu, west of the Alimbit, to (and including) Getmata, just
inland from Gasmata Island, and then distributed along the track that
crosses the island, ending with the Bao-speakers, about twelve miles
from the north coast. A short distance to the east, actually reaching
the north coast, is Kapore (Beli, Bebeli, Banaule), already mentioned
as separating the Nakanai and Willaumez languages. Kapore-speakers
have a tradition of having migrated from the interior at the western
base of the Willaumez Peninsula; it may well be that the Logologo lan-
guage which Meyer locates behind the Bola-Kove border belongs with this
family.

Kapore is closely related to the Pasismanua dialects, although it has
borrowed heavily from Lakalai. The other group of Whiteman languages,
the Mangseng dialects, are more aberrant. They are spoken along the
Ania River, at the eastern edge of the Nakanai Mountains, and again

extend from the south coast to a short distance from the north one.
There are reported to be four dialects, according to Allen and Hurd
1963: Roko, Sampantabil, Kulula, and Mirapu. To the extent that it is
inhabited at all, it seems likely that all the blank space now existing
on the map between the known members of the Whiteman Family will turn
out to contain Whiteman-speakers as well.

   Wordlists have been published for Kapore and Mangseng in Goodenough
1961a, and for a mixture of two Pasismanua dialects, Kaulong and
Sengseng, in Chinnery 1926, under the label of 'A Kinum and Apui'. I
have presented elsewhere (Chowning 1966) the evidence for considering
Sengseng, and by extension the other Pasismanua languages, Austronesian.
Admittedly the wordlists given by Chinnery look misleading. There are
frank errors which result in the omission of at least one obvious AN
reflex, -tama- *father* (reference rather than address). Roots, which
tend to be monosyllabic, are obscured by the inclusion of affixed pro-
nouns: a number of these roots have obvious cognates in other AN lan-
guages. A peculiarity of Whiteman languages is, along with a preference
for monosyllables, a large number of initial consonant clusters. At
least some of these can be shown to result from a tendency to drop a
first-syllable vowel in certain environments, as in the case of klat
to bite through (PAN *kaʀat) and slup *to drink through a straw* (PAN
*sɪʀup). Even when these cognates are recognised, the obvious AN con-
tent of the vocabulary remains low, but this is also an area of rapid
lexical change as a result of word taboos. By contrast with the phonol-
ogy and much of the lexicon, the grammar shows nothing that can be con-
sidered NAN with the possible exception of the indication of sex dis-
tinctions in the third person singular pronouns. This last feature is
found in Kapore, but apparently not in Mangseng (see Goodenough 1961a).
The Sengseng case at least suggests that if enough data were available,
some of the other languages of south New Britain might not look so NAN.

4.4.6.2.8. *VII. MENGEN*

   This family consists of three divisions: Uvol, Mamusi, and Mengen
proper. Uvol (Lote) seems to be confined to Montagu Harbour. Mamusi,
which extends up into the Nakanai Mountains, contains two main dialects,
Kakuna, spoken along the Melkoi River, and Mamusi proper, spoken along
the Torlu. Mengen is the easternmost AN language spoken along the south
coast of New Britain. It contains at least three dialects, of which
the best known one, Maenge (Poeng, Malmal) extends around Waterfall and
Jacquinot Bays. Orford, located just south of the NAN-speaking Sulka,
is considered by Laufer to be heavily influenced by Sulka. A third

dialect, so-called Bush Mengen or Longeinga, extends to just behind the
Melamela area. It contains numerous loans from Nakanai (this is the
language called Pau by the Melamela). It is uncertain whether Mio,
another language put adjacent to Pau by Meyer, is also a dialect of
Mengen; Laufer (1966:121) seems to think that it is.

   The status of Mengen has been the subject of considerable discussion.
Published material consists of wordlists in Parkinson, compiled by
Müller, which show the differences between Mengen, Tumuip, and Sulka,
and a grammar by Müller. These data show some peculiarities in the
formation of plurals and possessives, and in word-order in noun phrases,
but on the whole, especially after looking at texts collected by anthro-
pologists (the Panoffs) working in the area, I am inclined to believe
that the grammar is not very aberrant. Capell, after examining a
'scripture reader' by Culhane, concluded that Mengen is "structurally
and in some vocabulary akin to AN generally", but still considers its
status to be "marginal" (Capell 1971:267-8).

4.4.6.2.9. *VIII. TUMUIP*

   Tumuip, the remaining AN language in New Britain, is located in a
small enclave inland from the Sulka area. The AN component in its
lexicon is at least as large as that in some other south coast languages,
but it resembles neither these nor Tolai, though it shares a few iso-
glosses with the latter. There is only one dialect, and I have not been
able to find any similar-looking languages in New Ireland or Bougainville,
which are physically closest. It does seem safe to say that the AN
component in Tumuip is not derived from any other languages now spoken
in New Britain.

   As regards the grammar, Capell says that the forms "do not seem to
be structurally AN, apart from the lexical content, which has a degree
of AN. The verbal forms, however, are doubtful...but the possessive
suffixes to the nouns are AN" (Capell 1971:267-8). He and I are using
the same data, collected by George Grace, and I should add that only
some sets of possessive suffixes look AN; nouns, even names of different
parts of the body, take different sets. I wholly agree with Capell
about the NAN appearance of Tumuip grammar, though the possible sources
of influence are still to be identified. Of the languages I have classed
as AN, this is the only one that offers strong grounds for being con-
sidered mixed, though I have virtually no information on the grammar of
Lamogai, and little on Arawe.

4.4.6.2.10. *COMPARISONS BETWEEN NEW BRITAIN LANGUAGES*

The differences and the resemblances between New Britain languages
can perhaps be best represented by the comparative vocabularies presented
below. A number of such vocabularies have been published - Capell 1971;
Chinnery 1926; Friederici 1912; Goodenough 1961a; Parkinson 1907 - and
among them they represent all the major groups I have postulated. Be-
cause they do not contain the same lists of words from language to
language, and also because many of them contain a large component of
'cultural' vocabulary, in which loans may be involved, they are not
always clear indicators of fundamental differences and resemblances.
In addition, for languages known to me there are various errors, such
as Chinnery's substitution of kinship terms for the words for *'man'* and
'woman' and of the names of coloured objects for colour terms in A Kinum.
Capell's 'Nakanai' list contains forms both from Lakalai and from
Melamela, as well as a mysterious word for *'water'* and the word for
'male' rather than *'man'*. In the words for *'house'*, he sometimes gives
the one for *'family house'* and sometimes the one for *'men's house'*.
The following list undoubtedly has its errors as well, but it should
give an idea of the range of variation.

In each case, the major group is indicated by the roman numeral and
the specific language within it is named. The data should be most
accurate for Tolai, from the published sources, and Kove, Lakalai, and
Sengseng, in all of which I have done extensive fieldwork. The Mengen
lists were filled in by literate native speakers. The Tumuip list was
collected by George Grace and checked against the one in Parkinson.
The least reliable lists are probably those for Lamogai, collected by
David Counts, and Pililo, collected by myself, in both cases in a single
session from a Pidgin-speaking informant.

Where the data are full enough, I have presented only the root shorn
of affixes, but it has not always been possible to identify these with
certainty. Sengseng /e-/ before some nouns has been retained because,
although it is sometimes an article, this is not always surely the case.

Spellings are phonemic for Kove, Lakalai, Sengseng, and Tolai. It
consequently should be noted that the same symbol may represent somewhat
different sounds in different languages. For example, /r/ is a flap or
trill in Lakalai and a spirant in Kove; as an allophone of /t/ in
Sengseng, it has not been written at all. For Mengen, I have accepted
the informants' spellings and resisted the temptation to change /ng/ to
/ŋ/ (for the velar nasal), not being sure of the safety of always doing
so. For the other languages, I have omitted some of the phonetic dis-
tinctions noted by recorders; doing this should not result in serious
distortion of the data.

The POC forms given are all taken from Grace 1969, and represents
those that surely or probably have reflexes in one or more of the lan-
guages listed. I have not given POC forms that have none. In some
cases, it should be noted, the POC form is given a meaning which has
been altered in some of these presumed daughter languages; for example,
the words for *'hair'* in Kove and Maenge are from a proto-form that usually
means *'leaf'* (as it also does in these languages). In the interests of
simplicity, I have not indicated probable PAN proto-forms that have not
been reconstructed for POC (as in the cases of the Sengseng word for
'nose') nor probable POC forms that are not in Grace's list (as in the
case of the Lakalai word for *'sleep'*). I have also not listed forms
that are cognate with those in some other New Britain language when the
meaning is different; for example, the Lakalai word for *'male'*, but not
the word for *'man'*, is cognate with the Kove word for *'man'*. Syllables
in parentheses are those that appear only in certain contexts; for
example, the Sengseng word for *'breast'* regains its second vowel only
when followed by certain suffixes.

In some cases, forms taken from another language within the group
might be more clearly cognate than the one listed (for example, the word
for *'eye'* contains /m/ rather than /n/ in some Lamogai languages). The
lists should, however, be fairly typical of the groups concerned, and
contain a minimum of identifiable loans.

Comparative Vocabularies

	English	*bird*	*blood*	*breast/milk*	*earth*	*eat*
	POC	*manu(k)	*soso(n) *toto	*susu	*tano(q)	*kani
I.	Tolai	beo	ŋap	u	pia	ian
II.	Lakalai	malu	kasoso	susu	magasa	ali
III.	Kove	manu	siŋi	turu	tano	ani
IV.	Lamogai	munuk	morou	sune	tatlak	in
V.	Pililo	mon	imlek	siy	rut	in
VI.	Sengseng	eki	eŋhik	sus(u)	pluk	i
VII.	Maenge	manu	toto	sisia	magalo	kani
VIII.	Tumuip	men	motom	titi	ndan	in

English	eye	fire	fish	hair	hand
POC	*mata	*api	*ika(n)	*ndau(n)	*lima
I. Tolai	mata	iap	en	pepe	lima
II. Lakalai	mata	havi	ia	lvu	lima
III. Kove	mata	eai	iha	iauni	lima
IV. Lamogai	anta	ei	oŋwa	koio	mela
V. Pililo	moto	kwon	heil	lninin	nimo
VI. Sengseng	mata	yau	esma	yut	vili
VII. Maenge	mata	poi	lia	iaiau	kama
VIII. Tumuip	ŋomta	niu	pe	eiu	iaime

English	head	hear	laugh	leg	liver
POC	*ndaŋma *quiu	*ndoŋo		*paqa	*Qate
I. Tolai	uiu	waioŋore	noŋon	keke	kat
II. Lakalai	gama	lolo	iege	vaha	hate
III. Kove	voia	loŋo(ni)	ŋiŋi	ahe	ate(a)te
IV. Lamogai	ap	reŋan	devei	kaŋgu	pupuin
V. Pililo	opo	loŋi	miŋiŋ	kuyu	akat
VI. Sengseng	po, mehe	kihoŋ	hoŋ(o)	kivi	eta
VII. Maenge	giil	loŋe	maiili	ke	lona
VIII. Tumuip	bia	loŋ	ŋiŋ	kia	ber

English	louse	man	nose	rain	sleep
POC	*kutu, *tuma	*ŋmane/ *tamoie	*isuŋ, *ŋusu	*qunsa(n), *paʀa(t)	*eno
I. Tolai	ut(u)	tutana	bilauna	bᵃta	wa
II. Lakalai	utu	tahaio	maisu	hura	mavuta
III. Kove	tuma	tamone	nuru	awaha	eno
IV. Lamogai	outu	aŋgraŋ	norno	erei	miak
V. Pililo	kut	tuguno	yukio	ri	duk konoŋ
VI. Sengseng	mut	ve-masaŋ	muhut	pe-yuŋ	nahuŋ
VII. Maenge	kutu	nataie	isuruma	kue	keno, kenda
VIII. Tumuip	kur	metamgen	biodun	ner	ier

English	*snake*	*stone*	*sun*	*tooth*	*tree*
POC	*ŋmata	*patu	*qanso, *sina(R)	*lipon	*kai
I. Tolai	vui	wat	keake	livoŋa	davai
II. Lakalai	pase	uati	haro	livo	obu
III. Kove	mota	patu	waro	luo	avei
IV. Lamogai	amat	taŋo	oklou	kakai	kamut
V. Pililo	mat	kum	sinaŋ	nono	kih
VI. Sengseng	amat	umat	sinaŋ	ŋi	sa
VII. Maenge	mue	manage	ke	ngingi	bega
VIII. Tumuip	negelem	per	ha	niou	ue

English	*two*	*vomit*	*water*	*weep*	*woman*
POC	*dua	*lua, *muta(q)	*ndanu(m), *wal(R)	*taŋi(s)	*tapine, *pine
I. Tolai	urua	marue	tava	taŋi	vavina
II. Lakalai	-lua	kalalua	lalu	tall	tavile
III. Kove	hua	lua	eau	taŋi	tamine
IV. Lamogai	akap	puogiak	ouri	kerpin	elim
V. Pililo	enokip	mtumut	inuŋ	teŋ	elineno
VI. Sengseng	hwo, ponual	mutwok	eki	hau	et-wala
VII. Maenge	luo	muta	me	tani	avale
VIII. Tumuip	ro huru	boro	nuie	tirpek	nolo

4.4.6.2.11. *RELATIONSHIPS AMONG NEW BRITAIN LANGUAGES*

There is abundant evidence for lexical borrowing between neighbouring languages, but there are also numerous cases in which it is not clear whether borrowing or a relatively recent common ancestry accounts for certain lexical resemblances. Several cases suggest that the Whiteman languages may turn out to belong in a larger subgrouping not only with Arawe and Mengen, as I suggested in Chowning 1969, but with Lamogai as well. Proof or disproof of this hypothesis requires much more material than is available at present.

To take the opposite approach, I fully agree with Capell that it should be useful for subgrouping to study what he calls "areal vocabularies" (Capell 1971:318ff.). See, for example, the distribution of reflexes of the two POC words for *'vomit'* in the preceding lists. It can nevertheless be dangerous to base conclusions on short lists. For example, Capell tabulates the distribution of different forms meaning *'house'*, *'sleep'*, and *'louse'*. For Lakalai, he gives only luma *house*, ignoring hulumu *men's house* and valua *men*; only mavuta *sleep*, ignorning mata-tutulu

sleepy; and only utu *louse*, ignoring tuma *flea* and lega *nit*. Inclusion
of these would present a different picture of the areal distribution of
some of the forms discussed. For most languages, available lexical
data are too few for the problem to be investigated fully.

On the phonological side, it is evident that several languages share
features which make words look somewhat NAN: initial and medial consonant
clusters, reduction to monosyllables, and vowel shifts. The combination
is characteristic of south-west New Britain, from Kilenge through the
Arawe and Whiteman regions, and there have probably been common influ-
ences at work. Tumuip shares these features, although the vowel shifts
are different, while Tolai has only a comparatively large number of
monosyllabic forms, compared with Kimbe and the eastern Bariai languages.
Tolai also resembles some of the western languages, but differs from
those in between, in not only permitting word-final consonants but some-
times preserving those of the PAN form (compare Tolai karat, Sengseng
klat with Lakalai ala *bite*). In a general sort of way, Tolai and the
New Ireland languages on the one hand, and the southern New Britain
languages on the other, look more like each other than they do the Kimbe
languages and Kove-Kaliai (see below).

At the same time, the phonological diversity is so great that it is
not possible to say, as Capell does (Capell 1971:309-10), that particular
consonants in PAN have particular reflexes "in New Britain". I have
described the reflexes of Sengseng in Chowning 1966 and of Lakalai and
Kove in Chowning 1973.

Some grammatical features of these three languages are described in
the same papers. It is not yet possible to make any generalisations
about the grammars of New Britain languages as a whole. From what is
known so far, it does not seem likely that they will resemble each other
any more than do other AN languages in northern Melanesia. One point
is perhaps worth making. Features sometimes regarded as significant in
grouping languages may vary within the families as well as between them.
In the Bariai languages, only Kilenge-Maleu have the noun-marking article
/na/. Kaliai has compulsory dual pronouns, but Kove does not, and both
of these lack the peculiar possessive form ('*I father-my*') of their
closest relative, Bariai. In the Kimbe languages, complete decimal
systems are found in Lakalai and some of the Willaumez languages, but
not in Melamela. Melamela has a double set of subject pronouns, inclu-
ding the short "subject marker" (Capell 1969:45), while Lakalai has only
one set. The Pasismanua dialects and Kapore distinguish gender in third
person singular pronouns, but Mangseng apparently does not. The occa-
sional grammatical feature unites languages that have little else in
common: Tolai and Sengseng have four sets of pronouns (singular, dual,

paucal, and plural), while most New Britain languages seem to have only
two or three. A feature that is odd enough possibly to be significant
is the fact that some languages in different south New Britain families -
Arawe, Whiteman, Mengen, Tumuip, and perhaps Lamogai - use two different
sets of possessive pronouns for different parts of the body, one suffixed
and one not. It has already been mentioned that all the languages, apart
from Kimbe and Tolai, have the "preposed genitive" - *tree leaf* - a
feature that is generally agreed to link them with the western part of
Melanesia, including most of the island of New Guinea, rather than with
the east. On the whole, however, the variations are such as to suggest
that we do not yet know just which grammatical features are likely to be
significant for subgrouping.

4.4.6.2.12. *EXTERNAL RELATIONSHIPS*

   It has already been noted that only in two cases, Tolai and the
Bariai group, do New Britain languages have very close affiliations with
any spoken outside the island.   (This point needs stressing because of Capell's
pointing out the necessity of considering the languages of all the adjacent regions,
such as the Admiralties and Bougainville, in setting up subgroups (Capell 1971:295).
In my attempts to trace external relationships for the three New Britain languages
with which I have worked, and also for Tumuip, I have examined many wordlists from
Bougainville and other parts of the Solomons, New Ireland, the Admiralties, and the
north coast of New Guinea, and feel safe in saying that New Britain languages are
essentially separate from those of the neighbouring islands, with the exceptions men-
tioned above. I still have hopes that some of the south New Britain languages may turn
out to be related to some of the languages of northern New Guinea. There are a few
suggestive resemblances, including the possibility of phonemic tone in some Whiteman
languages, but the distinctive part of the lexicon seems to be confined to New Britain
itself.)
   I have set out elsewhere (Chowning 1971, 1973) my reasons for postu-
lating more remote connections between the Kimbe languages and those of
eastern Oceania; the evidence does seem to point to a relatively recent
common ancestry, but does not justify any special subgrouping.
   The present evidence gives some clues about the sequence in which
different AN languages reached New Britain, Tumuip, with its very limited
distribution, remaining the mystery. It is likely to have been there a
long time; otherwise it should be easy to locate its place of origin.
The Lamogai, Whiteman, and Mengen groups probably all (with or without
Tumuip) represent the earliest arrivals of AN-speakers in New Britain.
At one time, they probably occupied the whole south coast from Cape
Gloucester to Open Bay, and spread across the island to the north coast.
It is impossible now to judge how, and to what extent, the speakers of

these languages may have been influenced by the putative NAN-speaking groups who preceded them to New Britain; in historic times, only a few enclaves of NAN languages are to be found west of the Gazelle Peninsula.

The Arawe-speakers presumably came later, as is indicated by their location on offshore islands. The entire north coast of New Britain, it is worth remembering, contains a chain of active volcanoes, and it may have been as the result of their activity that later settlers were able to occupy these regions. The degree of diversification suggests that the Kimbe-speakers came first, probably from the east (see Goodenough 1970 for the suggestion that their languages were affected by Whiteman languages already present on the north coast). The Bariai-speakers would have come later, undoubtedly from the Vitiaz Strait region, and the Tolai last, via the Duke of Yorks from New Ireland. It is not possible to say whether the speakers of the south coast languages came from New Guinea or from farther east, but I would suggest that they, like the New Ireland inhabitants (including Tolai), represent early settle-ments of AN speakers in this part of Melanesia; the question of possible back-migrations from farther east can be raised not only for the Kimbe languages but for the Siasi Family (or many of its members) as a whole (see Chowning 1971).

4.4.6.2.13. MAPS

We may confine discussion to those maps likely to be consulted, in Capell 1962a and 1971, and Chowning 1969. Capell 1962a (Map VIII) is reasonably accurate in locating the AN languages known to him at the time, with the single exception of 'Maseki' (Mangseng), which is too far west. (This error, like much else in Capell's map, is probably taken from Meyer's 1932 map.) There is some confusion about language as opposed to dialect names, but the only serious error is separating Lakalai (labelled 'Bileki') from the rest of the Nakanai group and calling it "mixed Melanesian-Papuan". In 1971, as has been noted above, the same language causes trouble. On Map 3 (p.255) Capell ends the Nakanai-speaking region (labelled 'Lakalai Group') to the east of Cape Hoskins, and assigns the Lakalai themselves, along with the Kapore of the Whiteman Family, to the Willaumez Group, within which only Bola is distinguished as a separate language. By contrast, the languages to the west of the Willaumez Peninsula are all separated, even when the differ-ence, as between Kove and Kaliai, is merely dialectical. Along the south coast, there is no mention of Lamogai and Whiteman languages, and, as has been noted, Capell's Arawe dialects, A Kolet and Solong, are shown extending inland into regions in which languages of these other families are spoken.

The map in Chowning 1969 has been emended as follows. The small
island offshore in north-west New Britain should be numbered 11, not
12; it is the Kove outlier of Tamoniai. On the south coast, the markings
for the Arawe Family should extend from the coast up to No.24 to show
the area occupied by the Gimi speakers, and eastwards to encompass the
island of Gasmata and its neighbours. No.28, Bao of the Whiteman Family,
should extend straight down to the south coast to encompass Getmata.

My own recent fieldwork has also made it possible to extend the
Lamogai languages into the region inland from the western Kove-speakers.
It is not known whether the particular language spoken there is distinct
from No.20 (Aria).

The map as emended above is given in this chapter. (Some of the
blank spaces on the map, notably the heights of the Whiteman Range (north
of 24-27), are known to be uninhabited.)

Legend

22	AN languages
Sokhok	Probable AN languages
WASI	NAN languages
?	No information

AN language-families

I	‖‖‖‖	V	
II		VI	
III		VII	
IV		VIII	

0   40
kilometres

N

BAINING

TAULIL-
BUTAM

SUI

KOL

SULKA

ANEM

WASI

Rauto

Sokhok
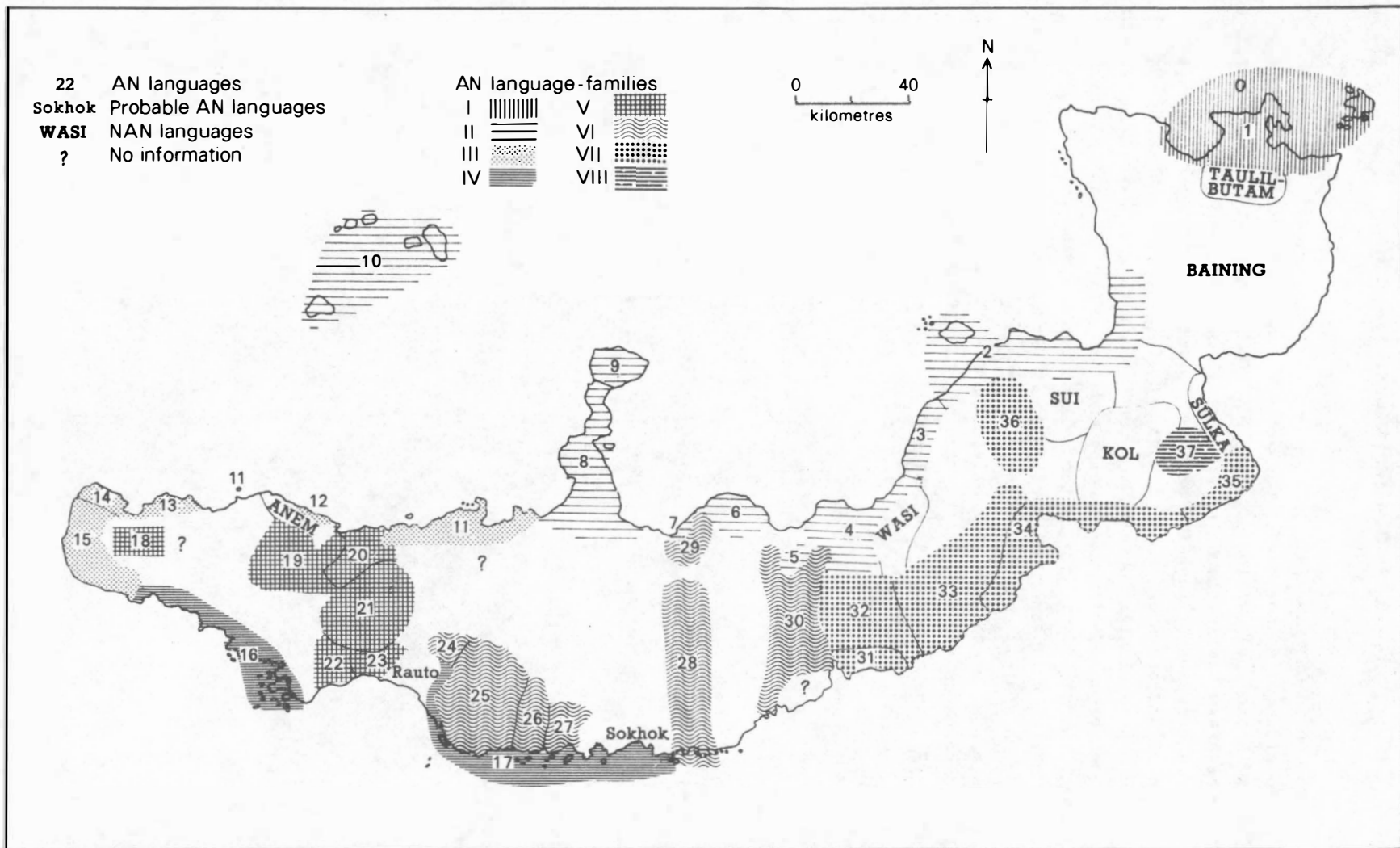
NEW BRITAIN LANGUAGES

KEY TO AUSTRONESIAN LANGUAGES AND DIALECTS ON MAP

I.   **Patpatar-Tolai Sub-Group of New Ireland Languages**
   1. Tolai (only member in New Britain)

II.   **Kimbe Family**
   2. Melamela
   3. Maututu
   4. Vele
   5. Ubae
   6. Bileki
   7. Xarua
   8. Bola
   9. Bulu
   10. Bali-Vitu

III.   **Bariai Family**
   11. Kove
   12. Kaliai
   13. Bariai
   14. Kilenge
   15. Maleu

IV.   **Arawe Family**
   16. Arawe
   17. Moewehafen

V.   **Lamogai Family**
   18. Longa
   19. Mok
   20. Aria
   21. Lamogai
   22. Pulie
   23. Rauto

VI.   **Whiteman Family**
   24. Miu
   25. Kaulong
   26. Sengseng
   27. Karore
   28. Bao
   29. Kapore
   30. Mangseng

VII.   **Mengen Family**
   31. Uvol
   32. Kakuna
   33. Mamusi
   34. Poeng
   35. Orford
   36. Longeinga

VIII.   **Tumuip Family**
   37. Tumuip

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4.4.7. AUSTRONESIAN LANGUAGES: NEW IRELAND

C.H. Beaumont

4.4.7.1. INTRODUCTORY REMARKS

The nineteen Austronesian languages in the New Ireland Province, together with the adjacent Tolai and Duke of York languages in New Britain, form a distinct group. The Tolai language with 63,000 speakers and Lavongai, on New Hanover, with 9,000 are the largest languages. Beaumont (1972:13) lists the number of speakers for all the languages. In the same article four subgroups were proposed:

ST MATTHIAS: Emira-Mussau, Tenis.

NORTHERN NEW IRELAND: Lavongai, Tigak, Kara, Tiang (Dyaul), Nalik, Notsi, Tabar.

MADAK: Madak (Lelet), Lavatbura-Lamusong.

PATPATAR-TOLAI: Barok, Patpatar (Pala), Sursurunga, Konomala, Siar, Kandas (Lambel), Duke of York (Mioko), Tolai (Kuanua, Tuna, Raluana), Lihir (Lir), Tangga (Anir, Muliama).

The location of these languages and subgroupings is indicated on the map. These subgroupings were originally based on lexicostatistical figures given by Lithgow and Claassen (1968:Chart II). A fuller lexico-statistical examination (see Table 1)[1] gives general support to these subgroupings although the placing of some languages must still be considered uncertain. The three languages spoken on the islands to the east of New Ireland represent the main area of uncertainty. Of these Tabar generally has higher percentages with languages of the Northern New Ireland subgroup than with those of the Patpatar-Tolai subgroup. Its highest percentage is, however, with Lihir. Figures for Tangga and Lihir are inconclusive. An island group of these languages was suggested by Capell (1971:259-63). This may be justified, but the grammatical features discussed there are not distinctive. It is worth noting that

TABLE 1

Approximate Cognate Percentages for the New Ireland-Tolai Group

	EM	TE	LV	TK	KR	TIA	NA	NO	TAB	LI	TGA	PA	SI	KD	DY	TO	SU	KO	BA	MA	LL
Emira-Mussau	–	66	32	33	37	38	31	31	29	29	26	33	27	24	26	33	18	19	26	26	32
Tenis	66	–	26	23	25	32	22	25	23	22	21	24	20	20	22	24	17	12	19	19	24
Lavongai	32	26	–	66	54	52	49	37	37	36	32	28	29	28	25	31	28	23	29	35	34
Tigak	33	23	66	–	64	56	50	36	40	34	30	29	30	28	28	31	28	24	31	32	34
Kara	37	25	54	64	–	65	74	48	43	43	36	36	36	31	36	36	33	31	36	35	40
Tiang	38	32	52	56	65	–	55	42	40	38	32	30	30	28	30	32	28	25	32	30	33
Nalik	31	22	49	50	74	55	–	44	46	42	36	37	35	31	35	35	32	30	34	36	38
Notsi	31	25	37	36	48	42	44	–	45	41	33	36	33	25	31	33	31	25	35	31	34
Tabar	29	23	37	40	43	40	46	45	–	53	39	38	33	29	33	34	31	29	39	35	39
Lihir	29	22	36	34	43	38	42	41	53	–	42	49	42	34	39	41	35	37	44	35	43
Tangga	26	21	32	30	36	32	36	33	39	42	–	42	37	32	34	39	36	33	36	30	31
Patpatar	33	24	28	29	36	30	37	36	38	49	42	–	52	52	58	64	38	46	52	33	41
Siar	27	20	29	30	36	30	35	33	33	42	37	52	–	65	57	54	38	47	42	33	37
Kandas	24	20	28	28	31	28	31	25	29	34	32	52	65	–	63	55	39	46	41	29	34
Duke of York	26	22	25	28	36	30	35	31	33	39	34	58	57	63	–	65	33	40	43	31	37
Tolai	33	24	31	31	36	32	35	33	34	41	39	64	54	55	65	–	38	40	47	34	40
Sursurunga	18	17	28	28	33	28	32	31	31	35	36	38	38	39	33	38	–	31	37	29	28
Konomala	19	12	23	24	31	25	30	25	29	37	33	46	47	46	40	40	31	–	34	27	32
Barok	26	19	29	31	36	32	34	35	39	44	36	52	42	41	43	47	37	34	–	38	47
Madak	26	19	35	32	35	30	36	31	35	35	30	33	33	29	31	34	29	27	38	–	64
Lavatbura-Lamusong	32	24	34	34	40	33	38	34	39	43	31	41	37	34	37	40	28	32	47	64	–
SUBGROUPS	St Matthias		Northern New Ireland									Patpatar-Tolai									Madak	

Squares enclose clusters of high percentages

LANGUAGE SUBGROUPS, NEW IRELAND

150°   151°   152°

Mussau I

ST MATTHIAS SUBGROUP

1

2

Emira I   Tench I

2°

NORTHERN NEW IRELAND SUBGROUP

142°   2°

200
miles

PAPUA NEW GUINEA

154°

9°

NEW HANOVER

3

Kavieng

4

5

9

Tabar Is

PATPATAR – TOLAI SUBGROUP

3°

Dyaul Is

6

7

8

10

11   Konos

12

KUOT FAMILY

MADAK FAMILY

16   Lihir Group

3°

LANGUAGES

1 Emira-Mussau
2 Tenis
3 Lavongai (Tungak)
4 Tigak
5 Kara
6 Tiang
7 Nalik
8 Notsi
9 Tabar
10 Kuot (Panaras) (NAN)
11 Lavatbura-Lamusong
12 Madak

13 Barok
14 Patpatar
15 Sursurunga
16 Lihir
17 Tangga
18 Konomala
19 Siar
20 Kandas
21 Duke of York (E New Britain)
22 Tolai (E New Britain)

13

Namatanai

14

15   Samo

Tanga Is

17

Anir Is

4°

21

Rabaul

Duke of
York Is

22

18

20

19

– – – – – Language subgroup boundary

0   20   40   60   80   100

miles

NEW BRITAIN

MP

150°   151°   152°   153°

LANGUAGE SUBGROUPS, NEW IRELAND

although Lihir retains a number of Proto-Austronesian words and scores
highly in lexical comparisons, these words have often undergone consid-
erable changes.

4.4.7.2. GRAMMATICAL FEATURES

More study on a grammatical basis will be necessary before any fin-
ality can be achieved on the subgrouping. Grammatical considerations
are also necessary for the confirmation of the wider New Ireland-Tolai
group, as some Austronesian languages outside the area also show per-
centages over 30% in relation to some New Ireland languages (Lithgow
and Claassen 1968:4). An examination of actual words shared and re-
gional variations also seems likely to be useful.

Comparative study of the grammatical features of New Ireland languages
is restricted by the limited amount of work done on individual languages
as reported in 4.2.8. The brief comments which follow refer only to
the two larger subgroups as there is almost no grammatical material
available for the languages of the St Matthias and Madak subgroups.
As identified by Capell (1971), the languages all have a Subject-Verb-
Object word order. Pronouns in all languages distinguish four degrees
of number - singular, dual, trial and plural. Tangga adds a quadrupal
to this. In some of the languages the plural form appears to have
originated as a quadrupal form. As is typical of Austronesian languages
in Melanesia, all the languages have possessive suffixes for body parts
and kinship terms. Alienable nouns are usually divided into two cat-
egories, edible and inedible, when they are used with possessive pro-
nouns. Tigak is an exception to this but the fact that it has several
series of possessive pronouns (Beaumont 1970:183) indicates that an
earlier distinction has probably been lost. Lihir has further classi-
fication of nouns in relation to the use of articles. Articles are used
in all the languages, though often with little semantic significance.
Nouns do not inflect for plural which is indicated by separate words
before the noun or by quantifying adjectives. There are some plural
nouns, e.g. vap *people* in Lavongai and Tigak. Adjectives typically
follow the noun.

Aspect is indicated by particles preceding the verb. Tense is indi-
cated by particles or by alteration of the subject pronouns. These
subject pronouns are obligatory, even when nouns express the subject.
In most languages these pronouns represent a complete set which fully
distinguish person and number, but in Lavongai they constitute only a
partial set. Personal pronoun systems are generally complex as has been

shown for Tigak (Beaumont 1970). There are different sets of forms
for the various functions, though there are basic similarities between
the sets.

4.4.7.3. PHONOLOGY

   Two languages, Kara and Barok, are tonal, as well as the Sokirik
dialect of Patpatar (Lithgow and Claassen 1968:9-12). Synchronic phon-
ology of the New Ireland languages appears to be fairly straightforward,
though little study of this has yet been made.

   Phonological changes do not offer much help as far as subgrouping
is concerned. The data available illustrate most of the reflexes of
Proto-Oceanic sounds[2] and a summary of these is given below. A numbered
list of words which illustrate these is given in Table 2 and reference
is made to these by numbers. Where tabulations of words have already been
published by Capell (1971) or Lithgow and Claassen (1968), only examples
for two representative languages, Kara and Patpatar, are listed. Data
presented in Table 2 are limited to cognates and probable cognates.

Proto-Oceanic *p. *p shows the greatest variety of any sound in New
Ireland languages. It is reflected as h in Patpatar, Kandas, Lihir and
Sursurunga, as v (bilabial fricative) in Nalik, Tabar, Duke of York and
Tolai, as f in Kara, Tangga, Siar and Konomala and as w in Madak and
Barok. Other languages generally lose this sound though in some words
(such as 29) a new consonant has later been added. Examples showing
the various reflexes of *p are (1, 2, 15, 18, 19, 21, 29).

Proto-Oceanic *mp. Evidence concerning reflexes of *mp (22, 23, 39)
is inadequate but suggests a distinct reflex in most if not all lan-
guages. This is mainly b but v also occurs in some languages. *ŋp
appears to be the same as *mp but again there is little evidence (26,
30).

Proto-Oceanic *t. *t is reflected as t in nearly all languages (6, 7,
9, 11, 14, 19, 24, 26, 29, 31, 33). The exceptions are Nalik which has
d or r and Barok which has t or r.

Proto-Oceanic *nd and *nt. The limited data (1, 18) indicates that
*nd and *nt may have combined. Reflexes are d, t and r.

Proto-Oceanic *l. *l is generally reflected as l (1, 4, 6, 14, 15, 24,
25, 36, 38). In Tangga the reflex is n and in Tabar r. Reflexes in
Emira-Mussau and Tenis appear to vary, with r being the most common.

Proto-Oceanic *d. On the evidence for *d (5, 32, 33) r and l seem to
be the most common reflexes.

Proto-Oceanic *ʀ. The most common word-medial reflex of *ʀ is r (22, 31, 32) though Tigak has g, Tiang and Lavongai have ŋ, and Lihir and Notsi have l. In initial position, reflexes as r or l are found for a few languages (16). In final position (24) Tigak, Kara, and Tangga reflect *ʀ as k, while it is lost in most of the other languages.

Proto-Oceanic *k. *k is reflected as k in all languages (10, 31, 36) except that Nalik, Lavatbura-Lamusong, and sometimes Kara have reflexes as γ. In reflexes of *kutu *louse* (9) and *ikan *fish* (20), *k is lost in all languages, with other consonants later added in some.

Proto-Oceanic *q. Initial *q is generally reflected as k (12, 24, 25, 34). Madak, Nalik, and Lavatbura-Lamusong reflect initial *q as γ (34). Medial *q is usually lost (21, 33) except that in (33) Lavongai and Emira-Mussau show a reflex as ŋ, Kara has g, and Tigak has k.

Proto-Oceanic *m. *m is reflected as m in all languages (3, 4, 7, 11). The final *m of *ndanum *water* (13) is retained in Tigak, Kara and Nalik, but the whole final syllable is lost in several of the other languages.

Proto-Oceanic *n. *n is reflected as n in all languages, though occasionally it is lost in medial or final position. Examples of reflexes are (1, 2, 3, 13, 35, 38). Notsi uliŋ *moon* (1) is an exception.

Proto-Oceanic *ŋ. *ŋ is reflected as ŋ in all languages except Lihir and Sursurunga, which have n. Examples are (6, 14, 30, 37). *ŋ is sometimes lost in final position (30, 37).

Proto-Oceanic *s and *ns. Both *s and *ns are generally reflected as s (8, 12, 35, 37, 38). *s and *ns are lost in Tolai and Duke of York. They are reflected as z in Lavatbura-Lamusong and sometimes in Nalik. For *susu *breast* (8) Lavongai, Barok, Tiang, and Tangga have t for the first *s, while Tigak and Kara have t for the second *s.

Other Proto-Oceanic Consonants. A few other consonants occur in Proto-Oceanic reconstructions but they are not common. The only ones for which any relevant data is listed here are *y (21), *w (17), *ŋm (28), and *ŋk (17, 39).

Final Consonants in Proto-Oceanic. Final consonants are commonly retained in New Ireland languages in several words (1, 14, 20, 35, 38). Retention occurs in a few languages for other examples (24, 37, 33). There is no evidence for the retention of the final consonant in *daʀa(q) *blood* (32) or *manu(k) *bird* (3) except that Tigak has manmanuk for *animal*.

Proto-Oceanic Vowels. Vowels are generally reflected consistently. Final vowels other than *a are generally lost (8, 9, 10, 12, 15, 29, 30, 34). There are exceptions to this (2, 18, 19, 22, 23, 25, 26), but even with these only some of the languages retain the final vowel. Where final vowels are lost there is sometimes a change in the preceding vowel (19, 30, 36).

Syllable Loss. Syllable loss (other than merely the loss of a single sound) occurs in most languages for some words, but there is little consistent pattern. Examples in which several languages lose the same syllable are (3, 13).

TABLE 2

Data List for Sound Changes in New Ireland Languages

I. Words tabulated by both Capell (1971:256-9 and 270-2) and
   Lithgow and Claassen (1968:Chart III)

English	Proto-Oceanic	Kara	Patpatar
1. *moon*	*pulan	fulan	
2. *woman*	*papine/*tapine	tefin	hahin
3. *bird*	*manu(k)	manu	man
4. *hand*	*lima	ma	luma
5. *two*	*dua	rotalua	irua
6. *ear*	*taliŋa	taŋa	taliŋa

II. Words tabulated by Lithgow and Claassen

7. *eye*	*mata	mata	mata
8. *breast*	*susu	sut	sus
9. *louse*	*kutu	ŋut	ut
10. *leg*	*kaki	ka	kake
11. *father*	*tama	tama	tama

III. Words tabulated by Capell

12. *sun*	*qanso	ŋas	kasakes
13. *water*	*ndanum	rarum	
14. *rain*	*laŋit *sky*		
15. *house*	*pale		hala
16. *house*	*Ruŋma		
17. *canoe*	*waŋka(ŋ)		waŋga
18. *banana*	*punti	fut	hudu
19. *sugarcane*	*topu	tuf	tuh
20. *fish*	*ikan	in	
21. *crocodile*	*puqaya	wuj	hueie
22. *pig*	*mpoRo	vio	bore
23. *butterfly*	*mpempe	pepe	
24. *egg*	*qatoluR	kateluk	tulur
25. *head*	*qulu		ulu
26. *head*	*ŋpatu	pat	
27. *I*	*au		yau
28. *man*	*taŋmata	mata	

TABLE 2 (cont'd)

IV. Other Words

	29.*stone*	30.*night*	31.*bite*	32.*blood*	33.*stand*	34.*liver*	35.*name*	36.*small*	37.*nose*	38.*path*	39.*flying fox*
Proto-Oceanic	*patu	*ŋpoŋi	*kaʀati	*daʀa(q)	*tuqu(d)	*qate	*ansan	*liki	*isuŋ	*salan	*mpeŋka
Emira-Mussau	atu	bo	katikatl	rai	tiŋlna	atea	ararina		uŋusuŋu-na	salana	
Tenis		elol-vo	katl	rai			ananina		ŋusoŋo	sala	
Lavongai	yat	vun		raŋai	tuŋ		asan	vanlik	his	salen	
Tigak		vuŋ	kagat		tuk	iat	isan,asan	lakllak	isu	salan	
Kara	fat	vuŋ	aɣeti		a-tigina	yat	isan		ayus	a-salan	
Tiang	ŋʌt	vuŋ	ket	rʌŋəlʌn	ti		isin		isʌ	səlʌn	
Nalik	avat	la-buŋ	kagarat		ka-rur		aiza		ais	lan	
Notsi	kat	na-biŋ	aŋalti	del	a-til		yesan			sel	
Tabar	vut		a ar	dar	a tir	at	as	a-lili	pip-ius	rosar	bek
Madak	lu-at	num-buŋ	iat	la-da	iru	la-ɣat	l-asieŋ	liɣilik	l-isna		
Lavatbura-Lamusong			yari	e-da	natu	e-ɣat	azin	idokdok	eizlŋ		
Lihir	hot			dal	etu	yat	yasina	halik	isu		biak
Tangga					ititi		asai	ilik			bek
Barok	wat		ikat		itu		eas	laklik	aisine		bakei
Patpatar	hat	buŋ	karat	dena	tur	kat-ine	hinsaŋ	hansik			beka
Sursurunga	hat	libuŋ		daran	sentur		ŋisan		nisun	sal	bek
Konomala	fat		ikati	dadei	itu	pal-kat	weisina				beke
Siar	fat				ol-tur	a-kat	risem	burun-lik			
Kandas	hat				tur	kat	risano				
Duke of York	vat		karat		tur	kat-ina	iana	kinalik			
Tolai	vat		karat		tur	kat-ina	iaŋ	ikilik			

N O T E S

1. The comparisons are based on 105 of the first 120 items in the
Summer Institute of Linguistics wordlist. I am grateful to the Summer
Institute of Linguistics for permission to use the unpublished lists
collected by David Lithgow and the late Oren Claassen in 1966. These
lists form the main basis for this lexicostatistical study, though for
Tigak, Patpatar, Duke of York and Tolai my own lists have been used.
The same sources are used for the data presented in Table 2.

2. Proto-Oceanic is used as a basis as it is less remote than Proto-
Austronesian. Reconstructions cited are those listed by Grace (1969,
1971), except that some brackets have been removed. The reconstruction
*kaki *leg* (10) is based on a Proto-Austronesian reconstruction.

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4.4.8. AUSTRONESIAN LANGUAGES: SEPIK PROVINCES

D.C. Laycock

4.4.8.1. GENERAL REMARKS

The Austronesian languages of the Sepik and western Madang regions
have been very little studied; all available material is listed in the
chapter on the history of research in these languages (see 4.2.2.).
This article draws heavily on material in these languages collected by
Laycock during fieldwork in 1970-71, and on fieldwork carried out by
J. Z'graggen (Anthropos Institute, Alexishafen). I am grateful for
data he has placed at my disposal. The few papers of major significance
are mentioned where relevant.

Laycock (1973a) lists eleven Austronesian languages along the north-
west coast of Papua New Guinea, in the area west of the Sepik mouth
(which we may call the Sepik coast), and just east of the Sepik mouth,
and on the offshore islands. However, this list, by an oversight, omits
the language of Medebur, and also treats Wogeo and Bam as a single
language. More recent work by Z'graggen has established the independent
status of Bam. Accordingly, we have to deal here with thirteen lan-
guages, which together form some kind of subgroup within the Oceanic
group of Austronesian languages, but their exact status cannot be de-
termined without much more work on other Austronesian languages of the
New Guinea area. The languages further appear to subgroup among them-
selves as follows:

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I. Western (sub-sub) group:[1]
        1. Sera
        2. Sissano
        3. Tumleo
        4. Ali
        5. Ulau-Suain

II. Eastern (sub-sub) group:
        6. Kairiru
        7. Kaiep
        8. Kis
        9. Wogeo
        10. Bam
        11. Sepa
        12. Manam
        13. Medebur
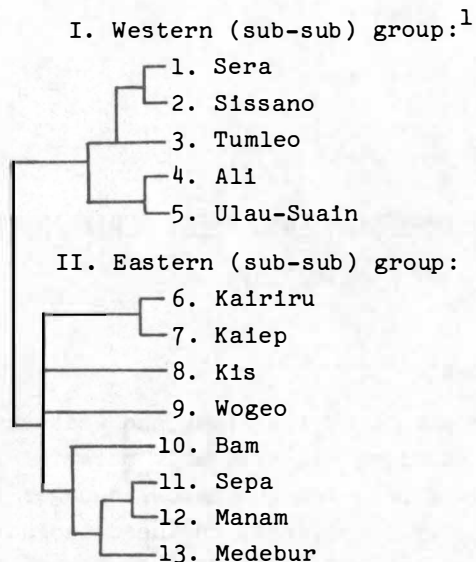
The locations of these languages can be found on the accompanying maps (by J. Z'graggen).

Laycock's data cover the first eight languages only, but material collected by Z'graggen on the remainder confirms the status of the sub-group. According to Z'graggen (1971), Manam, Sepa and Medebur are off-shoots of a single language, and the two former are in almost dialect relationship to each other (73% lexical cognacy). The reasons for other groupings are given in chapter 4.2.2. on the history of research in the Austronesian languages of the Sepik Provinces. This chapter attempts to provide some of the relevant data. (Further data on Manam, Sepa and Medebur can be found in 4.4.1.)

Appended to this chapter is a comparative wordlist of fifty items, chosen to illustrate both sound-changes within the group, and developments from Proto-Oceanic (items from Grace 1969).[2] Because of the selection for high retention, the wordlists give a greater impression of homogeneity than is actually the case; but even so there seems little justification for Capell's (1962b) statement that the languages of this group are "characterised by paucity of Melanesian content".

A chart of typological features is also appended, the data on Wogeo coming from a few pages of Wogeo grammar compiled by the anthropologist H. Ian Hogbin, and placed at my disposal by Arthur Capell, and confirmed by Z'graggen. All data on the languages Bam, Sepa, Manam and Medebur have been supplied by Z'graggen, as well as the Wogeo lexical data. The orthography has in some cases been slightly modified to fit the conventions used for the two other languages. The Manam material has been

checked against Gregersen (1974) and some additional items included;
Böhm (1975), which includes a Manam dictionary, has not yet been seen.
All of the languages share some typological features, such as subject-
prefixes on verbs, lack of an article, adjective following noun, suf-
fixed object pronouns on transitive forms, and markers similar to or
identical with these to express 'alienable' possession (in which the
pronoun form, or pronoun plus particle, follows or is suffixed to the
noun).   The languages differ in their number systems, in the presence
or absence of a dual number and of an inclusive/exclusive distinction,
in the degree of morphological complexity of subject-prefixes to verbs,
and in basic word-order of free constituents within the sentence - the
last feature correlating, essentially, with the split between the
'western' and 'eastern' groupings.   These features are set out in the
chart of typological features.   The presence of pronominal suffixes
indicating 'inalienable' possession, for instance, is strongly evidenced
in the group only in the case of 'body parts', and even here not in Kis,
and perhaps not in Sera (though the data is fragmentary).   The same
marking with kinship terms is strongly evidenced in the western group
only in Ali; it apparently occurs in Sissano and Tumleo, but present-day
informants seem to prefer the more general possessive marking of noun
plus (sometimes modified) pronoun suffix.   Data for Ulau-Suain and
Kairiru are inconclusive.   Inalienable kin possession does not occur in
Kis, but is found in the other languages of the eastern group.

   Features 6 and 7 in the chart deal with the universally present
feature of subject-marking in verbs, which in the western group at least
shows a number of unpredictable patterns, differing from verb to verb;
cf. Schmidt (in Schnee 1920, article 'Melanesische Sprachen'):

> In mehreren Sprachen von Deutsch- und Holländisch-Neuguinea
> ist dieser Subjektausdruck zugleich mit der ev. vorhanden
> gewesenen Verbalpartikel so eng mit dem Auslaut des Verbalstammes
> verschmolzen, dass die verschiedenen Personenbezeichnungen
> wie Anlautveränderungen des Verbalstammes erscheinen.

The corresponding markers in the eastern group have more transparent
forms, and show less tendency to vary for tense - although information
on this feature is not complete.

   Finally, the numeral systems show an interesting grouping.   The
binary systems (with word for *'five'*) are found only in the westernmost
members.   The remaining languages all have, basically, a quinary system,
but in some a distinct word for *'ten'* ('imperfect decimal system') is
found, while at least three of the eastern languages show the somewhat
unusual feature of a distinct word for *'six'* - *'seven'* being nevertheless
'five plus two', and *'ten'* being *'two fives'*.   Data on this last point
are lacking for Bam, Sepa, and Medebur.
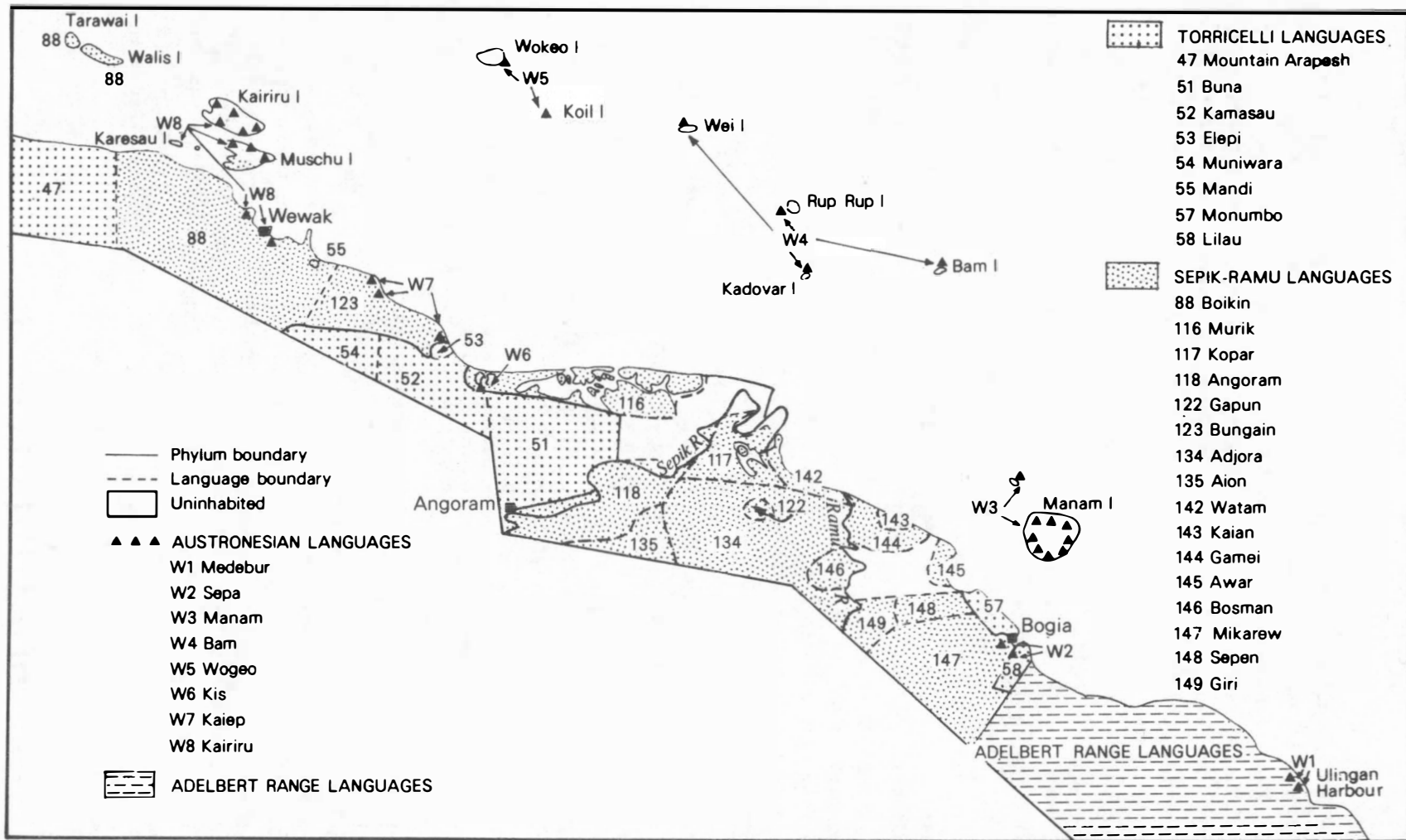
MAP I: AUSTRONESIAN LANGUAGES: EAST SEPIK AND WESTERN MADANG AREA

Legend:

— Phylum boundary
--- Language boundary

▲ ▲ ▲ AUSTRONESIAN LANGUAGES
W 9 Ulau-Suain
W10 Ali
W11 Tumleo
W12 Sissano
W13 Sera

TORRICELLI LANGUAGES
12 One
15 Olo
25 Valman
45 Aruek

SKO LANGUAGES
65 Warapu
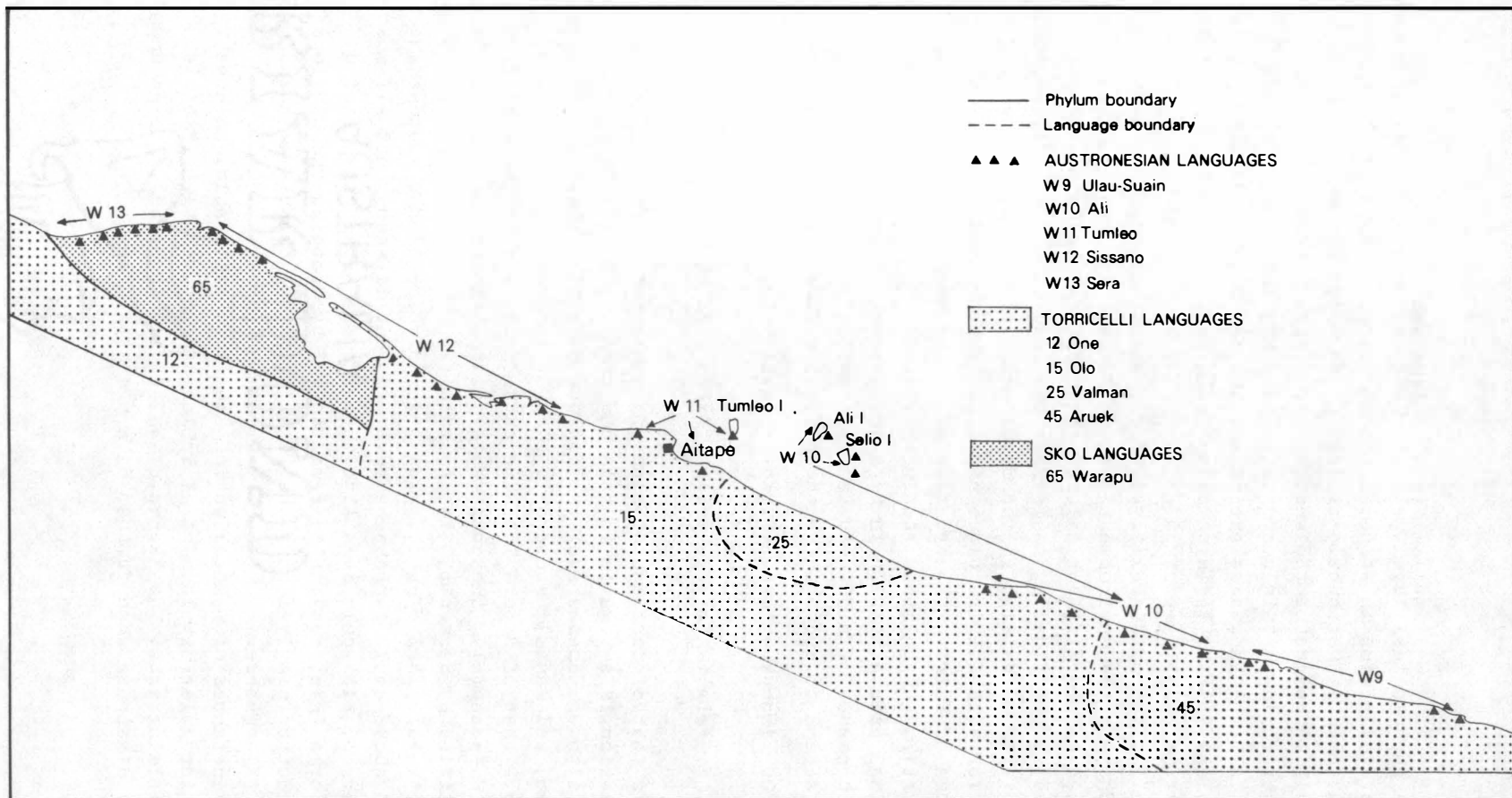
MAP II: AUSTRONESIAN LANGUAGES: WEST SEPIK AREA

On the phonological level, all the languages probably lack a voiced/voiceless distinction in stops, although there are some indeterminate areas that make it worthwhile preserving the distinction for the time being. All languages of the western group show a strong tendency to palatalisation in certain contexts, a tendency that is shared by Kairiru. All the languages except Kairiru and Wogeo have lost POC *k when initial; initial *p is sometimes retained, sometimes lost, while initial *t is usually retained.

Palatalisation of dental/alveolar consonants is found in Sera and Sissano only in the environment i-#; in Tumleo, all such consonants are palatalised before /i/, but palatal consonants are also found preceding other vowels, and finally, as is also the case in Ali and Ulau-Suain. Characteristic of Kairiru is the development of [tˠ] to [š], which accounts for such Kairiru place names as 'Shagur' and 'Sham'. All occurrences of Kairiru [š] are treated in the wordlist as being the sequence /si/, but this may require revision.

The final palatalisation in Sera and Sissano arises in many instances from the presence of a POC -*u, as is exemplified by the following possible schema to account for the differing forms of the word for *bird*:

$$\text{POC} \quad \underset{1}{*manuk} - \underset{2}{*manu} - \underset{3}{*mani} - \underset{4}{*mañi} - \underset{5}{*maiñ} -$$

$$\underset{6}{*miañ} - \underset{7}{*mian} - \underset{8}{*mien} - \underset{9}{*mieŋ} - \underset{10}{*miəŋ}$$

State 5 is that of Sera and Sissano (phonemicised as /main/, as the palatalisation is automatic in this position). State 7 is that of Kairiru, although speakers of one dialect have simply man (as do also Wogeo, Bam, and Manam); state 8 is that of Tumleo, state 10 that of Ali, and state 2 that of Sepa. The same pattern is seen in the word for *water* (POC *ndanu(m)), and comparable palatalisation for Sera and Sissano is exemplified by Sera uit, Sissano tə'uit (POC *kutu *louse*), and Sissano uil (POC *kuiu(r) *breadfruit*). The order of some of the sound-changes suggested above could perhaps be reversed, but it seems that all must have occurred. It would seem also that the Ulau-Suain and Kairiru dialect forms (man, ran) arise from state 7 by dropping the developed -i-, and not by simply losing the final V(C) from *manu(k), *ndanu(m); but this is arguable.

Other instances of palatalisation seem less explicable, as does the somewhat irregular development of Tumleo diphthongisation (*su(n)su *breast* yielding saus, but *Ruŋma(q) *house* yielding Ioum). These anomalies may disappear when further data are available.

Enough has been said to give a brief idea of the nature of the Sepik
region languages in general. A few brief notes on the location,
speakers, and previous literature on the individual languages follow;
a similar tabulation, with some further minor details, can be found in
Laycock (1973). Population figures for languages 1 to 8 are as of 1
January 1970; but this is supplemented by census figures correct to May
1974 obtained by Z'graggen for all languages of the eastern group, and
some of the western group; where the figures differ, the second figure
(in parentheses) is that given by Z'graggen.

4.4.8.2. INDIVIDUAL GROUPS

4.4.8.2.1. *WESTERN GROUP*

1. SERA (Serra, Ssia, Ser). Spoken by 432 people in three small vil-
lages, Puindu, Rainuk, and Sarai, lying between Sissano and Leitere on
the north-west Sepik coast. In literature prior to Laycock (1973)
listed, if at all, as a dialect of Sissano (e.g. Friederici 1912, 1913;
Neuhauss 1911); see discussion in 4.2.2.

2. SISSANO (Sisano, Sissanu, Aissano, Eissano, Zissano). Spoken by
4320 (4717) people in the villages of Sissano, Arop, Malol, and Teles,
along the Sepik coast west of Aitape. Some dialect divergences between
villages, and between the hamlets of the first three villages, which
are very large. Some possible influence from the neighbouring non-
Austronesian languages of Olo and One as far as Malol village is con-
cerned (see Laycock 1973 and 4.2.2.), but the specific suggestion of
the Sissano language as a whole being very heavily influenced by these
languages, and by Warapu, is denied by Laycock (1973b). Previous data
consists only of wordlists by Erdweg (1901), Neuhauss (1911) and
Friederici (1912, 1913), reprinted by Churchill (1916). Closely related
to Sera.

3. TUMLEO (Tamara). Spoken by 610 (675) people on the island of Tumleo
(Tamara), off Aitape, and in the relatively new mainland settlements
of Raiyu and Yakoi (east and west of Aitape respectively). Documented,
but with arguable phonology, in a grammar by Schultze (1911); a brief
wordlist is given by Erdweg (1901). Dialect information is scanty.

4. ALI. Spoken by 2079 (2118) people on the islands (off Aitape) of
Ali, Angel, and Seleo, and in the mainland villages of Paup, Yakamul
No.1, and Yakamul No.2. The western side of Ali Island speaks a dialect
which differs from the speech of the other Ali-speaking areas in various
phonological features, especially in the correspondence of /s/ to /h/
in many (but not all) words. Brief grammar and further data are in

Klaffl and Vormann 1905, and a short wordlist from Seleo and Paup in
Erdweg 1901.

5. ULAU-SUAIN (Ulau-Suen, Ulau-Sueng, Ulau-Suein, Sauvein). Spoken by
1271 (1369) people in three villages, Ulau, Suain No.1, and Suain No.2,
on the mainland east of Aitape (and east of Yakamul). Previous data
confined to a brief wordlist by Erdweg (1901), and grammatical notes
and a wordlist by Klaffl and Vormann (1905), who regard Ulau-Suain as
a dialect of Ali - to which it stands moderately close.

4.4.8.2.2. *EASTERN GROUP*

6. KAIRIRU. Spoken mainly on Kairiru Island and part of Mushu Island,
off Wewak, with scattered settlements on the mainland opposite; also
spoken on Karesau and Yuo Islands, although these islands also contain
some speakers of Boiken. Speakers number 2552 (2811); published data
consist only of short texts by Schmidt (1907, 1909), although Capell
(1971) mentions that he prepared a (presumably extensive) Kairiru
vocabulary in 1950.

7. KAIEP (Terebu, Turupu, Samap, Sumup). Spoken by a total of approx-
imately 300 people living mainly in the village of Kaiep (east of
Wewak), but also scattered throughout Terebu and Samap villages, still
further to the east. No published data, although occasionally mentioned
(by, e.g., Gehberger (1950)). Fairly closely related to Kairiru.

8. KIS. Spoken only in Kis village (216 inhabitants) immediately west
of Murik Lakes (which form part of the Sepik River delta). No previous
data, and apparently first mentioned as an Austronesian-speaking village
by Capell (1962a), on the basis of comments supplied by Laycock. Closer
relationships are perhaps to be sought among the island languages of
Wogeo or Manam; local tradition favours the second possibility, but the
linguistic evidence offers little support for this view.

9. WOGEO (Wokeo, Vokeo). Spoken on the islands of Wokeo and Koil in
the Lesser Schouten group north of the Sepik River delta; total speakers
1237. Linguistic data only in recently-published texts by Gagin (1972),
and fieldnotes of Z'graggen; the published anthropological material of
H. Ian Hogbin (see bibliography, various dates) contains usable data,
and a few pages of his unpublished notes have been examined in pre-
paring this paper.

10. BAM. Spoken on the islands of Wei, Blupblup, Kadovar, and Bam,
east of Wokeo and Koil; formerly regarded as a dialect of Wogeo (by,
e.g., Hogbin - see bibliography) but established as a separate language

by Z'graggen who says (personal communication) that it is more closely related to Manam than to Wogeo. Population 1455.

11. **SEPA.** Spoken in the two mainland villages of Sepa and Wanam, opposite Manam Island, by approximately 265 people; very closely related to Manam, according to Z'graggen (1971). For further information, see contributions 4.2.3. and 4.4.1. by Z'graggen in this volume.

12. **MANAM.** Spoken by 5572 people in 16 villages on Manam (Vulcan) Island and Boisa Island; little previous published data, but for such as there are see contributions 4.2.3. and 4.4.1. by Z'graggen in this volume, and Z'graggen (1971) (where the pronouns are given). A dictionary by Böhm (1975) is available, and a brief grammatical statement has recently been prepared by Gregersen (1974).

13. **MEDEBUR.** Spoken in the mainland villages of Medebur and Toto, with a combined population of 429; listed as Melanesian by Höltker (1937); no other published information apart from Z'graggen (1971).

It will be seen from this very brief presentation that a great deal of work still remains to be undertaken in the Austronesian languages of the Sepik region.

N O T E S

1.   In Laycock 1973, an uncorrected misprint transformed the 'western'
group into the 'eastern', and vice versa. Z'graggen proposes the names
'Aitape Sub-Group' for the western group, and 'Schouten Sub-Group' for
the eastern; the entire group he calls 'Wewak Austronesian'.

2.   The POC forms are intended to be suggestive of the possible origins
of the words listed, and are not to be regarded as being definitive;
nor are the forms cited necessarily those from which the words of the
Sepik Coast languages are derived, as Grace's reconstructions come from
a variety of groups within Oceania. The meanings of the POC forms are
not cited here, but in many cases they differ from the English key word
given - note especially POC *mp-anupe *caterpillar*, which seems to be
the origin of most of the words for *'snake'*.

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APPENDIX A

Comparative Wordlist - Austronesian Languages of the Sepik/Western Madang Region

ENGLISH	*man*	*woman*	*eye*	*nose*	*ear*
SERA	reisiouk	tamein	tapuŋ	suvətaŋ	tenerpiŋ
SISSANO	vəru	tamein	ta-k	su-k	tənerpo-n
TUMLEO	lama	tamen	matalaŋi-k	sulapi-k	tana'aliə-k
ALI	rama	tamiŋ	matakəriə-k	yisu-k	tənakei-k
ULAU-SUAIN	ramat	taiñ	matali-k	sundᵞela-k	ŋu-m
KAIRIRU	ramat	mwoin	mata-k	kwokala-k	tələŋa-k
KAIEP	ramet	main	mata-k	naŋa-k	tələŋa-k
KIS	mata	win	məta	ŋwak	kəŋabi
WOGEO	ramata	reine	mata	ŋariri	talŋa
BAM	tamot	ain	mata	giŋa	talŋo
SEPA	tamota	waine	mata	ŋgaŋa	taiiŋa
MANAM	tamoata	aine	mata	gaŋa, susukuri	kuŋi
MEDEBUR	tomat	waidik	mata	kamu	tiiiŋa
POC	*taŋmata	*tapine, *pine, *papine	*mata(q)	*isu(ŋ), *usu	*taliŋa

ENGLISH	*arm/hand*	*breast*	*blood*	*sun*	*moon*
SERA	ləɣaŋ	tuit	tenei	rau	bul
SISSANO	avea-k	tus	tənii	rau	sanar
TUMLEO	awitᵞeii-k	saus	tᵞani	uas	sanar
ALI	awiə-k	sus	tᵞiŋi	as	sənar
ULAU-SUAIN	ayi-k	sɩs	tᵞenayi	adaŋ	musuar, sənar
KAIRIRU	kawiə-k	sus	sinai	waraŋ	kaleo
KAIEP	au-k	sus	nderə	amar	sənar
KIS	dəmakei	sus	dara	usem	alewa
WOGEO	lima	ñoño	dara	varaŋ	kaleva
BAM	lima	sus	dar	nau	kaleu
SEPA	lima	lulu	dala	ŋamali	kalewa
MANAM	debu, luma	ruru	dara	amari	kalea
MEDEBUR	nima	zuze	dar	uyem	lam
POC	*qapaRa, *lima	*su(n)su	*tinaqi, *daRaq	*dran(i), *ndaŋi	*pula(n), *sina(R)

APPENDIX A (cont'd)

ENGLISH	night	water	sea	stone	mountain	fire
SERA	puiŋ	rain	na	ak	sol	teiŋ
SISSANO	poin	rain	na	at	ol	tein
TUMLEO	puŋ	rien	lef	eitatun	sol	yiəp
ALI	puəŋ	rieŋ	nau	paluək	saul	iiəp
ULAU-SUAIN	bui	ran	na	at	suən	asuwuiñ
KAIRIRU	abwuŋ	rian	nau	buŋ	worəŋ	luf
KAIEP	bulom	ndan	nou	vat	gulien	you
KIS	doma	dan	masak	pat	selu	yuwa
WOGEO	taum	dan	booka	buer	bulum	yowa
BAM	taum	dan	buek	pat	sakur	iow
SEPA	wabubu	ndanu	makasi	pa·tu	bu·ka	ewa
MANAM	rodo, wabubu	daŋ	makasi	patu	buku	ewa
MEDEBUR	didomo	daŋ	tal	pat	kowora	yo
POC	*ŋpoŋi, *(dr)on(st)o	*ndanu(m)	*iau(d), *ma-asi(n)	*patu	*kor(ao), *solo	*api

ENGLISH	tree	sugarcane	sago	banana	coconut	dog	pig
SERA	ai	to	ləpi	bur	ne	biŋ	poii
SISSANO	ai	to'	iipii	apone, vur	ni'	aun	puii
TUMLEO	iyei	tu	lapi	wour	neu	aun	pul
ALI	ai	tu	rapi	wur	niu	ouŋ	por
ULAU-SUAIN	ai	abuas	rabi	ud	niu	aun	bur
KAIRIRU	kai	tu	rapi	wur	niu	woñau	pur
KAIEP	ai	tou	buobə	wundə	niu	vanau	bor
KIS	ai	səkak	beiv	kwoipa	niu	kiou	bwor
WOGEO	ka	--	--	kwarem	--	ke	--
BAM	kai	--	--	u·d	--	kiu	--
SEPA	kai	--	--	undu	--	keu	--
MANAM	kai	tou	bobe	udi	niu	keu	boro
MEDEBUR	ka	--	--	ud	--	wona	--
POC	*kai	*topu	*rumpia, *rampia	*puti	*niu(R)	*ŋkaun	*mpoRo

APPENDIX A (cont'd)

ENGLISH	*bird*	*snake*	*fish*	*fly*	*mosquito*	*louse*
SERA	main	meni	mwoiŋ	laŋ	nənei	uit
SISSANO	main	vəni	peii	lan	nam	tə'uit
TUMLEO	mien	ani	su	tamiel	ñuəm	aut
ALI	miəŋ	ani	wa'air	lapitʸ	ñuəŋ	wut
ULAU-SUAIN	man	ani	ui	lusuwai	nam	ut
KAIRIRU	mian	vaniu	siasi	ləmwok	niam	--
KAIEP	man	atom	moɣolə	loŋ	nam	out
KIS	man	ali	ŋgam	alaŋ	nugur	kukut
WOGEO	man	kef	ika	iaŋo	ñam, samkir	kut
BAM	man	kiep	ik	malpuŋ	ñam	kut
SEPA	manu	mota	ika	ŋalambuti	namu	kutu
MANAM	maŋ	moata	ika	laŋo	naŋ	kutu
MEDEBUR	nepa	muat	ik	luwut	nam	kut
POC	*manu(k)	*mp-anupe, *ŋmata	*paRi, *ika(n)	*laŋo	*namu(k)	*kutu

ENGLISH	*house*	*white*	*black*	*cold*	*eat*
SERA	nou	wuipul	neknek	marir	'ain
SISSANO	nu	vokpus	niknik	marir	'ain
TUMLEO	loum	pos	ŋek	tareitʸ	i'ən
ALI	anou	pous	tʸumutʸ	tʸitʸetʸ	'eəŋ
ULAU-SUAIN	anu	sabus	dʸerañ	marid	an
KAIRIRU	pial	bunbun	silsir	marir	an
KAIEP	əlim	sambweu	kərkarə	marirə	'ani
KIS	baza	ŋgauron	nugundon	katakip	an
WOGEO	ruma	buŋabuŋa	jimjimu	kwel	kan
BAM	rum	sabau	jimjam	kumbir	manek
SEPA	pela	wawaraki	mbotambota	ndisuau	kani, monako
MANAM	pera	wauwau	zimzimi	tumura, madidi	kaŋ, mwanako
MEDEBUR	rum	wavlav	geragir	ekiam	kan
POC	*nua, *panua, *Ruŋma(q), *pale	*poti, *puti	*ŋkele	*ma(n)di(n)diŋ	*kani

APPENDIX A (cont'd)

ENGLISH	*come*	*go*	*one*	*two*	*three*	*four*
SERA	ma	pi	pontenen	eltiŋ	eltiŋ pal	eltiŋ eltiŋ
SISSANO	ma	uar	pondənen	tin	tin pondənen	tinutin
TUMLEO	miei	wi	mata	lou	tul	u
ALI	ma	ie/owa	tei	rou	tul	au
ULAU–SUAIN	mʷai	la	batai	ru	tuəl	ouŋgənañ
KAIRIRU	miai	liak	tai	wulu	tuol	viat
KAIEP	ama	alie	ta	lu	tol	tənal
KIS	me	nakei	ageiv	urani	toni	owani
WOGEO	wot	lako	ta	rua	tol	kuik
BAM	pur	lal	tini	aru	tuəl	kiki
SEPA	sopu, -pula	lako	teke	lua	toli	wati
MANAM	mai, pura	lako	teke	rua	toli	wati
MEDEBUR	zalu	va	takana	aru	tol	bilitak
POC	*mai	*lako, *pano	--	*rua	*tolu	*pat

ENGLISH	*five*	*1sg*	*2sg*	*3sg*	*1du*	*2du*	*3du*
SERA	piŋgari?	ya	e	iŋ	ou	brou	rouso
SISSANO	tartar	ya	e	i	oit	uit	ruit
TUMLEO	leim	auiou	yiyi	yeyei	--	--	--
ALI	lim	eu	yi	eŋ	etri	yitrei	entreŋ
ULAU–SUAIN	ayakalun	dʸau	i	wui	--	--	--
KAIRIRU	vələri	kiau	yik	ei	təmwoi	--	--
KAIEP	lim	dʸa	yi'	yi	--	--	--
KIS	lima	au	ik	e	tukwa	--	--
WOGEO	kwik bogoba	va	iko	iye	--	--	--
BAM	kiki be kuboa	ñau	kaik	ŋai	--	--	--
SEPA	lima	ŋa(yau)	kiko	ai	--	--	--
MANAM	lima	ŋau	kaiko	ŋai	--	--	--
MEDEBUR	lim	ŋa	kai	ani	--	--	--
POC	*lima	*au	--	*ia	--	--	--

APPENDIX A (cont'd)

ENGLISH	1pl/i	1pl/e	2pl	3pl
SERA	uit	uit	bruit	rei
SISSANO	eit	eit	om	ri
TUMLEO	etet	etet	emem	reirei
ALI	yit	yit	am	rei
ULAU-SUAIN	it	it	am	ari
KAIRIRU	kait	?	kam	ri
KAIEP	eit	ɛm	am	di
KIS	tukwa	am	ikpo	dei
WOGEO	kita	kita	kam(im)	die
BAM	takit	kikiai	kakam	didi
SEPA	ki·ta	kami	kamu	ndia
MANAM	kita	keka	kam	di
MEDEBUR	ki	kam	kom	adi
POC	*kinta	*kami	*kamu	*sida

APPENDIX B
Typological Features

| | *FEATURES* | | | | | | | |
	1	2	3	4	5	6	7	8
SERA	− ?	− ?	+	−	SVO	+	+	binary/5
SISSANO	+	disappearing	+	−	SVO	+	+	binary/5
TUMLEO	+	disappearing	−	−	SVO	+	+	quinary/10
ALI	+	+	−	−	SVO	+	+	quinary/10
ULAU–SUAIN	+	− ?	−	−	SVO	+	?	quinary
KAIRIRU	+	+	+	?	SOV(SVO)	partly	+	quinary/6
KAIEP	+	+	−	+	SOV	partly	partly	quinary/6
KIS	−	−	−	+	SOV	+	+	quinary
WOGEO	+	+	−	+	SOV/SVO	+	+	?
BAM	+	+	−	+	SOV/SVO	?	+	?
SEPA	+	+	−	+	SOV	+	+	quinary/?
MANAM	+	+	−	+	SOV	+	+	quinary/10
MEDEBUR	+	+	−	+	SOV	+	+	quinary/?

Key to features:

1. Special set of pronominal markers for body parts (inalienable possession).

2. Special set of pronominal markers for kin terms (inalienable possession) - same as body parts marking when present.

3. Dual number expressed in pronouns or verb concordance by distinct forms not synchronically derivable from the word for *'two'*.

4. Inclusive/exclusive distinction in first person pronouns.

5. Basic word-order.

6. Subject-prefixes in verbs closely assimilated to verb stem and/or tense particle, with morphological changes necessitating setting up of conjugation classes.

7. Subject-prefixes in verbs vary for tense.

8. Numeral system: binary (with word for *'five'*), quinary (with word for *'ten'*), quinary (with word for *'six'*), quinary.

4.4.9. AUSTRONESIAN LANGUAGES: BOUGAINVILLE PROVINCE

Peter C. Lincoln[1]

4.4.9.1. INTRODUCTION

All of the Austronesian languages of the Bougainville area belong to
the Oceanic subgroup. The best studied branch of Oceanic languages,
the Polynesian subgroup, is represented on the easternmost fringe of
Bougainville Province. In contrast, the Oceanic languages spoken on
the bigger islands of the area are among the least studied in the Pacific.
In an effort to restore some balance to this situation, I will deal very
briefly with the Polynesian languages and more extensively with the non-
Polynesian Oceanic languages. The focus will be on attempts to subgroup
these languages.

4.4.9.2. POLYNESIAN OUTLIERS

Nukuria, Takuu, and Nukumanu are distinct speech varieties which are
mutually intelligible or nearly so.[2] Even Luangiua, with its striking
sounds shifts *t > /k/, *k > /ʔ/, *n > /ŋ/, may be readily, or quickly,
understood by Polynesians of Bougainville district.[2]

Whatever disagreement may arise from the tricky problem of defining
language limits, all of these varieties form a subgroup with the closely
related speech of Samoa, Futuna, the Ellice Islands and the other
Polynesian Outliers, which languages are distinct from less closely
related languages of Tonga and of Eastern Polynesia.[3]

There may have been some contact in recent centuries between these
Polynesian Outliers and the rest of the Bougainville area. Parkinson
(1899) reported evidence of a Polynesian culture preceding occupation
of Kilinailau by Halia speakers.[4] Parkinson (1907:183-6) also mentions
occasional landings by Polynesians on the east coast of Bougainville.

So far, however, I have found no clear linguistic effects. Hahon,
Timputz, Solos, Saposa, and Nehan use a form of /kumala/ *sweet potato*,
but they could have obtained the plant and name recently by several
other routes.

4.4.9.3. OCEANIC LANGUAGES (EXCLUDING POLYNESIAN)

It is quite clear that Nehan, Halia, Solos, Petats, Saposa, Teop,
Hahon, Timputz, Piva, Banoni, Papapana, Torau, Uruava, and Mono-Alu
are all members of the Oceanic group.[5]

It is not yet clear whether these languages form a closed subgroup
within Oceanic. So far I have been unable to find phonological, lexical,
and morphological innovations that are shared by all and only these
languages.

In historical terms, this means that all of these languages trace
back to a single speech community, Proto-Oceanic, spoken about 5,000
years ago.[6]   However, it is not clear whether these Oceanic languages
represent one, two, three, or more separate traditions since that time.

In order to assess the possibilities, I will briefly examine previous
studies and then present tentative conclusions based on my own con-
tinuing research.

4.4.9.4. PREVIOUSLY SUGGESTED SUBGROUPS

The lack of information on how many languages were spoken in the area
diminishes the value of the earlier studies. This is unfortunate in the
case of Schnee (1901), because his perceptive, scholarly approach was
applied to very scanty data. He suggested that there were two subgroups
(Sprachgebiete) in our area: one including Nissan, Kilinailau, Buka,
and north Bougainville, and another, possibly related group, including
Bougainville Straits and south Bougainville.

Friederici (1913) and Ray (1926) sought to explain language differ-
ences and similarities by theories of migration. As a result, they tell
us little about subgroups. Ray's suggestion of affiliation between
Bougainville and the rest of the Solomons must be qualified. He had
very little data to work with, thus he could not show much more than
the basic Austronesian characteristics. Also he did not even try to
find affiliation with the Bismarck Archipelago.[7]

One can easily infer from Blackwood (1935) that Halia, Petats, and
Solos are closely related dialects, and that Teop, Hahon, and Timputz
are closely related languages. She found that Petats and Timputz are
"similar in construction" (1935:15) but show extreme lexical differ-
ences. These conclusions are supported by later studies including

LANGUAGES OF BOUGAINVILLE

Map 2

Population figures and language boundaries after ALLEN and HURD

non-Austronesian areas

+5S   +5S

Petats (1,350)

Halia (9,900)

Solos (2,300)

Saposa (750)

Timputz (1,400)

Hahon (850)

Teop (3,100)

Konua (1,300)

Papapana (100)

Keriaka (990)

Rotokas (3,500)

Torau (605)

Eivo (1,100)

Uruava (5)

Piva (310)

Banoni (680)

Nasioi (10,600)

Nagovisi (4,600)

+6S
156E

Siwai (6,100)

Buin (8,600)

+7S
155E

Mono-Alu (1,700)

0   25   50   100 km
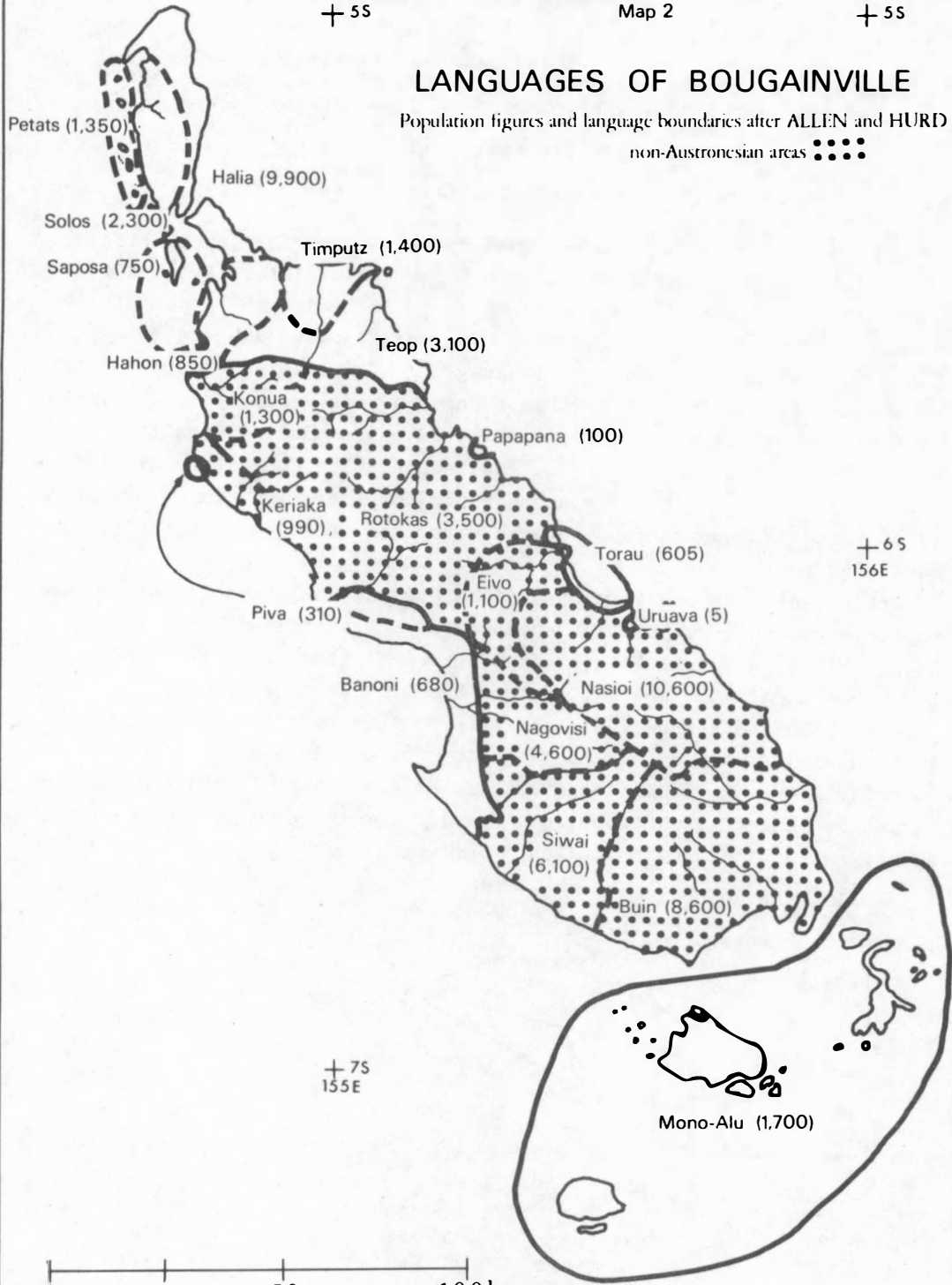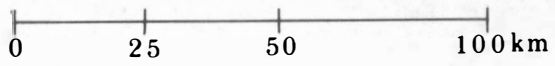
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this one. However, her comments about Saposa lead to a mistaken con-
clusion (1935:15):[8]

> ... Saposa, has special sound changes not found elsewhere
> in this area, e.g. it alone of all the dialects studied
> possesses an _f_ sound, which occurs in words whose cognates
> in other dialects have either _h_ or _v_ (as in Saposa fūnu,
> Petats hūlu, Kurtatchi [Timputz, P. Lincoln] wūnu = hair).
> When these have been allowed for, the Saposa dialect conforms
> to the general type. All these dialects are mutually
> intelligible.

The sound [f] identifies Saposa speakers even when they speak Pidgin.[9]
The [f] in itself would probably not impair intelligibility, but its
uniqueness indicates an extended period of isolation which definitely
would. Furthermore, later studies show that Saposa shares 40% or less
basic vocabulary with any Buka language.[10] It would be surprising if
languages with so few basic words in common were mutually intelligible.
Blackwood possibly observed what might be called dual-lingualism. In
this kind of language sharing, a person learns to understand his neigh-
bour's language and the neighbour learns to understand his. In such a
case, these neighbours can converse with each other, each speaking his
own language.[11]

Grace (1955) tentatively classified Oceanic languages into nineteen
separate groups. He put the languages of Bougainville Straits,
Bougainville, and Buka into a single group distinct from the Choiseul
languages and in the nearest part of Bismarck Archipelago.

Dyen (1965) attempted to classify more than 200 languages of the
Austronesian family by lexicostatistics,[12] but his sample from
Bougainville area was inadequate to relate Banoni or Mono to any other
language. Except for Saposa, his results for the northern area coincide
closely with Blackwood's implied subgroups.

```
Halia (Hanahan)
Halia (Lontes)
Petats
Solos (Sumoun)                              Buka
Saposa                                      Sub-Family  · · · · ·  ·
Teop                                                             ·A
                                                                 ·U
Teop (Rosiara)                                                   ·S
                                                                 ·T
Banoni · · · · · · · · · · · · · · · · · · · · · · · · · · · ·   ·R
                                                                 ·O
Mono · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·   ·N
                                                                 ·E
                                                                 ·S
                                                                 ·I
                                                                  A
                                                                 ·N
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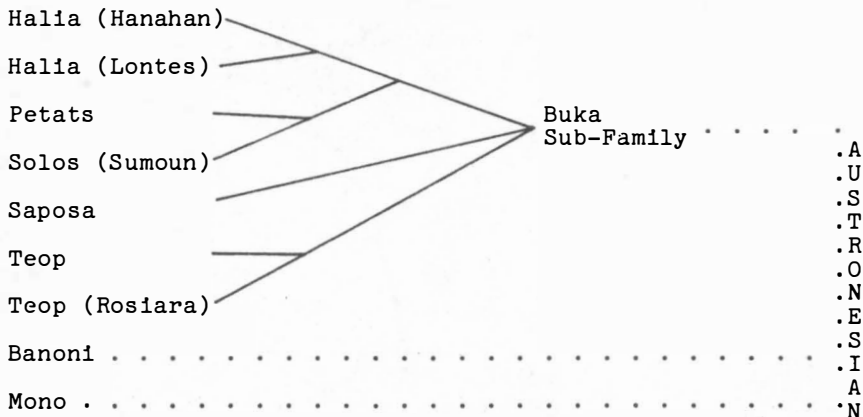
(after Dyen 1965)

Allen and Hurd (1965) classified all of the languages of Bougainville district on the basis of cognates shared on 170-item lists, which include the Swadesh 100 list and some cultural items.

Timputz Family: Teop, Hahon, Timputz

Petats Family: Halia, Solos, Petats, Saposa

Banoni Family: Banoni, Piva

Torau Family: Torau, Papapana, Uruava

Nehan and Polynesian Outliers are not grouped with any family. Their conclusions coincide closely with Blackwood's.[13]

If we ignore the distinction based on word-order, we find that Capell (1971) is in close agreement with earlier studies.[14] He groups Nehan with New Ireland languages. The rest would fit the subgroup inferred from Schnee (1901).

4.4.9.5. CURRENT RESEARCH

In this section I will present some tentative findings of my own investigation. In spite of limited data, I have considered other kinds of evidence than just lexicostatistics, namely lexical isoglosses, grammatical innovations and sound changes.

4.4.9.5.1. *LEXICOSTATISTICS*

I compared wordlists for fifteen languages, fourteen in Bougainville area and Nguna from the central New Hebrides.[15] Nguna is intended as a control. It is geographically remote and probably belongs to a different first-order subgroup of Oceanic.[16] Thus any clear subgroup revealed by cognate counting should show a considerably closer relation among its members than any member shows with Nguna. Each wordlist approximated the Swadesh 100-word list. *'Horn'* and *'live'* were omitted from all lists. Also missing from Nguna were *'breast'* and *'moon'*. The figures in the table are not percentages but the actual number of cognates found. Since all lists approximated 100, the counts also approximate percentages. Cognate decisions tended to be liberal. I accepted some irregularities that appeared to be the result of natural changes. The consonant correspondences that were interpreted as regular will be discussed later in this paper.

Lexicostatistics Count for Bougainville Austronesian

```
Nehan
 22  Solos
 22  59  Petats
 22  50  51  Halia
 20  20  19  21  Hahon
 20  20  17  25  61  Timputz
 22  28  25  33  51  58  Teop
 21  36  36  36  34  33  37  Saposa
 20  21  23  27  27  25  34  35  Papapana
 19  18  19  23  25  25  28  31  33  Uruava
 22  25  27  26  24  25  29  30  25  41  Torau
 23  25  26  26  19  22  21  26  21  28  40  Mono
 22  25  26  23  22  23  26  30  23  30  29  30  Piva
 21  26  24  22  22  20  25  30  22  25  26  25  61  Banoni
 21  16  17  18  20  19  19  20  18  23  24  22  18  19  Nguna
```

(Diagonal group labels: Buka, North, East, West)

To interpret the results, first notice that the Nguna reference line indicates that agreements lower than 25 do not reflect particularly close relationship. This leads to the conclusion that Nehan is not particularly close to any Bougainville language.

Allen and Hurd's figures for Nehan (to the north-west of Buka) are in close agreement with mine, except: Nehan-Petats 28%, and Nehan-Halia 27%. In the light of reported contact between Nehan and Buka (Blackwood 1935:380), these differences can be easily explained as borrowing.[17]

Beaumont (1972:11) compared some limited Nehan data with New Ireland languages and concluded there was no particularly close relationship hhere either. Looking at data in Capell (1971:256-9) suggests this same conclusion.

Thus, we may conclude that Nehan has had a prolonged history of isolation. The rest of the languages are spoken in a visually contiguous area in the sense that one may proceed from one language to the next without losing sight of land. Nonetheless, the cognate counts are not sufficiently high to force the conclusion that all of these languages share a period of common history independent of all other groups. On the other hand, this conclusion is not excluded by the cognate counts. As we have seen, linking of these languages with Nehan and probably the rest of New Ireland area is not very strong.

The next logical place to look for related languages is Choiseul, visible to the south-east from Bougainville. Capell (1968) found that Choiseul languages form a closed subgroup. They show relatively high

cognate percentages among themselves and quite low percentages with other languages. In particular he found that comparisons with Mono-Alu ranged from 6% to 13% (Capell 1968:15). I have not done any calculations comparing Bougainville lists with his Western Solomons lists, partly because none of these lists looked very similar to any Bougainville list.

Hooley (1971) included Halia among his Morobe area comparisons. His results indicate that there is no close relation of any Bougainville language with any language of the northern New Guinea-western New Britain area.

It now appears that the languages from Buka to Mono may have been isolated from other Oceanic groups for most if not all of the five or so millenia since the dispersal of Proto-Oceanic.[18] Proceeding from this very tentative hypothesis, we can ask about the degree of isolation between languages within the Buka-to-Mono area.

The cognate counts show some rather close relationships:

  Buka: Solos, Petats, Halia
  North: Hahon, Timputz, Teop
  West: Banoni, Piva
  East: Uruava, Torau, Mono

The East group is only weakly supported. Torau-Uruava (41), and Mono-Torau (40) connections appear to be significantly higher than Uruava-Mono (28). It would make slightly more sense, if the Torau were geographically between the other two, instead of north of Uruava. In fact, other evidence that it was spoken in the south-east corner of Bougainville was amassed by Terrell and Irwin (1972).

In order to make sense of the rest of the table, I propose a network diagram. I have placed these groups in their approximate geographical positions[19] and drawn lines connecting language pairs that share between 30 and 40 cognates.

Saposa shows inexplicably high lexical agreement with all other groups. On this basis we can say that there is a Bougainville group. However, this is only weakly defined because of some very low counts within the group. For example, Uruava shows a closer relation to Nguna (23) than to Solos (19) and Petats (19). Similarly, a group uniting the North and Buka groups with Saposa is suggested by the uniform, moderate relation to Saposa. Again such a grouping is weakly defined because we find only one line directly connecting Buka with the North group. Some of the other relations are quite low indeed, e.g. Petats-Timputz (17).

Let us now turn to other kinds of evidence to test these subgrouping hypotheses.

NETWORK DIAGRAM
BOUGAINVILLE SUBGROUP
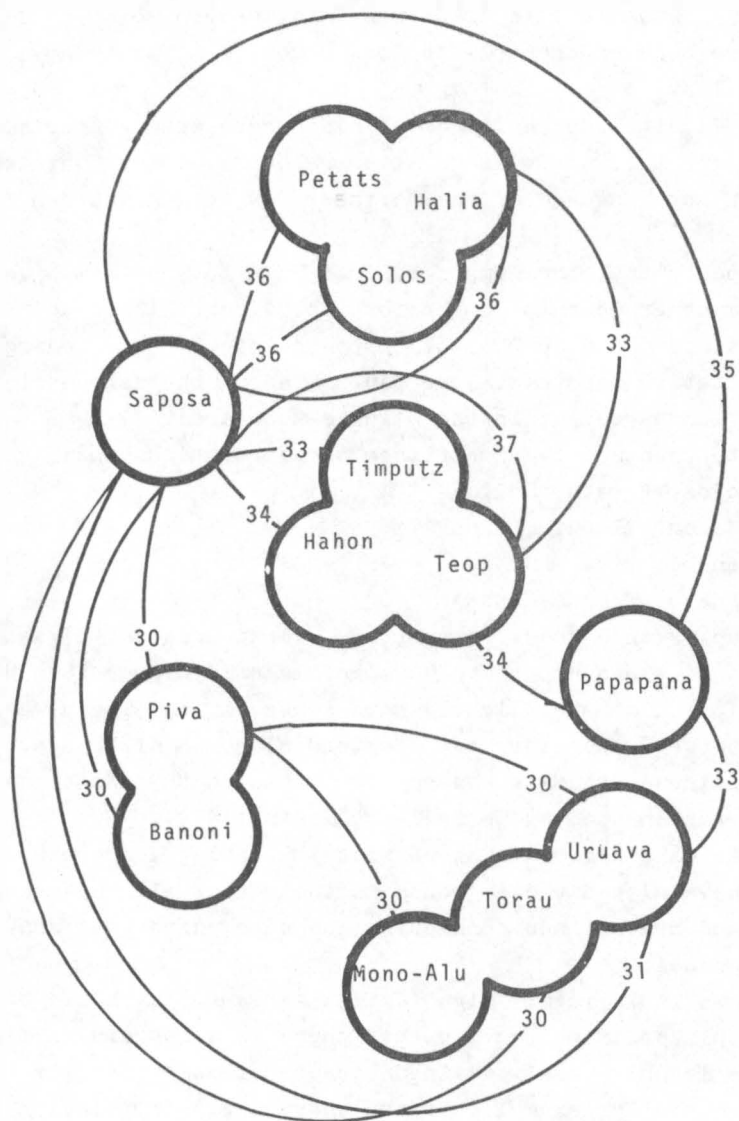
Languages sharing more than 40 words in the lexicostatistical count
are represented by overlapping circles. Languages sharing from 30 to
40 cognates are joined by a line on which the exact number has been
written.

4.4.9.5.2. *LEXICAL INNOVATIONS*

The most widely shared items are familiar Austronesian or Oceanic
retentions. In approximate possible Proto-Bougainville form they are:
*ma(i) *hither*, *mate *die*, *taliŋa *ear*, *mata *eye*, *boŋi *night*, *ikana
fish (all except Banoni), *mea *tongue* (all except Uruava), *pulu *hair*
(all except Mono). All but Banoni and Piva share *atea *know*, possibly
related to *ate *liver* (Capell 1968:22).

I have found no lexical innovations that support the Bougainville
subgroup. *atunu *kill/strike* nearly qualifies: Teop [ʔasun], Halia
[atuŋ], Banoni [tsunu], Piva [atsunu], Torau [atunu], Uruava [atunu].
But it is found outside the subgroup: Nehan [uiliataŋpo]; even more
damaging outside the area, in Papua: Motu [heatu], Roro [ahu], Doura
[aku], and Kuni [aku].[20] Some other words look promising but are not
shared widely enough. For example, the Banoni subject pronoun /no/
thou appears to derive from an earlier innovative form *alo which is
clearly reflected in Solos /eno/, Petats /elo/, Halia /alo/, Uruava
/aro/, and possibly some other forms like Papapana /anioi/. However,
Piva, in other ways most like Banoni, retains /aɣoi/ *thou*.[21] The
innovative form is also found outside the subgroup on nearby Choiseul:
Varese /aro/ *thou*.

Similarly, an innovative word for *three* is shared by Solos /huapis/,
Petats /hopis/, Halia /topisa/, Saposa /fopis/, Torau /episa/, Mono
/episa/, Piva /topisa/, and Banoni /dapisa/. Teop /kukan/, Timputz
/kukon/, Hahon /kukana/ might be a further innovation. But Uruava
/toru/ and Papapana /tau tonu/ are retentions of POC *tolu. Again
certain Choiseul languages share the innovation. Tavula /kapösa/,
Varese /pisa/, Ririo /pisa/, Kuboro /pösa/.

4.4.9.5.3. *GRAMMATICAL COMPARISON*

More and better descriptions of these languages are needed before
grammatical comparisons show more than interesting directions to in-
vestigate.

In Halia, non-past tense marking includes what look like possessive
suffixes that agree in person and number with the subject.[22] Petats
appears to have a similar system.

alia	e	la-g	
I	*non-past*	*go-I*	*I (will) go* (Allen 1971:65)

elia	a	la nauk	
I		*go*	*I am going* (Capell 1971:277)

Torau, Uruava, and Mono share an interesting device to express con-
tinuing present tense, which is more clearly related to the possessives

than the Buka system. The following data are from Rausch (1912) and
Boch (n.d.).

     Uruava   [purapura ia emu] *thou art making it*
     Torau   [aaloa   ai sau] *thou art making it*
     Mono-Alu [babaeni   saŋ] *thou art asking for it*

In Uruava the full verb stem is reduplicated. In Torau and Mono-Alu
only the first syllable is reduplicated. In each case the separable
possessive form follows.[23] But compare the following:

     Uruava [o purai] *thou made it*   [ko purai] *thou will make it*
     Torau [mu aloa] *thou made it*   [ba aloa] *thou will make it*
     Mono   [oi baene] *thou asked for it* [ona baeni] *thou will ask*

The other tenses are not so similar. Fragmentary data from other
languages indicate substantial differences in the tense and aspect
marking within other groups as well. Thus verb markers will not be of
much use to evaluate subgrouping hypotheses, but the study of inter-
action of possession and subject markers would be interesting for other
reasons. I might add that Banoni and Piva do not have anything that is
conspicuously like either Halia or Mono-Alu present tense, but more
subtle similarities may be found.[24]

4.4.9.5.4. *SOUND CORRESPONDENCES*

In the table of sound correspondences, multiple reflexes are listed
in approximate order of frequency. Ø represents loss of the consonant.
The data are insufficient for detailed discussion, but some clarifi-
cation is possible.

Some Proto-Oceanic phonemes played a minor role in comparisons, but
I will try to interpret what expected results are.[25]

*p   multiple reflexes; probable vowel conditioning. For example, in
      Banoni /β/ and /γ/ merge before back vowels. [$^{β}_{γ}$om] *turtle* :
      *poñu.

*p   occasionally lost before high vowel. [dzai] *fire* : *api.

*mp   little change.

*m   retained. Unexplained: Solos [bora] *fat* : *mona(k).

*t   retained before non-high vowels.

*t   before high vowels, various stages of t : ts : s : Ø are reflected.

*s and *ns probably merged in all cases. Interesting problems arise
      with Papapana [tanana] *road* : *njala(n) or *sala(n), and Mono
      [lulu] *breast* : *susu.

Consonant Correspondences Tentatively Accepted as a Basis for Lexicostatistics

POC	*p	*mp	*m	*t (o)(a)(e)	*t(u)	*t(i)	*s	*l	*R	*r	*n	*k	*ŋ
Nehan	w,Ø	b	m	t	t	ts	s,h	l	r,Ø	--	n	Ø,k	ŋ
Solos	h,Ø	b	m,b	t	t	t	s	n	n	n	n,r	Ø,k	ŋ
Petats	h	b	m	t	t	ts	s	l	l	l	n,r	Ø,k	ŋ
Halia	h	b	m	t	t	ts	s	l	l	l	n,l	Ø,k	ŋ
Hahon	β,Ø	b	m	t	ts	ts	s	n	n	--	n	Ø,k	n
Timputz	β,Ø	b	m	t	s	s	h	n,l	n	--	n	Ø,k	n
Teop	f	v	m	t	t,ts	Ø	s	n	n,r	n	n	Ø,k	ŋ,n
Papapana	β	b	m	t	t	t	t,Ø,s	n	r,n	n	n	Ø,k	ŋ,n
Uruava	β	b	m	t	t	s	Ø,s	r	r	r	n	Ø,k	n
Torau	β,b,Ø	b	m	t	t,Ø	Ø	s	n,l,r	r,Ø	r	l	Ø,k	n
Mono	f	b	m	t	t	t	Ø,s,l	n,Ø,l	n,l,Ø	l	n	Ø,k	Ø
Piva	β	b	m	t	ts	ts	s	n(r)	n	n(r)	n	Ø,k	ŋ
Banoni	p,β,Ø	b	m	t	ts	ts	s	n,r	r,n	n(r)	n	Ø,k	ŋ

*l, *R, and *r show some complex developments. More accurate phonemic
     statements are needed to resolve the problems. Halia has /r/
     versus /l/ distinction (Allen 1971). Teop does not (Carter 1952).
     Banoni, Piva, and Uruava do not (Lincoln, field notes). Data
     that I have seen for Torau and Mono-Alu suggest that /r/ and /l/
     are distinct but [l] and [n] may be members of the same phoneme.
     Hahon, Timputz, Teop, Saposa, Torau, and Mono-Alu have lost /l/
     in *tali *a* but only in Mono-Alu does this appear to be regular.
     Compare Mono [aiti] *rain* : *laŋit.

*n   cases of change to [l] or [r] are not yet clear.

*k   has double reflexes common to many Oceanic languages.[26]

*ŋ   is retained in Banoni, Piva, Halia, Solos, Petats, and Nehan.
     Sometimes Saposa and Papapana also.

*ŋ   becomes [n] in Teop, Timputz, Hahon, Uruava, Torau, and in some
     cases Saposa and Papapana.

*ŋ   is regularly lost in Mono-Alu.

*ñ   is possibly retained in Saposa, merged with *n otherwise.[27]

*ŋk is a likely source for [g] occurring in all languages but good
     evidence is lacking.

*q   appears to be generally lost.

*nt is without clear evidence.

*ŋm (or *mw) probably merged with *m.

*ŋp (or *pw) probably merged with *p.

*w and *y are not clearly attested.

Vowels have not been adequately investigated. The following corres-
pondences will probably be supported.

*a : [a], [e]; *e : [e], [i]; *i : [i], [u]; *u : [u], [i]; *o : [o],
     [u].

Vowel length is probably phonemic in all Bougainville languages, but
phonetic data are unreliable at this point.

     The only consonant correspondence set that shows much promise as the
basis of subgrouping is *ŋ. However, the pattern of development is not
very helpful. The loss of *ŋ in Mono-Alu suggests that this language
has been isolated from all others for some time. Torau and Uruava share
an innovative change of *ŋ to [n] with the North group but so far other
evidence does not support subgrouping these languages together.[28]

Papapana and Saposa both have syllable initial [ŋ] in their inventories
but it cannot always be traced to *ŋ; and *ŋ is reflected by a different
nasal in some cases: Saposa [ŋwɛr], Papapana [ŋuru] *mouth* ?: *ŋusu,
*ŋutu; Saposa [voiñ],[29] Papapana [i boni] *night* : *mpoŋi.

In short, then, sound correspondences reveal some developments that
are fascinating in their own right but of little or no value in sub-
grouping.

4.4.9.6.   CONCLUSIONS

My investigations are the first to try to find subgroups among all
the Austronesian languages of the Bougainville district and including
Mono-Alu.   The task was simplified somewhat because the Polynesian lan-
guages of Nukuria, Takuu, and Nukumanu had already been studied suffi-
ciently to conclude that they formed a subgroup with Samoa and other
Polynesian Outlier communities.   This subgroup is clearly distinct from
any others in the district.

The rest of the languages were investigated, as data would permit,
from several points of view.   Lexicostatistics made it clear that Nehan
probably had little shared history with the rest of the district.   Also
previous suggestions that Halia, Petats, and Solos form a Buka subgroup
were confirmed·.   Similarly the north Bougainville subgroup of Hahon,
Timputz, and Teop was confirmed.   The possibility of these two sub-
groups forming a single subgroup including Saposa as the third member
remains open, because Saposa shows similarity to all Bougainville lan-
guage groups.   A total Bougainville subgroup is also weakly supported
by the same evidence.   Piva and Banoni were shown to be closely related.
Mono-Alu, Torau, and Uruava were shown to form a subgroup also,[30] but
it is not yet clear whether this group should also include Papapana,
and Piva and Banoni as well.   If so, why not the northern languages
also?

Lexical innovations that would support any of these larger sub-
groupings have not been found.

The consonant correspondences do not clearly define any subgroups.
The most promising was the development of *ŋ which almost defines an
east coast group where *ŋ : /n/ but Saposa and Papapana were unclear.
Also, the loss of *ŋ in Mono contradicted and thereby weakened other
evidence for subgrouping it.

Preliminary search for shared grammatical innovations highlighted
the shortage of descriptive grammars.   On the positive side, Mono-Alu,
Torau, and Uruava were shown to share a complicated, innovative device
to express continuing action: namely, reduplication of verb stem

followed by possessive marking. The possibility of borrowing is quite
high because this device is shared in detail while other tense markers
are quite different. Also, other evidence for grouping these languages
together is not good enough to make the agreement quite plausible.
However, Halia subject marking in non-past tense opens the possibility
that there may be a much earlier shared innovation that is highly de-
veloped in Uruava, less so in Halia and lost in other areas.

The network diagram quite accurately exhibits what is now known about
groupings of Bougainville languages. Explicit in the choice of such a
display is that information is inadequate for the most decisive tree
diagram. Implicit in the choice is that possibly tree diagrams are
inappropriate.

My remarks have been quite tentative, but this should be taken
positively. My investigation is continuing, and other researchers are
joining in the effort. It is hoped that some Bougainvilleans may be
among those who become interested in the problems I have discussed.

N O T E S

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2. Irwin Howard, personal communication.

3. See Pawley (1967), Biggs (1971), Elbert (1965), Bayard (1966).

4. See 4.2.10.

5. I am following the tradition of Dempwolff, Milke, Grace, and others in using the term Oceanic. For characteristics of the group see Milke (1961) and Grace (1964). For discussion of a specific case, Nehan, see Dempwolff's notes accompanying Mayr (1930-31).

6. See Pawley and Green (1973) for details of this time estimate and other interesting observations.

7. Oliver (1949:10) has exaggerated Ray's comments rather than qualifying them.

8. I interpret "All these dialects..." to mean Buka + Saposa, as does Oliver (1949:10).

9. Leo Hannet, personal communication.

10. For Dyen the highest was 24.5% (1965:35).

11.   I have observed such interactions between Banoni speakers and
Siwai (non-Austronesian) speakers.   Evelyn Todd (personal communication)
observed this kind of interaction on Savo Island, British Solomon
Islands.   I am indebted to her for sensitising me to the possible im-
portance of dual-lingualism discussed further in Lincoln (1976).

12.   Using a 196-word approximation to the Swadesh 200.

13.   They comment that Saposa was exactly intermediate between their
Timputz and Petats Families.   They arbitrarily put it with Petats.

14.   Papapana, which is not specifically discussed by Capell, gives us
grounds for abandoning the AN1 (SVO) and AN2 (SOV) distinction, at least
in this case.   The eleven transitive sentences in Papapana collected by
Allen and Hurd in their survey divide as evenly as possible between
SVO and SOV.

15.   The Uruava list is from my own field notes.   The Nguna list is
from data collected by A.J. Schütz.   The Mono list is from the TRIPP
(Tri-Institutional Pacific Project) list filled in by Elija Hoala.
The other lists are taken from the 190 Summer Institute of Linguistics
survey lists collected by Jerry Allen and Conrad Hurd.   The Summer
Institute of Linguistics New Guinea Branch generously allowed me to
copy those lists.   Examples quoted in this paper come from these sources
unless otherwise noted.

16.   Pawley (1972) discussed Nguna as a member of his Eastern Oceanic
Subgroup.   That subgroup is probably valid, and is not likely to include
any Bougainville language.

17.   Recall that Allen and Hurd included cultural items.

18.   See Note 6.

19.   See Map 2 accompanying this chapter.

20.   cf. Pawley and Dutton (1977).   I am indebted to the author for
pointing out these cognates to me.

21.   cf. Roviana /aɣoi/ *thou*.

22.   Possessives are of slightly different form (see Capell 1971:276).

23.   Mono-Alu has two such words: [eŋ] *thy* (food, pain, smokes, etc.) and [saŋ] *thy* (with other objects).

24.   I have in mind the following facts about Banoni.
(1) The possessor in a verbal construction is marked by object suffix. /ke podeγo buγawa/ *Hast thou betel nut?*, where /buγawa/ *betel nut*, /ke/ 'third singular perfect/stative', /-iγo/ 'second singular object', /podo/ *have/belong*.
(2) The possessor in one type of nominal construction is marked by normal Oceanic possessive system. /γem buγawa/ *they betel nut* directly relatable to Proto-Oceanic *ke-mu mpua *edible-thy fruit*.
(3) The possessor in nominal construction may be marked by subject-like pronoun. /buγawa minno/ *betel nut, thy*. The final syllable may be the same as /no/ *thou* in /ko mana wai no/ *you gave it to me*, where /ko/ 'second singular perfect/stative', /mana/ *give*, /wai/ *to me*, /no/ *thou*.
    These facts have yet to yield to any coherent explanation. In the /minno/ construction, it appears that subject marker has become a possessive marker, the exact reverse of the Buka development.

25.   Proto-Oceanic forms from Grace (1969), ':' means 'corresponds to'.

26.   cf. Lincoln (1973), and Pawley and Dutton (1976).

27.   See Blust 1972:3 for evidence for Proto-Oceanic *ñ.

28.   Caution: [ŋ] in Rausch (1912) is probably a misprint for [g]. See Lincoln 4.2.10.4.14.

29.   The [ñ] in Saposa is not easy to explain. It is possibly an allophone of /ŋ/. The development of *ñ is not clear either. All of these problems converge into the single Saposa form [te^i nania] *ear-his* clearly from *taliŋa-ña, but with irregular developments, either *l : Ø and *ŋ : n or *ŋ : Ø and *l : n, of near equal probability.

30.   This study is the first clear demonstration of such a subgroup. Thurnwald and Frizzi hinted at something like this but in a misleading way (see 4.2.10.3.). Schnee was clearer, but included perhaps too much.

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4.4.10. AUSTRONESIAN LANGUAGES: MILNE BAY AND ADJACENT ISLANDS (MILNE BAY PROVINCE)

David R. Lithgow

In this chapter, only the main portions have been marked in accordance with the reference system employed in other chapters of this and the other two volumes of *New Guinea Area Languages and Language Study*. Otherwise, a system of consecutive numbering of sections has been employed by the author.

LIST OF ABBREVIATIONS

AN	Austronesian
PTC	Papuan Tip Cluster
1st	first person
2nd	second person
3rd	third person
∅	zero morpheme
sg.	singular number
pl.	plural number
du.	dual number
excl.	exclusive
incl.	inclusive
cont.	continuous
subj.	subject
obj.	object
lg.	language
caus.	causative
loc.	locative
neg.	negative
.	a full stop between words or symbols means that together they are equivalent to one morpheme of the vernacular text. For example: i-séke-s *he-gives.to-them*
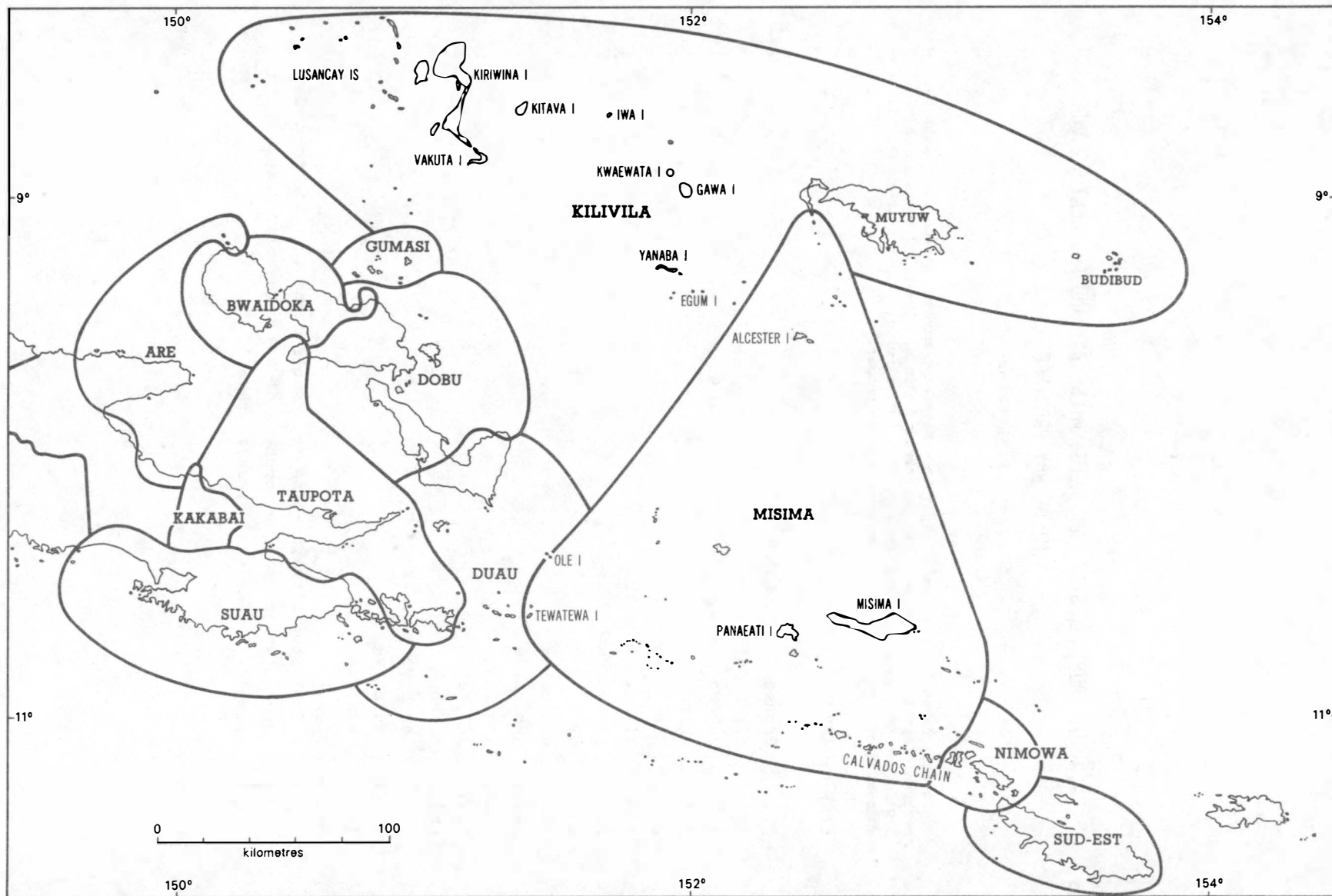
MAP 1: AUSTRONESIAN LANGUAGE FAMILIES OF MILNE BAY AND ADJACENT AREAS
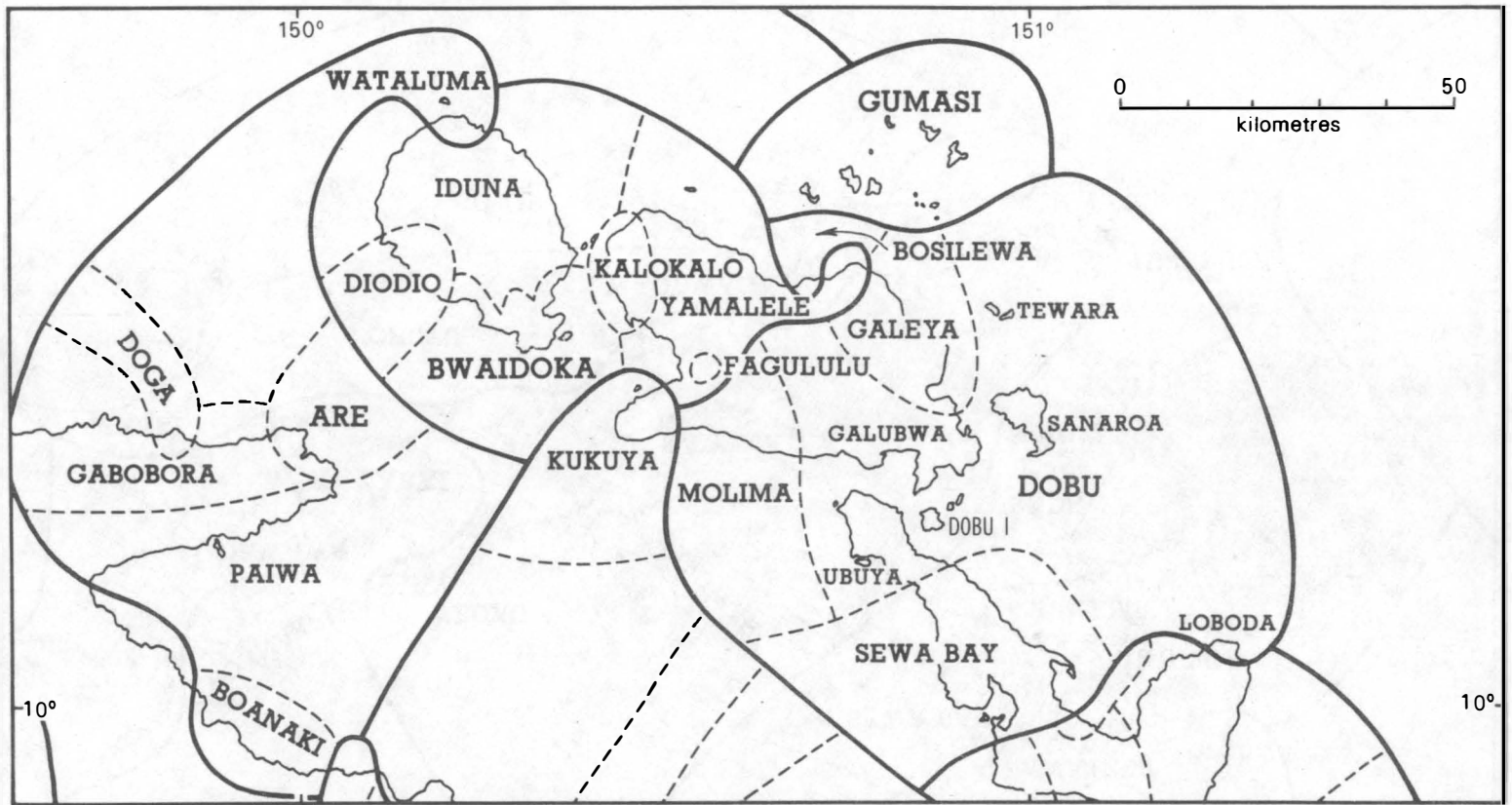
MAP 2: ARE-BWAIDOKA-GUMASI-DOBU AREA
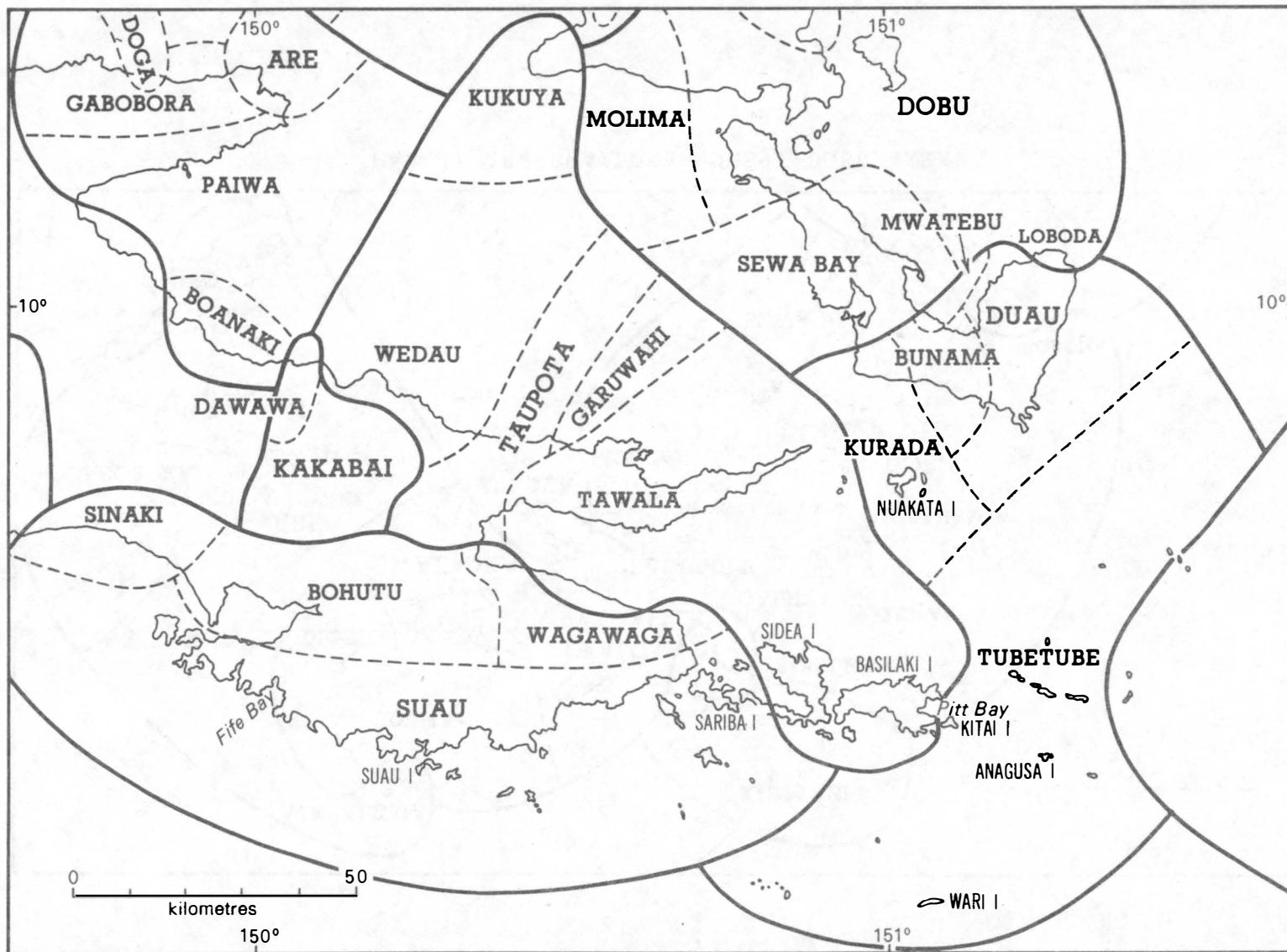
MAP 3: KAKABAI-TAUPOTA-SUAU-DUAU-AREA
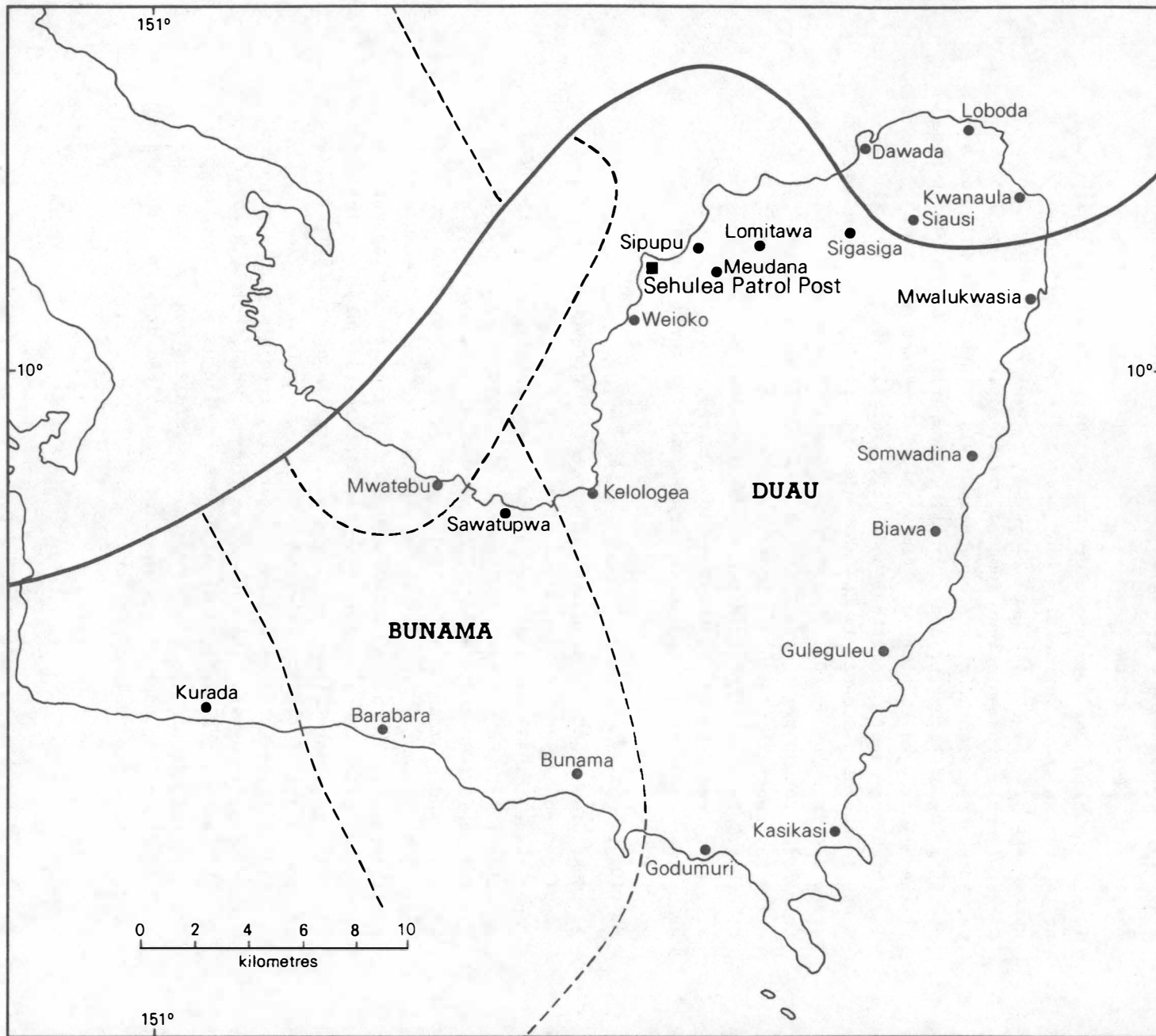
MAP 4 : BUNAMA—DUAU LANGUAGE AREA

4.4.10.1. LANGUAGES AND DIALECTS

4.4.10.1.1. *INTRODUCTION*

1.   In the Milne Bay Province there are 40 Austronesian languages plus at least eight non-Austronesian languages. The non-Austronesian languages are Rossel, and the Daga languages west of Wedau, which include Kanasi (Sona), Ginuman, Gvede (Gweda), Daga, Mapena, Maiwa and Jimajima. The 40 Austronesian languages have been divided into 12 families on a basis of cognate counting and grammatical comparison. Dyen groups some of these languages together as "Tip Cluster" or "Massim Cluster". There is a high degree of grammatical and lexical similarity between all of these languages. Sud-Est is the most dissimilar. Austronesian languages elsewhere in Papua New Guinea are significantly dissimilar. I have therefore grouped together all of the Austronesian languages of the Milne Bay Province, including Sud-Est, under the name of "Papuan Tip Cluster". In this chapter, Milne Bay Province Austronesian languages will be referred to as PTC (Papuan Tip Cluster), which is a smaller group than Capell's SEP (South-Eastern Papua).

4.4.10.1.2. *SOURCES*

2.   Most of the data in this article comes from personal research, supplemented by Capell's *The Linguistic Position of South-Eastern Papua* (Capell 1943) and A *Survey of New Guinea Languages* (Capell 1969), Arnold's (1931) Dobu Grammar, Dixon's (1970) Dobu Dictionary, Williams' (1962) Tawala (Keherara) Grammar, Cooper's (1970) Suau texts, survey wordlists and grammar data from colleagues of the Summer Institute of Linguistics (S.I.L.), and Huckett's (1974) and J. and M. Beaumont's publications on Iduna and Yamalele. Grammatical data were also supplied by Andrew Taylor (Motu language), Peter Lincoln (Banoni, Bougainville), and Clive Beaumont (Tigak, New Ireland). Assistance from all of these sources is gratefully acknowledged.

   Chart 1 lists 50 words of the Swadesh list from a major language of each family, along with the same words for the Motu, Maleu, Nakanai, Kuanua, Lavongai, Nukaria, Gedaged, and Buang languages. The Summer Institute of Linguistics New Guinea Survey wordlist was used for cognate counting, together with a sheet of grammatical data for grammatical comparison, which reads as follows:

He gives me.

He gives you.

He gives him/her.

He gives us (incl.).

He gives us (excl.).

He gives you (pl.).

He gives them.

They give me.

I (free-form pronoun) sit.

You (free-form pronoun) sit.

He (free-form pronoun) sits.

We (incl.) (free-form pronoun) sit.

We (excl.) (free-form pronoun) sit.

You (pl.) (free-form pronoun) sit.

They (free-form pronoun) sit.

His older brother.

His older brothers.

His younger brother (if different).

His sister.

His sisters.

Her brother (if different).

He is with his brother.

He is with his brothers.

Here.

There.

He is going.

Tomorrow he will go.

His food.

His house.

His wife.

Her husband (if different).

His hand.

My hand.

My child.

My children.

I used a more detailed list to study possession classes in the
Misima, Muyuw, Kilivila, Diodio, Bwaidoka, Kalokalo, Yamalele, Kukuya,
Tawala, Bohutu, Suau, Tubetube, Duau, Sewa Bay, Dobu, Molima, Galeya,
Mwatebu and Kurada languages.

3. RESULTS

On the basis of these data I carried out my analysis of languages
and families. I had read Capell's (1943, 1969) and Dyen's (1965)
articles and analysis of this linguistic area, a number of years pre-
viously. I then re-read their articles and compared their findings
with mine. Dyen's data came from only five languages in this area, so
there is little to compare. Capell's language divisions differ sig-
nificantly from mine, but the division into families is reasonably
similar.

I have modified the analysis of the languages of the D'Entrecasteaux
Islands made by Staalsen and myself in 1965. At that time we did not
do cognate counts between all of the languages, and in parts of the
analysis we worked independently. Our criteria for determining cognates
were evidently not uniform. We found significant dialect changes from
village to village, and may not have always used the same list as the
central dialect of a particular language. Our work was thorough in that
we got lists from every major village in the area. However, on re-
working the cognate counts according to the criteria I am using for the
whole of the Milne Bay Province, I obtained somewhat different results.
The results for Duau are significantly different because I decided to
use the Guleguleu list as the central dialect, rather than Sigasiga.
Three language boundaries were affected by my revision of cognate counts.
Maiodom is a dialect of the Yamalele language (84% cognate), and Loboda
is a dialect of the Dobu language (80% cognate). Because the south-
western dialect group of Duau has such a low cognate count with the rest
of the language, I have separated it off as the Bunama language. Lan-
guage families are shown on Map 1. Individual languages are shown on
Map 2 and Map 3. The dialects of Duau and Bunama languages are shown
on Map 4.

4.4.10.1.3. *LANGUAGES AND FAMILIES*

4. Below are listed the language families and languages with their
approximate populations. There are 12 families and 40 languages.

FAMILY	LANGUAGE	POPULATION
SUD-EST	Sud-Est (Tagula)	1,700
NIMOWA	Nimowa (Nimoa)	1,100
MISIMA	Misima (Panayati)	7,200
KILIVILA	Budibud (Nada)	170
	Muyuw (Murua)	3,000
	Kilivila (Kiriwina)	14,000

FAMILY	LANGUAGE	POPULATION
GUMASI	Gumasi (Domdom)	250
BWAIDOKA	Iduna (Vivigani)	4,960
	Diodio	1,170
	Bwaidoka (Bwaidoga)	5,380
	Kalokalo	725
	Yamalele (Iamalele)	2,560
	Fagululu	416
ARE	Doga (Magabara)	200
	Gabobora (Anuki)	500
	Are (Mukawa)	1,100
	Paiwa (Manape)	1,600
	Boanaki (Galavi)	1,700
	Wataluma (Watuluma)	190
TAUPOTA	Wedau	2,180
	Kukuya	1,230
	Taupota	2,660
	Garuwahi	225
	Tawala (Tavara)	7,990
KAKABAI	Kakabai (Igora)	880
	Dawawa (Mia-i-topa)	1,640
SUAU	Sinaki (Gadaisu)	325
	Bohutu (Buhutu)	1,065
	Wagawaga	1,020
	Suau	6,470
DUAU	Tubetube	1,190
	Duau (Duwau)	6,050
	Bunama	1,050
	Kurada (Nuakata)	935
	Mwatebu	166
DOBU	Sewa Bay	1,515
	Dobu	7,680
	Molima (Morima)	2,770
	Galeya (Galea)	1,875
	Bosilewa	350

5. COGNATE RELATIONSHIP BETWEEN FAMILIES

Percentages of shared cognates between families are determined from the languages listed below:

	Nimowa	Muyuw	Misima	Gumasi	Bwaidoka	Are	Taupota	Kakabai	Suau	Duau	Dobu
Sud-Est	44	22	27	22	20	15	17	17	11	17	22
Nimowa		18	33	15	25	16	17	16	18	20	17
Muyuw			31	38	36	29	22	25	27	29	32
Misima				24	31	23	25	20	20	29	33
Gumasi					37	26	27	29	28	42	47
Bwaidoka						34	38	36	31	40	42
Are							40	29	31	30	31
Taupota								41	38	34	30
Kakabai									30	29	40
Suau										41	42
Duau											54

6. WIDER COMPARISON

A comparison was made with some other Austronesian languages in Papua New Guinea, and cognate counts determined. These were languages from the Central Province (Motu), Morobe Province (Buang), Madang Province (Gedaged), West New Britain (Maleu), Central New Britain (Nakanai), East New Britain (Kuanua), New Ireland (Lavongai), and the Polynesian language of Nukaria to the north of New Ireland. Cognate counts with these languages are as follows:

	Motu	Maleu	Nakanai	Kuanua	Lavongai	Nukaria	Gedaged	Buang
Sud-Est	14	10	16	16	21	9	12	5
Nimowa	15	11	19	15	16	8	12	6
Muyuw	20	18	24	24	28	17	20	11
Misima	18	19	19	17	16	10	21	18
Gumasi	24	18	22	22	19	21	14	9
Bwaidoka	21	21	29	27	20	16	21	10
Are	27	20	24	16	15	13	24	11
Taupota	20	21	25	21	16	15	16	12
Kakabai	18	16	24	22	21	15	14	9
Suau	25	15	24	17	16	16	18	6
Duau	22	16	22	14	19	17	18	7
Dobu	26	17	23	20	16	20	19	12
Motu		18	24	18	19	19	18	9
Maleu			11	15	14	14	19	16
Nakanai				20	33	15	18	12
Kuanua					30	22	13	14
Lavongai						17	20	11
Nukaria							17	6
Gedaged								9

In 1966 I recorded 38% cognates between Nukaria and Muyuw. Possibly
I was counting as cognate any Nukaria word which was similar to a Muyuw
word which I knew. In a strict comparison of the two wordlists I can
now find only 20% possible cognates, and only 17% when employing the
criteria used in this survey.

7. LANGUAGE BOUNDARIES AND DIALECTS

8. The Sud-Est language is spoken on Piron and Sud-Est Islands, except
for Western Point in Sud-Est, which is a dialect of Nimowa. Cognate
relationships of dialects, according to the Hendersons' survey report,
are as follows:
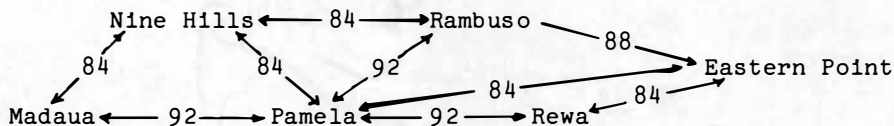
9.   The Nimowa language includes Western Point in Sud-Est, and the islands of Nimowa, Panatinani, Sabari and Panawina. The dialects are widely divergent. According to Lithgow and the Hendersons' wordlists the cognate relationships are:

```
        Sabari
          ↑  ←──── 77 ────┐
          92              ↘
          ↓         Nimowa ←──── 75 ────→ Western Point
        Panawina ←── 76 ──↗
```
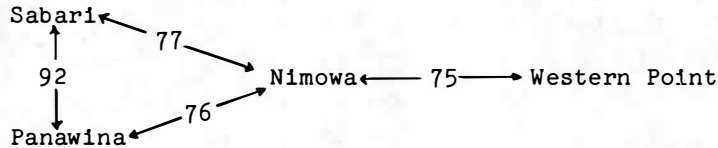
10.   The Misima language includes all of the other islands of the Calvados Chain (i.e. those west of Panawina) plus Kimuta, Misima, Panayati, Alcester, Bowagis at the western tip of Woodlark Island, and two islands in the Engineer Group, Ole and Tewatewa. Cognate relationships of dialects, according to the Hendersons, are as follows:

```
                                         ┌──→ Panayati
  Alcester, Bowagis, ⎫         ┌─ 93 ──┘
  Ole, Tewatewa      ⎬ ← 84 ──→ Misima ←
                     ⎭         └─ 92 ──┐
                                        └──→ Calvados Chain
```
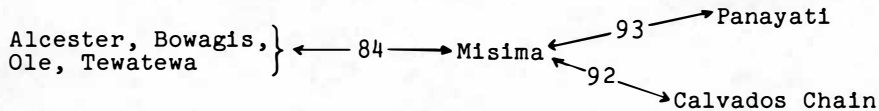
11.   The Budibud language is spoken only on the Laughlan Islands.

12.   The Muyuw language is spoken on Woodlark Island, and the Marshall Bennett Islands including Kitava. It consists of a dialect chain from east to west which becomes progressively more similar to the Kilivila language. The dialect names are Muyuw (eastern Woodlark), Wamwan (central Woodlark), Nawyem (western Woodlark), Lougwaw (Gawa, Kwaewata, Iwa, Yanaba), and Kitava (Kitava Island). Egum, near Yanaba, is almost identical with the Muyuw dialect. The dialect chain is illustrated by the cognate percentages in the following chart:

	Wamwan	Nawyem	Gawa	Iwa	Kitava	Kilivila
Muyuw	96	95	90	88	84	69
Wamwan		98	91	89	85	70
Nawyem			92	89	85	70
Gawa				98	93	78
Iwa					94	76
Kitava						79

Lougwaw and Kitava do not have the consonant clusters found in Muyuw. Their syllable pattern is similar to Kilivila, and it is easier for

them to learn Kilivila than Muyuw, even though they share a higher
cognate percentage with Muyuw.

13.   The Kilivila language includes Vakuta, Kiriwina and the Lusancay
Group.   There are a number of dialect divisions, but I have no concrete
data on them.

14.   Gumasi is spoken only on the Amphlett Islands.

15.   Iduna is spoken on Goodenough Island at Waibula, Ufaufa, Upper
Wataluma, Idakamenai, Kalemutabutabu, Vivigana, Wakonai, Ewele, Belebele,
Kalauna, and in two mountain villages in the Bwaidoka area, Ufufu and
Goiala.   Cognate relationships, according to Lithgow and Staalsen (1965)
are:

Waibula
↑
92
↓
Ufaufa
↑
90
↓
Idakamenai
↑
80
↓
Central Dialect (Vivigana, Wakonai, Kalimutabutabu, Ewele)

    75   80   78   76

Goiala ◄— 86 —► Ufufu ◄— 82 —► Kalauna ◄— 92 —► Belebele
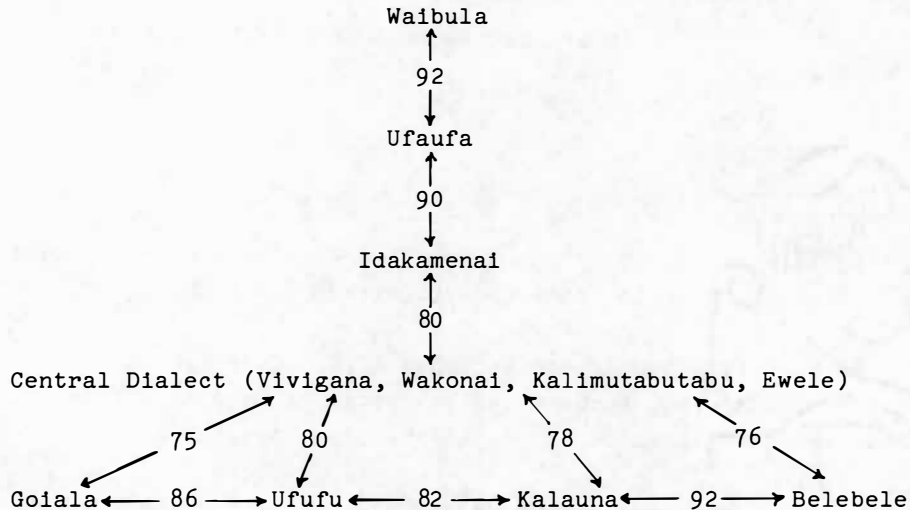
16.   Diodio on the west coast of Goodenough Island is spoken at Awale,
Molata, Diodio, Utalo and Yauyaula.   The central dialect, according to
Lithgow and Staalsen (1965), includes Molata and Diodio, with relation-
ships to the other dialects as follows:

	Awale	Utalo	Yauyaula
Central	85	85	84

17.   The Bwaidoka language is confined to the southern tip of Goodenough
Island, including Mataita on the eastern coast, to Lauwela and Kilia on
the western coast, and to Wagifa Island off the southern tip.   Dialect
relationships, according to Lithgow and Staalsen (1965), are as follows:

```
Lauwela ←——88——→ Kilia ←——90——→ Central ←——81——→ Mataita
                                     ↑
                                     98
                                     ↓
                                  Wagifa
```

18.   The Kalokalo language is spoken in the inhabited part of the wes-
tern tip of Fergusson Island.

19.   Yamalele is spoken in the Yamalele villages around Seymour Bay to
the south, and at Didigavu, Gwabegwabe, and Masimasi on the north coast
of Fergusson Island.   It is also spoken at Maiodom (Wadalei), where it
is separated from the rest of Yamalele by the Bosilewa language.
Lithgow and Staalsen (1965) had mistakenly listed Maiodom as a separate
language.   Revised cognate counts between the dialects are:

	Didigavu	Gwabegwabe	Masimasi	Maiodom
Yamalele	94	95	82	84
Didigavu		96	85	86
Gwabegwabe			81	82
Masimasi				78

20.   Fagululu is spoken in one main village and a cluster of hamlets
a few miles south of the Yamalele villages.

21.   The Doga language in the Rabaraba District is spoken at
Magavara, Divediveni, Karuasi and Boririte.   I have no dialect data on
this or the next three languages in the Cape Vogel area.

22.   Gabobora surrounds the Doga language, adjoining the Are language
in the east and Paiwa in the south.

23.   Are, at the tip of Cape Vogel, includes the Mukawa, Bogaboga,
Ginada, Irikaba, Rausewa, and Wabubu villages.

24.   Paiwa includes the coastal villages of Dabora, Banapa,
Poroyabarabara, Minapi, Kwanabu, Abuaro, Omara, Didiwa, Giwa,
Marewanaki, Kweabagira, and probably the inland villages of Wanaki,
Nirai, and Mapona.

25.   Boanaki is spoken on the coast from Uga to Vidia, with Boanaki as
the centre of the language.   There is a dialect variation of 75% between
Boanaki and Vidia.

26. Wataluma is spoken at only two small villages in the north of Goodenough Island, Wataluma and Budula.

27. Wedau is spoken on the coast from Wedau to Topura, and inland from Topura at Yapoa, with dialect variations, thus:

	Topura	Yapoa
Wedau	95	84
Topura		85

28. Kukuya is spoken on the peninsula of the south-west tip of Fergusson Island from Igwageta to Mapamoiwa. There are minor dialect variations from village to village.

29. Taupota is spoken on the mainland coast between the Wedau language and Garuwahi, and at the head of Milne Bay at Waiema, Laviam, Maiwala, Yanianini, and Naura. Below are listed the cognate percentages of the Taupota dialects and Rabe dialect of the Tawala language:

	Taupota	Waiema	Laviam	Maiwala	Naura	Tawala
Yanianini	92	83	68	80	73	82
Taupota		82	69	72	60	72
Waiema			73	68	58	67
Laviam				82	71	64
Maiwala					73	70
Naura						70

30. The Garuwahi language is spoken only at Garuwahi.

31. The Tawala language extends from Awaiama and Rabe through the whole of East Cape, on the south coast of Milne Bay from Daio to Maimowa, and is also located on Sidea and Basilaki Islands, except the south-west tip of Sidea and Pitt Bay on Basilaki. For dialect comparison, wordlists were used from Awaiama, East Cape, Divenai, Rabe, Gwavili, Sidea, Basilaki. The cognate percentages are as follows:

	East Cape	Divenai	Rabe	Gwavili	Sidea	Basilaki
Awaiama	78	81	80	80	79	74
East Cape		83	89	87	82	78
Divenai			92	79	82	70
Rabe				80	83	75
Gwavili					82	76
Sidea						91

32.   The Kakabai language is located entirely inland.   It includes Pova
(near Dogura), Kwabunaki, Gavi, Mainawa, and Kwaiowa.   Kwabunaki,
Mainawa, and Gavi comprise the Kakabai dialect.   The Kwaiowa area is
occupied by the Igora dialect.   The dialect relationships are as
follows:

	Kakabai	Igora
Pova	79	70
Kakabai		84

33.   The Dawawa language includes Manubada on the coast, and the inland
villages of Didia, Gadovisu, Kiwarai, and Wanama.   Manubada is 80% cog-
nate with the inland villages.   Both Dawawa and Kakabai languages are
31% cognate with Wedau.

34.   The Sinaki language on the south coast of Papua includes the
Gadaisu, Laimodo, and Suwayabina villages.

35.   The Bohutu language is spoken in the villages of the Sagarai
valley.

36.   Wagawaga is spoken on the south-western shore of Milne Bay at
Kilakilana, Gamadoudou, and Wagawaga, inland from Dawadawa at Bwadabwada
and Wagagatu, and on the eastern tip of the mainland at Kanakope,
Noabune, and Simagahi.   It is probable that this language is spoken at
other inland villages, notably Goilawalika and Leiplai inland from
Loani, where it is reported that the language is different from Suau.
The dialect relationships are as follows:

	Gamadoudou	Wagagatu	Noabune
Kilakilana	84	81	70
Gamadoudou		84	75
Wagagatu			85

37.   The Suau language is spoken on the remainder of the south-east tip
of Papua and on Sariba, Logea, Kwato, Bonalua, and Suau Islands.
Cooper (1970) has examined the variations in the Suau dialects in close
detail, and the picture is quite complex.   My wordlists give the fol-
lowing cognate percentages:

	Suau Is.	Sariba
Fife Bay	79	64
Suau Is.		78

38.   Tubetube is the language of the Engineer Islands, Wari, and Pitt Bay on Basilaki Island, which is called the Kitai dialect. Cognate relationships are:

Wari ←— 92 —→ Tubetube ←— 95 —→ Kitai

39.   Duau is the language of the eastern end of Normanby Island. It extends from Godumuri on the south coast right round to Kelologea on the north coast, except for the villages on the northern tip of the Duau Peninsula, Loboda, Kwanaula, Dawada, and Siausi. The dialect areas are shown on Map 4. Revised cognate counts are as follows:

	Kasikasi	Meudana	Kelologea	Sipupu	Lomitawa	Sigasiga	Biawa	Somwadina	Mwalakwasia
Guleguleu	76	66	55	62	72	67	80	74	73
Kasikasi		71	70	76	74	65	76	72	74
Meudana			78	86	79	66	71	59	62
Kelologea				79	67	52	55	58	59
Sipupu					80	69	84	62	64
Lomitawa						78	76	73	74
Sigasiga							82	71	72
Biawa								86	82
Somwadina									87

40.   The Bunama language is spoken on Normanby Island in the Barabara and Bunama villages in the south, and in the Sawatupwa village area in the north. The Bunama language is also shown on Map 4. The dialect variations are as follows:

	Barabara	Bunama
Sawatupwa	82	79
Barabara		91

41.   Kurada is spoken only in the Kurada and Bwasiaiai village census areas, and on Nuakata Island. The dialect variation is very small.

42.   Mwatebu is spoken only in the Mwatebu village area, which is also shown on Map 4.

43.   The Sewa Bay language has widely diverse dialects in the following village areas: Sewataitai, Darubia, Miadeba, Bwakera, Maiabare,

Pwanapwana, and Sibonai.   Revised cognate relationships are:

	Sibonai	Sewataitai	Darubia	Miadeba	Bwakera	Maiabare
Pwanapwana	76	75	77	83	76	76
Sibonai		74	72	69	68	72
Sewataitai			81	67	61	69
Darubia				73	65	73
Miadeba					82	61
Bwakera						64

44.   Dobu is spoken on the islands of Dobu, Sanaroa, and Tewara; on
Fergusson Island from Bwaiowa Peninsula to Nade, with all of the ad-
jacent hinterland; on the western tip of Normanby Island from Sisiana
on the north coast to the area adjacent to Ubuya Island on the south
coast; and on the north-eastern tip of Normanby Island at Loboda,
Kwanaula, Dawada, and Siausi villages.

The Galubwa dialect inland from Salamo on Fergusson Island, and the
Ubuya dialect on the Ubuya side of Normanby Island, have a /h/ phoneme
which is lost in Dobu.

        toholo (Galubwa) = toolo (Dobu)

The /k/ of Sanaroa and Loboda is usually replaced by a glottal stop in
Dobu, and the labialised velar /kʷ/ is replaced by a labialised glottal
stop.

        kitakikisi (Sanaroa) = ʔitaʔiʔisi (Dobu)
        lekwasa   "   = leʔwasa   "
        kwabula   "   = ʔwabula   "

Loboda also has the /h/ phoneme.

Edugaura on Dobu Island is regarded as the "real" Dobu language.
The relationships between Edugaura and the other dialects are as
follows:

	Sanaroa	Galubwa	Ubuya	Loboda
Edugaura	94	96	86	80
Sanaroa		87	88	84
Galubwa			91	75
Ubuya				76

45.   The Molima language is found on the central south coast of
Fergusson Island from Gimotola to Toagesi, and in the hamlets in the
centre of Fergusson around Tutubea and Ebadidi.   This area is known as
Salakahadi.   Dialect relationships, according to Lithgow and Staalsen
(1965), are as follows:

	Ebadidi	Tutubea
Molima coast	76	75
Ebadidi		76

46. The Galeya language is spoken in the north-east of Fergusson
Island from Gameta, through Basima and Duduna to Sebutuia, and inland
in the villages around Galeya. Dialect relationships, based on Lithgow
and Staalsen (1965), are:

	Sebutuia	Basima	Urua	Gameta
Galeya	92	82	79	75
Sebutuia		82	77	73
Basima			90	87
Urua				94

47. The Bosilewa language is spoken in the hamlets around Bosilewa on
the north coast of Fergusson Island.

4.4.10.1.4. *ANALYTICAL DIVISION INTO LINGUISTIC GROUPS*

48. Cognate counts are only a rough guide in linguistic classification,
for the following reasons:
(a) There is a big difference between cognates which are identical,
and those which are only vaguely similar.
(b) There are usually errors in eliciting wordlists.
(c) A list may be free of errors, but not truly representative of the
language, especially as the languages are constantly changing and
borrowing from each other, and there are many marginal dialects for most
languages.
(d) Many common words have quite dissimilar but equally acceptable al-
ternatives, and it is a matter of chance which word will be given. In
the 50 words I have listed from the Muyuw wordlist, seven have common
non-cognate alternatives. If one is eliciting using a related language
one will obtain more cognates.
(e) There are often errors in determining cognates, and mechanical
errors in counting them. The number of errors increases proportionately
with the length of the list, because of fatigue. Fatigue may not be
significant if a linguist is carefully comparing only two or three
languages, but it becomes significant in a survey like this involving
some 150 wordlists and over 3,000 cognate calculations.
   Because of the limitations of cognate counts I have compared some
grammatical features of the languages which share a fairly even number

of cognates, and this has enabled me to separate them into family
groups. For instance, Wataluma shares 51% cognates with Iduna, 44%
with Bwaidoka, and only 42% with Are, but its grammar is very similar
to Are, and less similar to Iduna and Bwaidoka. It has obviously in-
creased its cognates with Iduna and Bwaidoka by borrowing from them.
The same principle applies, though less convincingly, to Kukuya, which
belongs grammatically to the Taupota Family, though it has a much
higher cognate count with the adjacent Molima language (49%) than with
Taupota (35%).

49. COGNATE COUNTS

Below are listed the cognate counts within families. This will be
followed by an outline of contrasting grammatical features between lan-
guage families.

50. KILIVILA FAMILY

	Muyuw	Budibud
Kilivila	69	43
Muyuw		65

51. BWAIDOKA FAMILY

	Diodio	Bwaidoka	Kalokalo	Yamalele	Fagululu
Iduna	60	70	42	35	39
Diodio		63	47	45	41
Bwaidoka			58	51	45
Kalokalo				64	53
Yamalele					56

52. ARE FAMILY

	Gabobora	Are	Paiwa	Boanaki	Wataluma
Doga	36	55	44	49	39
Gabobora		52	57	52	38
Are			50	54	42
Paiwa				73	33
Boanaki					40

53. TAUPOTA FAMILY

	Wedau	Taupota	Garuwahi	Tawala
Kukuya	38	35	33	34
Wedau		62	41	47
Taupota			65	69
Garuwahi				62

54. KAKABAI FAMILY

Kakabai shares 61% cognates with Dawawa.

55. SUAU FAMILY

	Bohutu	Wagawaga	Suau
Sinaki	58	39	60
Bohutu		56	65
Wagawaga			55

56. DUAU AND DOBU FAMILIES

In this composite chart the first four columns of the first four lines constitute the Dobu Family, and the last four lines the Duau Family.

	Sewa Bay	Molima	Galeya	Bosilewa	Mwatebu	Kurada	Duau	Tubetube	Bunama
Dobu	45	56	53	58	49	45	54	34	52
Sewa Bay		39	36	34	33	29	31	30	55
Molima			45	56	46	38	40	29	42
Galeya				61	30	32	35	27	37
Bosilewa					38	39	42	28	41
Mwatebu						48	52	32	66
Kurada							53	50	49
Duau								49	61
Tubetube									44

4.4.10.1.5. *CONTRASTIVE FEATURES OF LANGUAGE FAMILIES*

57.   In this section I list and illustrate significant differences between adjacent language families.

58. SUD-EST

The subject prefixes of the verb are similar to those in other families, but the object suffixes are somewhat different, especially in the first and second persons singular.

    1sg -ŋo (usually -gu, but Nimowa -au, Duau -gau)
    2sg -ŋe (usually -mu, but Misima -wa, Duau -go)

I recorded only one set of possession prefixes.

Noun classifiers are like those found in the Kilivila language family.   Ray (1938) listed 20 classifiers with the numeral affix -to *three*.   The classifier tan- is used with numeral affixes for counting shell-money, thus:

tándava	*one*
taníwo	*two*
tánto	*three*
tanváře	*four*
tanlíma	*five*
tanwóna	*six*
tanpíři	*seven*
tánwo	*eight*
tansíwo	*nine*
tanyówolo	*ten*

Stress is not predictable in this list, and would therefore seem to be phonemic.

In Ray's list tan-to means *three petticoats* and not *shell-money*.

I elicited the numeral *'one'* with 16 items, and found the following variations in the numeral affix for *'one'*: řeva, řava, řaga, řaγa, and daγa. The classifier for *'animals'* is mbwa- (Ray (1938) omboi-)

bombo mbwa-řaga   *one pig*

buga mbwa-řava   *one dog*

'Paper' and *'rope'* have the same classifier, aŋga- (Ray 1937-9 yanga-)

džiŋa aŋga-řava   *one paper*

dio aŋga-řava   *one rope*

'Tree products' have the classifier mbamba-

umbwa mbamba-řaγa   *one tree*

kini mbamba-řaγa   *one spear*

yambia mbamba-řava   *one sago*

For *'canoe'* the word and classifier are the same, waŋa-

waŋa waŋa-řava   *one canoe*

In Sud-Est the plural suffix -ndži or -ŋi, which is found on some kinship nouns, is quite distinctive.

The phonemic pattern in Sud-Est is not like the rest of PTC, having many fricative consonants.

The verb does not change for future tense.

There are separate words for *'wife'* and *'husband'*, namely webo and mořu.

59. NIMOWA

Subject prefixes on the verb follow the usual pattern, but the object suffixes are quite different, as shown in the chart below:

Subject Prefixes	Sud-Est	Nimowa	Misima
1sg.	ya-	a-	ya-
2sg.	u-	u-	u-
3sg.	i-	i-	i-
1pl.incl.	r̃a-	ta-	ta-
1pl.excl.	a-	a-	a-
2pl.	wa-	hu-	ku-
3pl.	di-	si-	hi-

Object Suffixes			
1sg.	-ŋo	-au	-m or -u
2sg.	-ŋe	-m	-wa
3sg.	-ø	-ne	-k or -ø
1pl.incl.	-nda	-de	-r̃a
1pl.excl.	-ŋa	-ai	-ma
2pl.	-mi	-u	-miu
3pl.	-ŋi	-di	-kir

The plural of kinship nouns is formed by reduplication of the first syllable of the singular form, and the addition of the prefix he-.

    loune   *his sister*

    he-lo-loune   *his sisters*

Reduplication for the plural form of kinship nouns is found in the Are and Taupota language families, but not in most of the island languages, which have a suffix with the vowel o or u.

The verb does not change for future tense.

Numerals consist of a stem ho- plus the numeral suffixes -tia *one*, -iwo *two*, -tuwon *three*, -pat *four*, -lime *five*. I found no stems other than ho- in use for counting, but this could be investigated further.

There is only one set of possession prefixes.

There are different words for *'wife'* and *'husband'*, namely poniyene and mwaniyene.

I have heard reports which suggest that there is phonemic stress in this language.

60. MISIMA

The list of object suffixes given in Section 59 shows a contrast between Nimowa and Misima.

For plural of kinship nouns -u suffix is used.

    natuna   *his child*

    natunau *his children*

For future tense n- is prefixed before the subject prefix of the verb.

    n-i-yegon
    fut.-3sg.-*go*   *he will go*

This may be an unreal aspect marker, rather than future tense marker.

Contrasting with the two possession classes in Sud-Est and Nimowa, there are four in Misima, namely the words with possession suffixes indicating intimate possession, two groups with different sets of possession prefixes, which I call 'intermediate' and 'distant', and a special form for the word for *'food'*. The words for *'food'* with singular possession are:

    aau   *my food*
    aam   *your food*
    aana *his food*

The suffixes indicating intimate possession are:

    1sg. -ø
    2sg. -m
    3sg. -na

The prefixes indicating distant possession are:

    1sg. no-
    2sg. wam-
    3sg. wana-

The intermediate form, for which the main use is in the possession of food and clothing, varies from dialect to dialect, and in one dialect the intermediate and distant forms seem to be the same. The singular intermediate forms which I have listed for different dialects are:

Person	Dialect 1	Dialect 2	Dialect 3	Dialect 4
1sg.	o-	no-	no-	o-
2sg.	wam-	wam-	am-	am-
3sg.	wana-	wana-	ana-	ana-

The prefixes in Dialect 4 are almost identical with the words for *'my food'*, *'your food'*, *'his food'* and this pattern is found in all of the Duau Family and in Yamalele and Kalokalo.

In 1893 Fellows noted phonemic stress in the Misima language.

The word lagona is used for both *'wife'* and *'husband'*, which is in contrast to the usage in both the Nimowa and Kilivila Families. Neither Sud-Est, Nimowa, nor Misima make a linguistic distinction between a man's older or younger brother. This distinction is found in the Kilivila Family.

61.   KILIVILA

This family features a large number of noun classifiers which combine with numeral suffixes, demonstrative suffixes, and with modifiers to form a kind of compound noun.   Three classifiers are illustrated from Muyuw, as follows:

	kay- *tree*	buna- *house*	na- *animal or woman*
one	káy-tan	buná-tan	ná-tan
two	ká-y	buné-y	ná-y
three	káy-ton	buná-ton	ná-ton
four	káy-vas	buná-vas	ná-vas
five	káy-nim	buná-nim	ná-nim
that one	káy-wen	buná-wen	ná-wen
those ones	ka-síyas	bun-síyas	na-síyas
a small one	káy-kakit	bún-kakit	ná-kakit
small ones	kay-kékels	bun-kékels	na-kékels

The only other language with such classifiers is Sud-Est.

As in Misima, there are three possession classes, and a special word for *'food'*, which in Muyuw is:

kagʷ	*my food*
kam	*your food*
kan	*his food*
kads	*our*(incl.) *food*
kaem	*our*(excl.) *food*
kaemiy	*your*(pl.) *food*
kaes	*their food*

The possession affixes are:

	Intimate	Intermediate	Distant
1sg.	-gʷ	agu-	guna-
2sg.	-m	amu-	mu-
3sg.	-n	ana-	na-
1du.incl.	-d	ada-	da-
1pl.incl.	-ds	ada- -s	da- -s
1pl.excl.	-m	ama-	ma-
2pl.	-miy	ami-	mi-
3pl.	-s	asi-	si-

Subject prefixes and object suffixes are almost identical with those in the Dobu, Duau, and Suau Families, but the free pronouns are different, as can be seen from Chart 2.   In this chart the contrast between the eight phonemic vowels in Muyuw and Budibud is shown.   I have not represented this phonetic difference previously in this chapter, even though I suspect that it may be phonemic in Sud-Est.   The Budibud free

pronouns show some similarity to those in Doga and Are. In Muyuw there
are as many third person pronouns as there are classifiers, because
that pronoun consists of a classifier plus -wen 'singular' or -síyas
'plural'.

There are different words for *'husband'* and *'wife'* in Kilivila and
Muyuw, but dagon serves for both in Budibud, which is similar to lagona
in Misima.

All three languages share the presence of different words for older
and younger siblings of the same sex.

	Budibud	Muyuw	Kilivila
his older brother	tʌ́wan	túwan	túwala
his older brothers	tʌ́wans	tuwán	tuwála
his younger brother	bwʌ́dan	bwádan	bwádala
his younger brothers	bwʌ́dans	budán	budála

In Muyuw the plural is marked by change of stress, while the suffix -s
is added in Budibud with no change of stress. The plural suffix -s can
be used with nouns as well as with verbs in Muyuw and Kilivila, but it
is not commonly found with nouns.

Stress changes in all three languages when an intransitive verb
becomes transitive, and object suffixes are affixed. For the third
person singular object there is no suffix in Kilivila and Muyuw, but
the stress still changes. Thus stress alone may indicate whether the
verb is transitive or intransitive. For example in Muyuw:

ikatúnag	*he gets ready*
ikatinʌ́ge-gʷ	*he gets me ready*
ikatinʌ́ge-m	*he gets you ready*
ikatinɛ́g	*he gets it ready*
ikúnup	*he is sewing up* (intransitive)
ikunúp	*he sews it up* (transitive)

Budibud examples are:

ikatúnag	*he gets ready* (intransitive)
ikatinɛ́gɛ-n	*he gets it ready* (transitive)

The contrast between /o/ and /ɔ/ and between /e/ and /ɛ/ can be seen
in the Budibud pronouns, and Muyuw words like

isékem	*he gives to you*(sg.)
isɛ́kɛm	*he gives to us*(excl.)

This contrast seems to be stronger in Budibud than in Muyuw, and is
slight, if present, in Kilivila.

This family is peculiar in having a suffix on the verb to indicate
plurality of the subject in the second and third persons. The suffix
is -s in Muyuw and Budibud, and -si in Kilivila. For the first person

inclusive it is present for plural but absent for dual. Other families
have plural subject prefixes which are different from the singular ones,
except for a few languages in which the third person singular and plural
prefixes are the same.

	Muyuw subject markers	Dobu subject markers
1sg	a-	ya
2sg	ku-	ʔu
3sg	i-	ʔi
1du.incl.	ta-	-
1pl.incl.	ta- -s	ta
1pl.excl.	ka-	ʔa
2pl.	ku- -s	wa
3pl.	i- -s	si

62. GUMASI

The Gumasi language has been classified as a linguistic isolate. It
shows more affinity to Duau than to any of the families adjacent to it.

The free pronouns are similar to those of Duau, except for the
second singular, which is similar to the Are form.

Singular object suffixes are similar to those encountered in Kilivila,
but the subject prefixes follow the pattern of those of Dobu and Duau.

The plural of kinship nouns is -o as in Dobu.

As in Duau, there is no marker for the future tense, whereas Dobu
has partial reduplication, and Kilivila has an unreal aspect prefix.

There are three classes of possession, plus an intimately affixed
word for 'food', as in Kilivila, Duau, and Bwaidoka.

In having the same word for 'husband' and 'wife', it is like Dobu
and Duau, but different from Kilivila and Bwaidoka. Like Dobu, it lacks
separate words for older and younger siblings of the same sex. This
distinction is found in Kilivila, Duau, and Bwaidoka, as has been pointed
out above in 61.

63. BWAIDOKA

A number of the characteristics of the Bwaidoka Family have been
indicated already. There are individual subject prefixes in Iduna and
Bwaidoka, but the three languages on Fergusson Island, and Diodio, have
the same form i- for third person singular and plural subjects. Paiwa,
Boanaki, and Wedau also have no mark of plurality for third person
subjects. A woman who has borne a child takes plural person affixes
in the Bwaidoka Family languages.

There are semantic distinctions between the referents to older and younger children of the same sex, and between those for husband and wife.

The plural marker for kinship nouns is -o, -u, or -vo.

Future is marked by the na- prefix to verb stem, as in the languages of the Are and Taupota Families, the Bosilewa language, and also in Ubir in the Northern Province.

The possession affixes are listed in Chart 8.

64.   ARE

Similarity of Wataluma to mainland members of the Are Family is shown in the form of the subject and object affixes of the verb.   In Chart 3 are listed the affixes for Wataluma, Are, Paiwa, Boanaki, and for contrast, Bwaidoka on Goodenough Island, and Wedau on the mainland.

In Wataluma we find reduplication for plurality in kinship nouns. This is a feature of the mainland Austronesian languages of the Milne Bay Province, and is found also in Kukuya. This feature is illustrated in Chart 4, with Bwaidoka, Kurada, and Dobu included for contrast. The Dobu word means *'any brother, older or younger'*.

There are three basic possession classes in this family, but only two in the Taupota and Wedau Families.   The third person singular affixes are as follows:

	Intimate	Intermediate	Distant
Dobu	-na	?ana-	?ina-
Bwaidoka	-na	ana-	yana-
Wataluma	-na	kana-	yana-
Are	-na	kana-	anae-
Gabobora	-na	kana-	yana-
Paiwa	-na	kana-	ina-
Boanaki	-na	kana-	ina-
Wedau	-na		ana-

The future tense is marked by the na- prefix.

There are no separate words for *'wife'* and *'husband'* as are found in the Bwaidoka Family.

65.   TAUPOTA

The Taupota Family has only two possession classes, excepting Kukuya, which has three.   There is no special possession form for food.

The future tense is marked by the na- prefix.

Reduplication for the plural of kinship nouns is illustrated in Chart 4.

A reasonable degree of similarity between Kukuya and the rest of the Taupota Family is evident from the pronouns and pronominal affixes listed in Chart 5.   There is a single word for *'spouse'* which is also listed in Chart 5.   In Kukuya and Wedau there seems to be no distinction made between *'he gives him'*, *'he gives them'*, *'they give him'*, and *'they give them'*.

The -ya morpheme at the end of the Molima suffixes is an emphatic particle, which is probably optional.

66. KAKABAI

The Kakabai Family differs from the Taupota Family because the na-prefix for future tense is not found in the former.

The Igora dialect, which borders on the Suau language family, has three possession classes.   The rest of the family, like the Taupota Family, has only two.   The Igora dialect has one word for *'wife'* and *'husband'*, but the rest of the language and Dawawa have two separate words.

The plural of kinship nouns is formed by reduplication, as in the Taupota Family.

The free pronouns are quite similar to those in the Taupota Family, and different from the Suau Family, but the forms of the affixes are intermediate between those of these two language families.   They are shown in Chart 6.

67. SUAU

The Suau Family is reasonably homogenous, and more similar to the Duau and Dobu Families than to the Taupota Family.

There is a variety of ways in which the plural of kinship nouns is indicated.   In Wagawaga afa- is prefixed with no reduplication.   In Sinaki one or two syllables are reduplicated.   In Suau one or two syllables are reduplicated and yau *many* may follow the noun.   This word yau is common to the Suau, Duau and Dobu Families, and seems to be the basis of the plural suffixes -yao, -ao, -o, -u, -aho, -avo, which are found in the Misima, Gumasi, Duau, Dobu, and Bwaidoka Families.

There is no marker for future tense.

In the Suau Family, as in the Duau and Dobu Families which conclude this section, there are three possession classes, the same word for *'wife'* and *'husband'*, and ma- for the accompaniment prefix.   There is a slight variation, me-, in Tubetube.

68. DUAU

Tubetube is a difficult language to classify, because it has points
of similarity with all of its adjacent languages - Suau, Misima, Muyuw,
Duau, Tawala, and also Dobu. Its closest similarity is with Duau and
Suau, in that order, so I have grouped it in the Duau Family. In Chart
7 are listed the free pronouns and subject and object affixes of Suau,
Tubetube, Duau, Kurada, Mwatebu, and Dobu.

I found no indicator of future tense in this family.

The Duau Family has a special word for possessed food, which is the
same as, or very similar to, the intermediate possession prefix. This
is found also in the Misima, Kilivila, and Bwaidoka Families. Nimowa
and Sud-Est have a word for possessed food, which is quite similar,
even though these two languages do not seem to have a class or inter-
mediate possession. Singular possession affixes and special words for
food are listed for a number of languages and Duau dialects in Chart 8.
Initial glottal stop is frequently omitted in these data, and they have
not been checked closely for accuracy.

69. DOBU

Mwatebu, because of its close grammatical similarity with the Dobu
Family, could have been grouped with it in spite of its high cognate
counts with Bunama, Kurada and Duau.

The free pronouns in this family are quite diverse. Subject and
object affixes are so similar that it seems unnecessary to list them.
The free pronouns are as follows:

	Dobu	Galeya	Bosilewa	Molima	Sewa Bay
1sg.	?abo?agu	yowa	dowo	iya?a	yau
2sg.	?oyo	komu	?om	o?a	?oyo
3sg.	tauna	tonina	toninena	tauna	tauna
1pl.incl.	?abo?ada	ita	?ita	ida?a	?
1pl.excl.	?abo?ama	ima	?ima	ima?a	?ai
2pl.	?omi	omi	?om	omia	you
3pl.	taudi	tondi	sedau	taudi	taudi

Molima differs from the rest of the Dobu Family in having separate
words for older and younger siblings of the same sex. As can be seen
from Section 61 and Chart 5, the Dobu and Molima subject prefixes show
slight differences.

The accompanitive morpheme ma- of this family is shared with Yamalele
of the Bwaidoka Family.

For future tense Dobu and Molima have partial reduplication, but I
do not find this feature in the Sewa Bay and Galeya data. In Bosilewa
the prefix na- is used.

70. CONCLUSION

This concludes the classification into language families, which should provide a working basis for future detailed studies of PTC languages.

4.4.10.1.6. *CONTRASTIVE FEATURES WITH AUSTRONESIAN LANGUAGES IN OTHER PARTS OF PAPUA NEW GUINEA*

71. This section is a very brief listing of significant contrast.

72. LANGUAGES OF THE SOUTH COAST OF PAPUA

The PTC group of languages is not interspersed with non-Austronesian languages. Such languages however separate PTC from other groups of Austronesian languages, forming a block across the mainland border of the Milne Bay Province. This block consists of the Magi languages in the south, and the Daga Family in the centre and north.

Motu has significant similarity with PTC, including three possession classes, and the intermediate form can be used as a special word for *'food'*. Keapara, Sinogoro, and Magori seem to have only two possession classes. However, Motu does not reduplicate the verb stem for continuous mode, but shows this with the suffixes -mu, for present and future tense, and -ya for past tense. This tense distinction is also foreign to PTC, as is the lack of plural markers on kinship nouns. Sinogoro however has a plural suffix -ri. Number is not indicated in the second and third person subject prefixes in Motu.

73. NORTHERN PROVINCE LANGUAGES, MINIAFIA AND UBIR

The object suffixes distinguish only third person from non-third person in the plural. The second person subject prefixes are the same for singular and plural. These languages distinguish between *'his brother'* and *'her sister'*, which cannot be done in PTC. There seems to be a change of subject prefix from e- to i- for future tense. Miniafia subject prefixes do not seem to be obligatory, but they are present in all of the Ubir data. There are only two possession classes.

Words tend to be shorter in these languages, and there are many word-final consonants. Miniafia looks quite different from PTC languages, but Ubir seems to be intermediate between Miniafia and Doga, which I have grouped with the Are Family.

74. MOROBE PROVINCE, BUANG LANGUAGE

In Buang we find much greater phonemic complexity, and no obvious similarity in pronouns or pronominal affixation, except for the suffixes of intimate possession. There is no plural form for kinship nouns.

75. WEST NEW BRITAIN, MALEU LANGUAGE

Maleu has subject prefixes and some similarity to PTC in its pronouns and pronominal affixes, but my data are not adequate for a detailed comparison.

76. CENTRAL NEW BRITAIN, NAKANAI LANGUAGE

Pronouns and suffixes show a vague similarity to PTC. There are no subject prefixes. There is reduplication for continuous mode and for plurality of kinship nouns. There are separate words for *'his brother'* and *'her sister'*, which is not found in PTC. There is an intimate possession class, similar to PTC, and another class in which an intimately suffixed noun follows the possessed noun.

77. NEW IRELAND, TIGAK LANGUAGE

Tigak is the language of Kavieng, which is adjacent to the Lavongai language of New Hanover.

There is general similarity in object suffixes and intimate possession suffixes, but only vague similarity of pronouns to those found in PTC.

There are no pronominal subject prefixes.

Person and number of a kinship noun is indicated by the preceding article. Articles before nouns are found in New Ireland and New Britain, but not in PTC.

There are two possession classes, and verbs do not change for future tense. Women are regarded as plural if they have had children, as in the Bwaidoka Family.

78. BOUGAINVILLE, BANONI LANGUAGE

There is a very vague similarity in pronominal object suffixes. Subject prefixes seem to indicate number only. The prefix na- is used for plurality of kinship nouns. There are two possession classes, intimate and non-intimate.

The accompanitive morphemes show similarity to those in PTC:

nna tanta mea kasi-na article *he with.him brother-his (he is with his brother)*

nna tanta maria na-kasi-na article *he with.them(pl.)-brother-his (he is with his brothers)*

4.4.10.2. PHONOLOGY AND GRAMMAR

4.4.10.2.1. *PHONOLOGY*

79. Phonology will be described under the headings of vowels, consonants, syllable pattern, stress, and orthography.

80.   VOWELS

Most languages have five vowels /i, e, a, o, u/. There are eight vowels in Muyuw and Budibud /i, e, ɛ, ʌ, a, ɔ, o, u/. In Dobu the recorded vowel glides are pronounced sometimes as glides and sometimes as vowel sequences. I believe that they are vowel sequences which are pronounced as glides in rapid speech. But in Muyuw the glide /e^i/ fluctuates with /e/, and the glide /o^u/ fluctuates with /o/. So in Muyuw the vowels are written orthographically i, ei, e, a, a̲, o, ou, u. In a final syllable a central vowel is always /a/, never /ʌ/. In this position it is always written as a. In the grammatical discussion the vowels of the Muyuw language will be written orthographically.

Vowel length is found in Dobu, and is probably present in other languages. It is a manifestation of vowel sequence, as illustrated by the elision of /h/ in the Galubwa dialect of Dobu language:

	Galubwa	Dobu Is.
one	ʔebwehu	ʔebweu
full	maha	maa
stand	toholo	toolo

81.   CONSONANTS

The dominant consonant pattern is illustrated by the phonemes of the three languages listed below:

	stops	flap	continuants	labialised
Muyuw	p b t d k g	l	m n v w y s	pʷ bʷ kʷ gʷ mʷ
Dobu	p b t d k g ʔ	l	m n w ɏ s	pʷ bʷ kʷ gʷ mʷ ʔʷ
Tawala	p b t d k g	l	m n h w y s	pʷ bʷ kʷ gʷ mʷ

The glottal stop has a scattered occurrence throughout PTC, being found in the Bwaidoka and Wedau Families, all of the Duau Family, except possibly Tubetube, and in all languages of the Suau and Dobu Families. The glottal stop is labialised in Dobu, Galeya, Bosilewa, Yamalele, Kurada, and possibly in other languages as well.

A fronted fricative /ɏ/ is found with variations throughout most of the island languages. In Muyuw it is fronted without friction, and the equivalent of this phoneme in Budibud is a lateral with the whole blade of the tongue held against the palate for a time and then released quickly. In Kilivila it is fronted with friction, as in Gumasi and the whole of the Bwaidoka Family. In Yamalele and Fagululu the friction is so pronounced that it sounds like /z/ or /ð/ but fluctuates with

non-fricative /y/. It was not heard in the Are, Kakabai and Suau
Families, and only in Kukuya of the Taupota Family. The Awaiama dialect
of Tawala language is spelt 'Awalama' by Capell. One wonders if there
is a fronted lateral fricative here which fluctuates with a /y/ sound.
On the D'Entrecasteaux Islands the only languages in which it was not
recorded in the survey wordlists were Wataluma, Kurada, and Mwatebu.

   Other unusual phonemes recorded include:
   r̃   in and around Wedau and Sud-Est
   ts   in Dawawa
   tš   in Duau
   dž   in Sud-Est, Duau and Budibud
   z   in Diodio
   voiceless ŋ̊ in some dialects of Duau

82. LABIALISATION

   I conducted a wider survey of labialisation and found it to be a
common feature of Papua New Guinea languages. It seems to be universal
in the Milne Bay and Sepik regions, where the pattern is for velar and
labial consonants to be labialised, but not alveolar consonants.
Labialised consonants include some alveolar ones in Highlands and Fly
River languages. Automatic labialisation of velar consonants is common
in environments such as the syllable /ka/ preceded by /u/ then becoming
/ukwa/.

   In the Milne Bay Province the consonants which may be labialised
include /b p β f m g k x h ʔ/. The mainland languages from Gabobora
to Garuwahi tend to have only the velars /k g/ labialised. There are
word-final labialised consonants in Muyuw.

83. CONSONANT SEQUENCES

   Consonant sequences occur in most PTC languages, and are a dominant
feature of Muyuw. They result from the elision of unstressed vowels,
either in word-final or word-medial position. Unstressed vowels are
most likely to be lost following the consonant /m/. In Dobu, what is
spelt amukwayai is pronounced amkwayai, and dimudimu is always pronounced
dimdim. Kilivila yakidas(i) is yák̲ids in Muyuw. In Muyuw the morpheme
combinations i-la-badúbad and ana-mitákwabʷ are pronounced ilbdúbad and
anmtákwabʷ. Doubling of consonants is common in Muyuw, most commonly
with the continuants /m n v w y s/, but it can also occur with stops
and labialised consonants. In Kukuya I have recorded a word-initial
/mm/ in mma *food*, and with the prefix am- *your*, there is the possibility
of a triple consonant.

84. STRESS

There is a constant pattern of vowel lengthening near the end of the
phonological word. In Dobu it affects the penultimate vowel. In Muyuw,
because of the absence of word-final vowels, it is the final vowel which
is lengthened. I mention length first, to distinguish length from
stress. Stress is phonemic in Kilivila, Muyuw, Budibud, Misima, and
probably also in Nimowa and Sud-Est. Stress is not indicated in any
practical orthography.

In all of the languages of PTC it seems that stress is predictable
within certain word-classes, notably kinship nouns and verbs. When a
kinship noun is pluralised by the addition of a suffix, the stress moves
one syllable closer to the end of the word. In Muyuw the stress moves
in the same way, though no suffix is added. When an intransitive verb
is made transitive, an object suffix is usually added, and the stress
moves one syllable closer to the end of the word. In Muyuw the stress
moves in the same way, even for third person singular object when no
suffix is added.

Close study may reveal predictable stress patterns in all words in
Dobu, but this has not been done. For instance stress in three-syllable
nouns and place names is frequently on the first syllable.

85. ORTHOGRAPHY PROBLEMS

Orthographies which are easy to read are based on the principle that
almost all syllables consist of a consonant followed by a vowel. The
exceptions are some word-initial vowels and word-final consonants, and
occasional vowel and consonant clusters.

Problems have arisen through failure to make use of the consonant
symbols y and w, even when the /y/ is obviously fricative as in nigeɣa
in Dobu. This word is traditionally spelt nigea. The /y/ in Suau is
sometimes represented by i, but usually by e. By not using y and w,
some orthographies end up with long sequences of vowels with no guide
as to the syllable boundaries. People who learn to read from inaccurate
spelling tend to modify their pronunciation to fit the spelling. This
applies especially to people who are not native speakers of the lan-
guage, but it also happens to people speaking their own language,
especially in teaching and ecclesiastical situations.

When labialisation has been represented by u or o following the
consonant, this tends to be read as an extra syllable, especially
labialised glottal stop. The Dobu people say that folk from Misima
and Kiriwina usually pronounce leʔwasa as leowasa. This is not sur-
prising, because the word is spelt leʔoasa.

The Suau orthography omits the glottal stop entirely. Children who
have been educated only in English omit glottals when writing their own
languages.

Using both symbols l and r for the alveolar flap is not a problem
unless people try to equate them with the English sounds. In this case,
it is best to use l for the flap and r for the trill found in the Wedau
area.

In some orthographies phonological words have been excessively frag-
mented into morphemes which are written as separate words. It is use-
ful to do this to a limited degree where:
(a) words are excessively long
(b) there is 'loose' phonological juncture at the morpheme boundary
(c) morphophonemic variants do not need to be represented if the affix
is separated from the word-stem
(d) the affix is a clitic occurring with different word-classes.
Thus in Muyuw we write the clitic bo- ∿ bwa- ∿ bwe- separately from the
word which follows it, and we always spell it bo. We note however that
readers tend to read it as bo, even when it should be pronounced bwe.

4.4.10.2.2. *INTRODUCTION TO GRAMMAR*

86. Many of the commonest word-stems in PTC languages can take verbal
affixes and act as verbs, cr possession affixes and act as nouns, or
they may be unaffixed.

4.4.10.2.3. *VERBS*

87. Verbs normally have a subject prefix. Exceptions observed are:
(a) A Muyuw string of verbs with the same third person subject may omit
the prefix on one verb.
(b) Commands in Dobu. For *'Come here!'* a Dobuan may say ʔu-pili-ma
you-run-here, or just pili-ma *run-here*.

In Chart 9 are listed the subject prefixes of one language of each
family in PTC.

In the Kilivila Family there is the complication of the -s suffix
for plural subjects, except for the first person plural exclusive. It
is also not present in dual.

In all languages the rule for making an intransitive verb transitive
is to add the appropriate object suffix and move the stress one syllable
closer to the end of the word. Difficulties in analysis arise for
linguistically unsophisticated English-speakers when the equivalents of
our intransitive verbs are transitive in PTC, and vice versa, and when
the semantic areas of similar verbs are not the same in PTC as they are

in English. For instance, PTC languages do not have an equivalent for
the English *'give'*. The closest equivalent means *'give to'*, with the
recipient as the object of the verb, not the thing which is given.

   A verb may consist of a directional particle plus a subject prefix,
and there are compounds of these particles with other verb stems, in
which case the particle indicates the direction of the action. Muyuw
examples are:

m	*towards speaker*
w	*towards hearer or away where the direction is not relevant*
n	*away from speaker and hearer*
k	*to him, there*
a-m	*I-come.here*
a-w	*I-go.to.you*
a-n	*I-went.away*
i-tó-m	*he-stands-here*
i-tó-w	*he-stands-near.you or away*
i-tó-n	*he-stands-there*
i-sí-m	*he-stays-here*
i-sí-w	*he-stays-away*
i-sí-n	*he-stays-there (he sits)*
i-sí-k	*he-stays-there*

   Directional particles and object suffixes are mutually exclusive.
Verbs with directional particles have the stress pattern of transitive
verbs. They are therefore to be classified as transitive verbs, with
the directional particle functioning as the object suffix. This
analysis is supported by the fact that in the Misima language the
singular object suffixes on some verbs are also the directional part-
icles, which are the same as the Muyuw directional particles.

i-pé-m	*he-gives.to-me*
i-pé-wa	*he-gives.to-you*
i-pé-k	*he-gives.to-him*

Other Misima verbs take a more standard set of suffixes, namely -u,
-wa, -∅.

   With the Tubetube word for *'give to'* for first and second persons,
the locative particle is used for plural as well as singular recipients,
with no distinction of number and no distinction between inclusive and
exclusive.

i-yea-ma	*he-gives.to-me or us(incl.) or us(excl.)*
i-yea-wa	*he-gives.to-you(sg. or pl.)*

For the third person object there is a different stem.

i-wole-na	*he-gives.to-him*
i-wole-gili	*he-gives.to-them*

88. CONTINUOUS MODE AND REDUPLICATION

There is reduplication of the first one or two syllables of the verb
stem, with some morphophonemic adjustments, to indicate a continuous
action, which means either continuously doing a thing, or many people
doing the same thing one after the other. Examples are listed in
Chart 10.

Anticipating the discussion of nouns (see 4.4.10.2.4.) it may be
mentioned that reduplication also occurs in nouns, and indicates mul-
tiplicity or diminutive. Reduplication of the first syllable of the
accompanitive noun in Muyuw indicates reciprocity. In many PTC lan-
guages reduplication indicates the plural of kinship nouns. Among
these, in a part of the Suau Family, the first syllable only is re-
duplicated. The first two syllables are reduplicated in the rest of
the mainland PTC languages and in Wataluma and Kukuya.

In Dobu verbs reduplication of the first two syllables indicates
continuous mode, and reduplication of one syllable indicates future
tense.

     i-tauya   *he-goes or went*

     i-tau-tauya   *he-continuously-goes*

     i-ta-tauya   *he-will-go*

89. CAUSATIVE AND CLASSIFICATORY PREFIXES

There are particles, one or more of which may be prefixed to the
verb stem, indicating the method, or some other specific information
about the action (classificatory), or that the action was brought into
a state of being (causative). The latter group is semantically similar
to the passive of European languages, but it is not a passive marker.
The former group are compound verb stems or are derivationally similar
to compound verbs. The causative forms, of which there are several in
each language, indicate general causation. It has not yet been possible
to find a clear difference of meaning between them.

Examples of classificatory prefixes which are compounds are:

   Dobu   ʔi-ʔeno-gulewa   *he-sleep-stone (he sleeps heavily)*

   Muyuw i-kay-sal   *it-wood-crack (the wood cracks)*

Below are examples of two common classificatory prefixes:

	to do with the hand	to be first
Misima	gi-	
Muyuw	ki-	gin-
Dobu	gi-	gimi-
Iduna	ki-	
Are	bo-	kai-
Wedau	vo-	al-
Tawala	wo-	ai-

The general causatives in five representative languages are:

Muyuw   ka-, ta-, kata-, va-, ya-

Dobu   e-, lo-, loe-, gie-

Iduna   ve-, lu-, luve-, ki-, kive-

Wedau   am-, rau-, wana-, vi-

Suau   rau-, tai-

Note the combinations of two prefixes in the first two groups.

In some languages there is a classificatory prefix which means 'reciprocally'. In Suau it is hai-, in Iduna ve?a-.

In Iduna a compound verb may have a simple root first, then a causative particle, then another root.

eno-ve-fota   *lie*-causative-*back (lean back against)*

bawe-ve-?a   *pig*-causative-*eat (feed pigs)*

Verbs with classificatory or causative particles can be used as verb or noun stems. However, there are some nouns which cannot be used as a verb stem unless a causative prefix is added. In Dobu, iyana *fish* cannot be used as a verb, but lo-iyana causative-*fish* can be used as a verb or a noun.

?ina-paisewa lo-iyana   *his-work* causative-*fish (his work was fishing)*

90.   MODIFYING VERBAL SUFFIXES

This is another form of compounding of the verb stem. Many adverbial concepts in English are expressed in PTC languages by adding a modifying suffix to the verb stem. Frequently the modifying suffix can stand alone as a simple verb stem, or as a noun. These are Dobu examples:

i-sana   *he-turns*

i-laga   *he-goes.uphill*

i-sana-laga   *he-turns-uphill*

D'Entrecasteaux languages are very rich in this feature. The following are a few of the modifying morphemes which can go with verbs in the Dobu language, and one example of their usage:

-ataya   *permanently*

-lugu   *inside*

-manini   *quickly*

-daita   *for no particular reason*

-gesi   *wrongly*

-besobeso   *carelessly*

?i-e-sa?u-besobeso-di   *he*-causative-*put-carelessly-them (he put them so that they were spread around carelessly)*

Muyuw does not have such modifying suffixes.

4.4.10.2.4. *NOUNS*

91.   Nouns throughout PTC have complexity of possession, and a system
of classifiers in the Kilivila and Sud-Est Families. Possession, rep-
resented by two or three different sets of affixes, has a semantic
basis.   Nouns take 'intimate' suffixes for close relatives and integral
parts, such as body parts.   Prefixes denote a more distant type of
possession.   In most of PTC there are two sets of prefixes, which I
call 'distant' and 'intermediate'.   The 'intermediate' group is used
for things which are worn, eaten, chewed or drunk, and abstract concepts
like feelings of the body or mind.   Verbs with causative prefixes when
used as nouns usually take intermediate possession prefixes.

   Muyuw has a further possessive form meaning *'belonging to that place'*.
It is a suffix -nen, with certain morphophonemic variants.

   Most nouns can be possessed in at least two different ways, thus
bringing out subtle semantic distinctions.   Thus in Muyuw:

   na-mweg   *his-sail*
   wag mweg-an *canoe sail-its (canoe's sail)*

   In some languages the possessive prefixes are regarded as separate
words or as prefixes with loose juncture.   In Muyuw and Dobu they are
phonological prefixes and are written as such in Muyuw, but as separate
words in Dobu.   Examples of the three forms, plus possessed food, are
listed for Muyuw and Dobu in Chart 11.   Chart 8 lists singular possession
affixes for all languages on which I have this data.   It will be noted
that intimate suffixes on nouns, and object suffixes on verbs, are
virtually the same in all PTC languages.

   Possession is used much more freely with nouns in PTC than it is in
European languages.

92.   **COMPOUND NOUN STEMS**
   Compound noun stems are common.   Simply joining two words together
will make a compound noun in Dobu.

   anuwa-masula *house-food (a food-house)*
   ʔeda-paisewa *road-work (work-road)*

Note that the second noun has the modifying function.   If the first
noun normally takes a possession prefix, the whole compound noun takes
the possession prefix.   If it normally takes a possession suffix, then
the whole compound takes the possession suffix.

   ʔidi-ʔeda-paisewa *their-road-work (their work-road)*
   sina-ʔaiʔaili-na *mother-true-his (his true mother)*

   In Muyuw compounding of noun stems involves the use of the noun
classifier system.   There are more than 50 classifiers.   To each

classifier, demonstratives, numerals, and modifiers may be suffixed.
Numerals and the singular demonstrative cannot occur without a clas-
sifier. The plural demonstrative usually has a classifier. Modifiers
are roots which may stand alone or be affixed as nouns or verbs, but
when attached to a classifier the meaning is like that of a compound
noun. Thus the classifier na- *animal or woman* is productive in a human
context in the following way:

ná-wen	*woman-that*
na-síyas	*women-those*
ná-tan	*woman-one*
na-y	*women-two*
ná-toun	*women-three*
ná-vas	*women-four*
ná-nim	*women-five*
ná-kakit	*woman-small*
na-kékel-s	*woman-small*-plural
ná-kwabᵂ	*woman-widow*
na-kubúkwabᵂ-s	*woman-single*-plural

(kubúkwabᵂ in a reduplication of kwabᵂ which basically means *'to have
no husband'*)

Classifiers are often the same as, or similar to, a noun belonging
to the group which they classify, usually in an abbreviated form.
Bunátum and bwan both mean *'house'*, and the classifier for buildings is
buna- or bun-, which is productive in the same way:

buná-wen	*building-that*
bun-síyas	*buildings-those*
buná-tan	*building-one*
buné-y	*buildings-two*
bún-kakit	*house-small*
bun-kubúkwabᵂ	*house-single.women*

The modifiers kákit, kékels, kubúkwabᵂ can stand alone as subjects of
a sentence, take a subject prefix and become a verb, or modify the
meaning of a noun by following it.

It is certain that the lists of classifiers in Kilivila and Muyuw are
incomplete, and it seems that they are an open class, in that new ones
can be added. Each noun is not invariably used with the same classifier,
but different classifiers are used to focus on different areas of
meaning. A general classifier kwei- is frequently used instead of the
specific ones which are available. The classifiers sínawa- *ten* and
lakatú *hundred* enable Muyuw-speakers to count to a thousand, which is
lakatú-nim lakatú-nim *hundred-five hundred-five.*

There is some similarity between these classifiers and function
markers or nominalisers, which are found in the whole of PTC. Two of
these seem to be universal. They are tau- or to- or ta- *the one who*,
and kaba- or kabo- or aba- or ʔebe- *the place of*. The second one has
a widely extended area of meaning which includes *'the instrument for'*.
They are derived from tau *man*, and keba *bed or seat*. These two words
or their cognates are found almost universally in PTC. In the Are
Family bai- has a function similar to the second one. Examples in
Muyuw are:

> ta-kaléiwag   *the ruler* (from kaléiwag *rule*)
>
> na-kaléiwag   *the female ruler*
>
> ab-kaléiwag   *the place at which he rules*
>
> kabéi-dow   *occasion of calling* (from dow *call*)
>
> na-kabéidow   *his call or death*

A complex Dobu example is:

> ʔana-to-gie-apwesa   *his*-the.one.who-causative-*appear (his making
>   it appear)*

The verb stem is frequently reduplicated to indicate continuous mode,
and it may be transitive or intransitive. Transitive stems have an
object suffix, and there may be a free object as well. In Muyuw
instead of zero third person singular object suffix the suffix is -ein,
which is followed by -s if the actors are plural.

> na-ta-wtél-ein-s wag   *his*-one.who-work-*it*-pl. *canoe (his canoe-
>   workers)*

A Wedau example is:

> tau-vi-lawan-u   one.who-causative-*cure-me*

The nominal prefix toni- in Dobu and Yamalele means *'owner of'*. In
Dobu toni-ʔasa is *'owner of the village'*. The equivalent in Muyuw is
tagini- which is a compound of two morphemes:

> ta-giní-wag   one.who-*first-canoe (canoe owner)*

Place names take prefixes meaning *'the language of'*, *'people of'*,
'man of', and in some languages *'woman of'*.

	Muyuw	Dobu
language of	aga-	ʔena-
people of	mina-	me-
man of	guma-	goma-
woman of	nen-	sine-

In Dobu, instead of sine-Dobu one can say waine-Dobu *woman-Dobu*, which
is an ordinary compound noun. In Misima we have pana- *language of*. In
Tawala it is pona-. In Paiwa it seems to be gapa-. The language listed
as 'Gabobora' probably means *'the language of Bora'*.

In most languages numerals usually stand alone, following the noun which they modify. They take the suffix -na to make the corresponding ordinal number. They can stand alone as nouns. In Dobu ʔeluwa *two*, ʔeluwena *second*.

PTC languages have a concise way of expressing the number and persons of a group in one word. In Muyuw:

agʷ-mwánet	*my-alone (just me)*
am-mwánet	*your-alone (just you)*
an-mwánet	*his-alone (just him)*
adi-téi-y	*our*(incl.)*-men-two (you and I)*
ami-téi-nim	*your-men-five (you five)*

In Dobu:

t-ebweu-gu	*man-one-my (just me)*
t-ebweu-na	*man-one-his (just he)*
ta-te-luwa	*we*(incl.)*-man-two (you and I)*
wa-te-nima	*you-man-five (you five)*

Muyuw uses intermediate possession prefix throughout. Dobu uses the intimate suffix for singular, and the verbal subject prefix for plural. Yamalele has a combination like Muyuw, namely -ai- stem with numeral suffix and intermediate possession prefix.

4.4.10.2.5. *PRONOUNS*

93. As well as verbal subject and object affixes and three groups of possession affixes, there are free pronouns, examples of which are given in the sections in 4.4.10.1.3. and in Charts 2, 5, and 7.

The interrogative pronouns of these languages can be used indicatively. For instance *'who?'* and *'whoever'* is the same word, namely yaita in Dobu, in its singular form, and yaisigedi in the plural. Other such pronouns are formed by prefixing interrogative morphemes onto nouns.

> to-waga *which-boat?* or *whatever-boat*

Most languages have an emphatic pronoun, which is an intimately possessed noun stem. *'Myself'* in Dobu is tau-gu, in Tawala taunawa-u, and in Muyuw tónei-gʷ or ta-tónei-gʷ.

If the suffix -mo is added to a pronoun or noun in Dobu, it means *'just that one'*. With a negative morpheme as well, it means *'not even one'*.

4.4.10.2.6. *ACCOMPANIMENT*

94. Accompaniment in nouns and pronouns is represented in quite diverse ways. Muyuw uses a possessed noun, the basic stem of which is so-

companion.   Changes in the stem and affixation indicate plurality of
the stem, which then means *'companions'*.   This is unusual because most
noun stems are the same whether they are singular or plural.   The
accompaniment construction is used very frequently in Muyuw.   The
affixed forms are:

possessor	single companion	plural companions
1sg.	sou-gʷ	si-gʷ-éy
2sg.	sou-m	si-mʷ-éy
3sg.	so-n	si-n-éy
1du.incl.	so-d	si-dáy-as
1pl.incl.	so-d-s	si-dáy-as
1pl.excl.	si-méy	si-máy-as
2pl.	si-míy	si-míy-as
3pl.	si-síy	si-síy-as

It is used in the following ways:

    sougʷ yákoum ta-wótet *my.single.companion you* ldu.incl.-*work (you
                and I work together)*

    siméy bo i-nóun *our*(excl.)*.single.companion emphatically* 3-*go
             (our companion has gone)*

    ka-gʷ sinásin son yin *food-my taro its.companion fish (my food
             is taro with fish)*

The accompanitive is reduplicated in Muyuw to indicate reciprocal
action.

    sin-si-né-y reciprocal-*companion-his*-pl. *(he interacting with
         his companions)*

   Kilivila has accompanitive words similar to Muyuw, but makes less
use of them, preferring the uninflected deli *along with*.

    deli latu-la *with child-his/her (with her child)*

deli does not change even if the following noun is plural.

   Dobu has a prefix ma- which functions in the same way.

    ma-natu-na   *with-child-her (with her child)*

    ma-natu-na-o *with-child-her*-pl. *(with her children)*

This prefix is found widely distributed in languages such as Duau,
Kurada, Yamalele, Paiwa, Dawawa, Wedau, Taupota, the Suau Family, and
as far away as Keapara in the Central Province, and the Banoni morpheme
in Bougainville is similar.   The equivalent in Iduna, Fagululu and
Garuwahi seems to be wa-, and in Kakabai it is vai-.

   When ma- is used with pronouns in Dobu the following paradigms
result:

	single companion	plural companions
with me	ma-ʔiya-gu	ma-ʔegwa-o
with you	ma-ʔiya-yo	ma-ʔemwa-o
with him	ma-ʔiya-na	ma-ʔena-o
with us(incl.)	ma-ʔe-da	ma-ʔe-da-o
with us(excl.)	ma-ʔe-ma	ma-ʔe-ma-o
with you(pl.)	ma-ʔe-mi	ma-ʔe-miya-o
with them	ma-ʔe-di	ma-ʔe-diya-o

Almost identical paradigms occur in Bosilewa, Molima, Sewa Bay, Mwatebu, and possibly in other languages. Similar forms in more distant languages are:

	he with him	*he with them*
Duau	ma-kiha-na	ma-kiha-na-ho
Tawala	mi-te-na	mi-te-hi
Garuwahi	wa-ʔite-na	wa-ʔite-hi
Taupota	ma-ite-ni	ma-ite-hi
Wedau	ma-ite-ni	?

This type of accompanitive word is usually placed at the end of the phrase in which it occurs. A Dobu example is:

natu-na-o ma-ʔe-na-o *child-her*-pl. *with*-word.stem-*her*-pl.
                      (she with her children)

The accompanitive words listed below were also found in phrase-final position:

	he with him	*he with them*
Paiwa	yavata	mao-yavata
Dawawa	mati	mati
Kakabai	mate	ma-mate

The accompaniment construction can be used for people, things, or abstract concepts. A Dobu example will be followed by one from Iduna.

i-sawa-sawa ma-ʔina-nuwasabwalena *he*-cont.-*read with-his-under-standing (he reads and understands)*

kaliva wa-wehi-na gi-ʔela *man with-rain-his he-came (the man came in the rain)*

4.4.10.2.7. *EMPHASIS*

95. In Kilivila emphasis is denoted by the free form bogwa or the clitic bo-. The clitic, but not the free form, is used in Muyuw. It is in a class of two members, the other member being mo- which denotes sequence.

bo-nág   *definitely-not*
bo-í-kous *definitely-it-finished*

In Dobu emphasis is denoted by the clitic -ya.

    nige-ya   negative-emphatic

    si-pili-pili-ma-ya   *they-continuously-ran-here*-emphatic

    ʔena-ya   *at.it*-emphatic

    I have not looked for the emphatic particle in other languages. However, there is a verb-final -y in Muyuw which I thought was an undefined directional particle, but I now believe that it is the same as the Dobu emphatic particle, though used quite infrequently.

4.4.10.2.8. *ASPECT AND FUTURE TENSE*

96. INTENDED VERSUS COMPLETED ACTIONS

    In Dobu niʔátu or niʔatúi, used alone, means *'it is finished'*. When used in a sentence niʔátu means *'already done'* or *'being done'*.

    niʔatu ʔi-apwesa   *already he-appeared*

    niʔatu wa-lla-ila   *already you*-cont.-*return (you are returning already)*

    For intended action in Dobu the future, or 'projected', tense is used. This means that it is future to the time of action of the sentence. The conjunction used in Dobu and some other languages for the future tense is be.

    nuwanuwa-na be i-ta-tauya   *desire-his and he*-future-*go (he wants to go)*

This could also mean *'he wanted to go'*.

    For intended action in Dobu the prefix sabi- can also be used with a verb stem, and with no subject prefix.

    niʔatu si-apwesa sabi-paisewa   *already they-appeared in.order.to-work (they have come to work)*

    In the Kilivila Family there are no tense markers, but a clear distinction is made between completed or definite actions, and intended actions, where this distinction is significant. Customary actions are grouped with intended actions. They are marked with a bi- ∿ b- prefix, and completed actions with ni- ∿ n-, which suggests relationship with sabi and niʔatu in Dobu. In Muyuw I call them 'unreal' and 'real' aspect markers. They are optional, and are placed before the subject prefix.

    b-i-sés   unreal-3sg.-*stay (let it stay)*

    n-i-sés   real-3sg.-*stay (it is there)*

bisés can also mean *'it will stay'* or *'if it stays'*. Misima has an n-prefix which is equivalent to b- in Muyuw.

    In Dobu, some of the function of the unreal aspect is carried by the -da- subjunctive particle, which is placed between the subject prefix

and the verb stem. This morpheme is found also in Duau, Yamalele, and
probably in other languages. Its equivalent in Wedau and Tawala is ta.
In Dobu, da is used with the negative, and for entreaty or suggestions.
The nearest equivalent in Muyuw is the functor kid. Two examples in
Dobu will be followed by two in Wedau.

Dobu: nige-ya ya-da-?ite-na *not*-emphatic *I-perhaps-saw-it (I didn't
                             see it at all)*

      ta-da-tauya *we*(incl.)-*perhaps-go (let's go)*

Wedau: ega a-ta-nei *not I-perhaps-come (I did not come)*

       a-ta-nei *I-perhaps-come (I would come)*. This can also mean
                 'if I come'.

It should be remembered that all verbs show a distinction between
simple and continuing actions, which compensates to some extent for the
lack of English tense distinctions. Displayed below are the Dobu and
Muyuw aspect-markers and related functors:

	Dobu	Muyuw
emphatic	-ya	bo-
completed	ni?atu	ni- ∿ n-
intended	sabi-	bi- ∿ b-
subjunctive	da-	kid
future	reduplicate	–

These will be further illustrated by giving translations of the
above sentences into the alternate language. *'It is there'* and *'let it
stay'* are different in Muyuw, but they are the same in Dobu: ?i-miami
it stays. The sentence *'he has appeared'* in Muyuw is bo-í-sap *emphatic-
he-appears*. *'You are going back already'* in Muyuw is bo-ku-ymá-yum-s
emphatic-you-cont.-*return*-pl. *'He wants to go'* in Muyuw is sivína-n
kid b-i-nóu-n *desire-his perhaps* unreal-*he*-cont.-*go*. *'They have come
to work'* in Muyuw is bo-n-i-méi-s b-i-wótet-s kid *emphatic*-real-3-*come*-
pl. unreal-3-*work*-pl. *perhaps*. *'I didn't see it at all'* in Muyuw is
nag b-a-kín *not* unreal-*I-see.it*. *'Let's go'* in Muyuw is bi-té-n
unreal-*we*(du.incl.)-*go*.

In Muyuw the emphatic bo- can be used for impending action:

    bo-b-á-touw *emphatic-unreal-I-embark (I am going on board)*

97. FUTURE

For future tense the first syllable of the verb is reduplicated in
Mwatebu and Molima, in the same way as in Dobu. The commonest form of
future or projected tense in PTC is the prefix na-, which is placed
between the subject prefix and the verb stem. It is found in Bosilewa,

Fagululu, Yamalele, Kalokalo, Iduna, Bwaidoka, Diodio, Wataluma,
Gabobora, Are, Wedau, Taupota, Garuwahi, Kukuya, and possibly in other
languages as well.

   Tawala lacks a verbal particle for future or projected action, but
the functor apo placed before a verb carries this sense. In Suau apo
seems to mean *'and then'*. There seems to be no indicator of future on
the verb in Sud-Est, Nimowa, Gumasi, Paiwa, Boanaki, Dawawa, Kakabai,
Bohutu, Sinaki, Suau, Duau, Tubetube, Kurada, Sewa Bay, and Galeya.

   Not all Dobu verbs can be reduplicated for future tense. In these
cases future tense may be distinguished by the lack of vowel change
from a to e; and the -i object suffix is used for third person singu-
lar. The verb ʔi-ʔíta *he-sees* illustrates this.

	non-future	future
3sg. object	ʔi-ʔité-na	ʔi-ʔitá-i
3pl. object	ʔi-ʔité-di	ʔi-ʔitá-di

It is not known whether this vowel variation for future is found in
other languages.

4.4.10.2.9. *NOUN PHRASES AND TEMPORALS*

98. NOUN PHRASES

   A noun or pronoun may be followed (or more rarely preceded) by
numerals, demonstratives or modifiers. In the Kilivila language family
these words consist of:
(a) classifier plus numeral morpheme
(b) classifier plus demonstrative morpheme
(c) classifier plus modifier, or modifier alone.

   The following examples are in the Muyuw language:
(a) bwan búna-toun   *house building-three (three houses)*
(b) bun-síyas bwan   *building-those house (those houses)*
(c) bwan bábaw or búna-babaw   *many houses*

   In Dobu and most of PTC the numerals are single words, without
affixes, and they follow the noun which they modify, except for ʔebweu
one, which may precede the noun. In Muyuw the numeral morphemes, and
the singular demonstrative -wen, cannot stand alone as free forms.

   In Muyuw, the demonstrative plus classifier is the third person
pronoun. The first morpheme is any classifier, and the second morpheme
is the singular or plural demonstrative.

ná-wen	*woman-that (her)*
káy-wen	*wooden.thing-that (it)*
siginí-wen	*mat-that (it)*

wal í -wen   *cord-that (it)*

tó-wen   *common.object-that (it, him)*

In Muyuw a classifier plus modifier is like a compound noun in the rest of PTC. In Muyuw the plural is formed by adding an -s suffix, and moving the stress one syllable closer to the end of the word. In Muyuw, the form of a modifier, when it stands alone, is that of a common noun, which optionally takes possession affixes. The question arises whether this is an unaffixed noun, semantically equivalent to a European descriptive. Such words, in fact, may stand alone as the subject or object of a clause.

avákaein bo í-kous; kákit n-i-sés   *big* emphatic *it-finish; little*
                real-it-stays (most is finished; the smaller part remains)

In most of PTC the modifying words follow the noun, and take the third person intimate possession suffix, which in Dobu is -na for singular number, and -di for plural. In the following Yamalele example two such modifiers stand alone, like nouns:

i-'ogoi-a bwaiki-na wata manamanawe-na   *he-cleared-it bigness-its*
                and length-its (he cleared it wide and long)

PTC modifying words can stand alone, and their affixes have semantic value - more so than in the gender affixes of European languages. In Dobu, the modifier plus suffix frequently combines with the noun to form a true compound noun with one possession suffix instead of two.

sina-gu gidali-na   *mother-my small-its/her (my little mother)*

or   sina-gidali-gu   *mother-small-my*

The second form is more idiomatic, but most European speakers would use the first expression.

The next two examples could sometimes be translated by English modifiers, sometimes by nouns. They feature reduplication, which is found in the continuous mode of verbs or in multiple nouns:

gida-gidali-di   multiple-*small-their (many small ones)*

le'wa-le'wasi-di   multiple-*sick-their (many sick ones)*

Affixation is not restricted to the third person:

ona kabo-kabo-na   *talk* multiple-*false-its (untrue talk)*

kabo-kabo-yo   multiple-*false-your (you are lying)*

'abo'ada maibo'a-da   *we*(incl.) *all-our*(incl.) *(all of us)*

One can simply say maibo'a-da, and the meaning is the same.

A noun which takes possession prefixes is followed by a modifier in the same way as two stems form a compound noun. In the next examples the first is a compound noun, and the second one is a noun and modifier (or perhaps two nouns).

'ina-'eda-paisewa   *his-road-work (his work-road)*

'ina-paisewa sinabwa-na   *his-work big-its (his big work)*

The structural difference is the possession suffix on the second word.
But note that the same words can be used as a verbal predicate:

    ʔi-paisewa sinabwa-na *he-works big-its (he works hard)*

The next example comes from a folk-tale:

    ʔi-e-iyana sinabwa-na *he*-caus.-*fish big-its (he became a big*
                                fish)

    Muyuw modifying words may be joined to a classifier, or they may
stand alone. In either case there is no possession affix. If the
modifier, standing alone, has a possession affix, it is clearly a noun.

    bun-ávakaein classifier.for.buildings-*big*

    ávakaein   *big*

    vakáeina-n   *size-its*

It is tempting to analyse eiyana sinabwana *become big fish* (Dobu) and
wótet ávakaein *big work* (Muyuw) as compound stems. Note these examples:

    i-wótet ávakaein   *he-works big (he works hard)*

    na-wótet ávakaein   *his-work big (his big work)*

In Dobu it is the affix on the second word which indicates the number
of the first word:

    ʔina-ʔeda toʔumali-na *his-road bad-its (his bad road)*

    ʔina-ʔeda toʔumali-di *his-road bad-their (his bad roads)*

The last two examples, if uttered in isolation, would be stative, or
equational, clauses. Their meanings would be respectively: *'His road
is bad'. 'His roads are bad'.*

    In PTC the structure of a noun phrase is exactly the same as a
stative clause. Further, a simple narrative clause can function as a
noun phrase, in apposition to a noun or pronoun or pronominal affix.
This leads to a consideration of apposition, which is the key to under-
standing the complex generative power of PTC languages.

99. APPOSITION

    Apposition is the key to the analysis of noun phrases. To describe
all of the possible combinations would be complex, probably incomplete,
and would not reflect the generative processes of the language. By the
process of apposition, phrases of great diversity and complexity are
constructed.

    One can picture the nuclear clauses as either verbal or stative.
The verbal clause, if intransitive, has a subject prefix and a verb
stem. If it is transitive, it also has an object suffix. The stative
clause is a single noun or pronoun, with optionally in apposition an-
other noun or pronoun. Other nouns or pronouns can now be placed in
apposition to any of these nouns, pronouns or pronominal affixes, in-
cluding possession affixes. A free-form subject can be in apposition

to the subject prefix of the verb, and a free-form object in apposition
to the object suffix. Some linguists would call this 'co-reference',
but the generative process is the same. These examples are from Dobu:

> gose-ma ni?atu ?i-tauya *friend-our*(excl.) *already he-go (our*
> *friend has gone)*

The noun gose-ma is in apposition (or co-referent) to the subject pre-
fix ?i-. It consists of a noun stem gose- and possession affix -ma.
Either or both of these can have in apposition to it a noun or pronoun,
or a noun phrase similarly constructed by apposition.

(a) a pronoun in apposition to gose-

> gose-ma tauna *friend-our*(excl.) *him*

(b) a pronoun in apposition to -ma

> ?abo?ama gose-ma *we*(excl.) *friend-our*(excl.)

(c) a phrase in apposition to -ma

> ?abo?ama maibo?a-ma gose-ma *we*(excl.) *all-our*(excl.) *friend-*
> *our*(excl.) *(the friend of all of us)*

The meaning of the next example from Muyuw can be made clear if
translated literally into English, whereas a free English translation
masks the grammatical structure.

> péina-n wou-m tóu-gwey *reason-its body-your the.one.who-weak*
> *(because you are weak)*

The last two words are a stative clause with tóu-gwey *the weak one* in
apposition to wou- *body*. This clause functions as a phrase in apposi-
tion to péina- *reason*. The grammatical structure is shown by the
translation: '*The reason is that your body is the weak one*'.

A further refinement is the use of a simple verbal clause in apposi-
tion to a noun, pronoun, or pronominal affix. This is similar to the
Pidgin structure in sentences like this one, which I heard on the radio:

> Sapos yu kam long Amerika, na Australia, na wanem hap liklik
> ples yu kam.

The verbal clause liklik ples yu kam is in apposition to wanem hap,
describing it in more specific detail.

A Muyuw example is:

> i-mé-kei-gʷ n-a-sés wá-ked *he-came-to.meet-me* real-*I-stayed*
> *at-road (he met me I was staying at the road)*

The sense of the second clause in this sentence is '*I was the stayer at
the road*'. It is a dependent clause referring to the object of the
first clause, -gʷ *me*. There are no relative pronouns in these languages.
The only thing which distinguishes this clause from the second clause
of a narrative sequence, is the absence of a pause between the clauses.
The second clause is an amplification of the object of the first clause,
describing it in more specific detail.

This is another Muyuw example:

    gámag ta-síyas b-éi-bwein-s i-náge-s lívan   *people men-those*
    unreal-3-*good*-pl.subj. 3-*listen*-pl.subj. *talk (people those will*
    get well, they listened to the talk)

The main clause is *'people listened to the talk'*. The two words meaning
'those will get well' is a clause which functions as a descriptive phrase
in apposition to gámag *people*, describing it more specifically. Either
the noun gámag *people* or the clause tasíyas béibweins *they will get
well* could stand alone as subject of the main clause.

    A phrase consisting of a sequence of nouns or pronouns in apposition
usually begins with a general term which is followed by words which
define it more closely. This final example is from Muyuw:

    bwáloud ná-tan kudá-vin álei-gʷ   *pig animal-one* sex-female
                                    domestic.animal-my (my sow)

100. TEMPORAL NOUN PHRASES

    In PTC languages there is a variety of time words and phrases which
may be used singly, or linked together in a sequence. The most general
word comes first, and is followed by more specific terms, as in this
Muyuw example:

    nubwéig, gáboug, walaláyis waség   *tomorrow, morning, dawn at*

Time words and phrases are usually placed first in a sentence.

    The word for *'time'* in Muyuw is tut, and in Dobu tuta. Many time
phrases include this word, as in this Dobu example:

    Salagigi ʔina-tut-aya   *Salagigi his-time-at (at the time of*
                                        Salagigi)

4.4.10.2.10. *LOCATIVES*

101. LOCATIVE MORPHEMES AND PHRASES

    The common locative in Dobu is ʔena or ʔenaya *to* or *at*. It follows
the word to which it refers, or it may be suffixed to a noun in a
shortened form -aya ᷍ -ya.

    anuwa ʔenaya   *house at*

This may be shortened to anuw-aya *at the house*.

    The locative meaning *'from it'* or *'by it'* is ʔenega or -ega suffixed
to a noun.

    anuwa ʔenega   *house from*

This may be shortened to anuw-ega *from the house*.

    wag-ega   *boat-by (by boat)*

ʔenaya and ʔenega are the third person singular forms of a paradigm
with pronominal affixes for all persons:

1sg.	ʔeguya	*to me*	ʔeguyega	*from me*
2sg.	ʔemuya	*to you*	ʔemuyega	*from you*
3sg.	ʔenaya	*to it*	ʔenega	*from it*
1pl.incl.	ʔedaya	*to us*	ʔedega	*from us*
1pl.excl.	ʔemaya	*to us*	ʔemega	*from us*
2pl.	ʔemiya	*to you*	ʔemiyega	*from you*
3pl.	ʔediya	*to them*	ʔediyega	*from them*

One of these words with, and following, a noun or noun phrase, to which it refers, comprise a locative phrase. Such phrases usually precede the verb of a clause, or they may function as the predicate of a stative clause.

> taudi ʔeda-paisewa ʔenega si-tau-tauya *they road-work by.it*
>   they-cont.-*go (they are going by the work-road)*
>
> taudi anuw-aya *they house-at (they are in the house)*
>
> kaiwe sinabwa-di-yega *tree big-their-from (from the big trees)*

In Iduna -ya *at, to,* if preceded by -na becomes -ne. Other person endings take the -ya suffix without contraction. '*At it, to it*' is againe, and '*from it*' is amine. The structure is the same as Dobu:

> manuwa againe gi-na *house to.it he-went*
>
> Bwaidoka amine gi-ʔela *Bwaidoka from.it he-came*

In Tawala there is a prefix u- *at, to* to the stem -yahi-, which takes the usual personal suffixes:

> u-yahi-m *to you*

If a further suffix -gei ∿ -ei ∿ -yei is added, the meaning is '*from-*'

> u-yahi-m-gei *from you*

The prefix u- is used with place names, but hoi- is used with common nouns, and -gei with its allomorphs is used with all nouns:

> u-Salamo   *at-Salamo*
>
> hoi-wam   *in-boat*
>
> wam-gei   *from-boat (by boat)*
>
> heipuli-yei *earth-from*

In Suau, the locative suffix is -yai, and its usage is very common. Combined with haedi it means '*from*'.

> haedi-yai ʔi-lao-lao-ma? *from-loc. he-cont.-come-here? (where*
>   *does he come from?)*

Muyuw has a rare usage of -yay as a locative suffix, but the very common morpheme is wa- ∿ o- *at, to.*

Muyuw has a word waség (singular referent) or wasigéis (plural referent), which means '*from, by, at, concerning, accompanying*'. Derivationally it may be cognate with Dobu ʔenega *from it, by it,* but it has a much wider area of meaning. It usually follows the noun or phrase to which it refers, but it may precede it.

    nátu-n wá̲-wag n-i-sés   *child-his at-canoe* real-3-*stays (his child*
                                   is in the canoe)

    í-tá-teiy-s tálal wasigéis   3-*cont.-chop*-pl.subj. *axe with*(pl.)
                                    (they are chopping with axes)

    b-éi-yum-yay   unreal-3-*return-place (it will come back to this*
                                  place)

In all of PTC, specific locations such as *'inside', 'above', 'beside'*
are expressed by a noun stem plus the intimate possession suffix and
locative affix. Two Muyuw examples are followed by two from Dobu:

    wa-dáda-gᵂ   *at-side-my (beside me)*

    wa-dáda-n   *at-side-its (beside it)*

    selebe-gu-ya   *nearness-my-at (near me)*

    selebe-na-ya   *nearness-its-at (near it)*

These words usually follow the noun or noun phrase to which they refer,
as do ʔenaya and ʔeguya in Dobu.

4.4.10.2.11. *OTHER FEATURES*

102. NEW AND OLD INFORMATION

    Languages need devices to show whether nouns or pronouns in sentences
represent new or old information. In English an object, not mentioned
previously, has the indefinite article *'a'*, but after we know about it,
it is given the definite article *'the'*.

    In PTC, such morphemes are not obligatory, but when it is appropriate,
the distinction is made between old and new information. The numeral
for *'one'* is used with a noun which has not been mentioned previously.
If the noun has been mentioned previously it is followed in Dobu and
Yamalele by -nina (singular) or -nidi (plural). The morphemes are some-
what similar in other languages, except for the Kilivila Family, which
has prefixes. The suffixes in some other languages are:

    Misima   -ina

    Duau   -ina

    Kukuya   -na

    Bwaidoka   -nai

    Tawala   -ma or -na

    Suau   -wa

There is a -ma suffix which follows the intimate possession suffix of
the noun in Dawawa, which probably has the function of a definite
article. These morphemes in Dobu show whether a noun is singular or
plural:

    tomota-nina *person-the (the person)*

    tomota-nidi *person-the*(pl.) *(the people)*

In the Kilivila Family the equivalent of the definite article is a
ma- or m- prefix to the demonstrative pronoun. These are Muyuw examples:

    m-tó-wen   *the-man-that (that particular man)*

    ma-ná-wen   *the-woman-that (that particular woman)*

    ma-káy-wen   *the-wooden.thing-that (that particular wooden thing)*

The plurals of these pronouns are:

    m-ta-síyas

    ma-na-síyas

    ma-ka-síyas

103.   IMPERSONAL PRONOUN

In English, if one wants to refer to any person, one says, *'whoever'*
or *'one'* or *'you'*, thus:

    Whoever tries will succeed.

    If one tries, one will succeed.

    If you try you will succeed.

The commonest pronoun used in this general sense in PTC is the first
person inclusive plural, or dual. For a heavy thing which one cannot
lift in Muyuw, they say:

    nag bi-ta-kow *not* unreal-*we*(incl.)-*lift.it (we will not lift it)*

The literal translation of the conclusion of a Tawala story is:

    'Today we will go there, and we will see it'.

Translated into idiomatic English this would be:

    'If you go there today, you can still see it'.

104.   NEGATIVE

Each language seems to have several negative morphemes, often with
varying shades of meaning. The commonest position for the negative
morpheme is immediately preceding the verb.

In Dobu there are three negative words. The commonest is nige or
nige-ya. The absence of something expected is indicated by kakae.
There is a stronger negative sense in geya'abo, and this word is used
in prohibitions.

In Muyuw, nag is the common negative, with a contraction na- which
can be used as a prefix before the verb. An alternative prefix is ta-
(kwa- in other dialects):

    nag i-kákin or na-i-kákin or ta-i-kákin *not-he-knows (he does
                                              not know)*

These prefixes are clitics which can be prefixed to other words beside
verbs:

    ta-káy-tan wag *not-wooden.thing-one boat (not any boat)*

Absence of something expected in Muyuw is indicated by mav or makaw, which usually follows the word to which it refers:

  ven mákaw *village nothing (there is no-one in the village)*

  i-wóteta mav *he-works nothing (he worked for nothing)*

If we use nag in this position, it means *'in vain'*.

  i-ní-neiv nag *he-*cont.*-search not (he searched in vain)*

The two commonest prohibitive negatives are áwoum and máta-. For emphasis the negative is repeated at the end of the sentence. Thus in PTC two negatives make a strong negative:

  áwoum b-i-kálouw, áwoum neg. unreal-*it-fall,* neg. *(it must not*
               fall!)

  nag i-wótet-s, nag neg. 3-*work-*pl.subj., neg. *(they definitely*
             did not work)

105. REASON WORDS

In Muyuw and Dobu these words are structurally nouns which take intimate possession suffixes, and mean 'for the person indicated by the suffix'. This is illustrated from Dobu (the first three examples), and then from Muyuw:

  manu-gu *benefit-my (for me)*

  manu-yo *benefit-your (for you)*

  manu-na *benefit-it (for it, because)*

  péina-gᵂ *benefit-my (for me)*

  péina-m *benefit-your (for you)*

  péina-n *benefit-its (for it, because)*

  péina-d-s *benefit-our*(incl.)*-pl. (for us)*

  piné-m *benefit-our*(excl.) *(for us)*

  piná-miy *benefit-your*(pl.) *(for you)*

  piné-s *benefit-their (for them)*

The third person singular form often has the meaning of *'because'*, and is used in reason clauses:

  i-tóupan péinan an-pwáyat *(he-hid because his-fear (he hid because*
              he was afraid)

This can be expressed more vividly without a reason word:

  i-tóupan, an-pwáyat *he-hid, his-fear (he hid with fear)*

This is the pattern which is found in Dobu and Iduna. In Iduna, the reason word is faʔi-na. In Tawala, the reason words have either a locative prefix meaning *'at'*, or a suffix meaning *'from'*. The words are u-beina and bin-ei.

106. RESULT WORDS

Result is often expressed by simple sequence, with or without a simple conjunction. There are also linking words which mean *'and so'* or *'therefore'*. In Muyuw, the linking word is a noun:

    mápu-n *repayment-its (its consequence, consequently)*

In some other languages the words are:

    Dobu: ʔenega (literally *from it*)
    Yamalele: fai-fai-na-nina cont.-*reason-its-the*
    Tawala: uyahina *therefore*; but uyahin-ei *from it.*
    (e.g. numa uyahin-ei *from the house*)

107. CONDITION WORDS

Most languages seem to have two or more condition words:

    Muyuw   magat, kukin
    Dobu   ʔeguma, ʔabo
    Yamalele   voke
    Iduna   kaʔi (clause initial), digo (clause final)

Condition words can be found in dependent clauses of conditional sentences, or in isolated sentences of only one clause. These are Muyuw examples:

    magát bu-ku-lívan-s, bo b-á-tam *if* unreal-*you-speak*-pl.subj.,
      emphatic unreal-*I-agree* (*if you had spoken, I would have agreed*)
    magat bu-ku-lívan-s, when an isolated utterance means, *If only
      you had spoken!*
    wag magát *boat if (if only there was a boat!)*

108. PURPOSE WORDS

Purpose words can be used to introduce a purpose clause, but they are usually omitted. In Muyuw these three sentences have the same meaning:

    ku-vág vágan b-éi-bwein *you-do.it so.that* unreal-*it-good (do it
                              well)*
    ku-vág b-éi-bwein *you-do.it* unreal-*it-good (do it well)*
    ku-vág bwein *you-do.it good (do it well)*

109. ALTERNATIVES

There is no equivalent for English *'or'* in PTC. The conjunction o is found in many languages, and I suspect that it comes from English. Its function however, is different, and it can be used for *'and'* as well as *'or'*. The concept of alternatives can be expressed with the clause *'but if not'*. This example is from Muyuw:

    ku-táwtoun-s ku-páyin-s; kukín gog nag, kálabus *you-strong*-pl.
      subj. *you-pay.tax*-pl.subj.; *if but not, gaol (work hard to pay
      your tax, or you will go to gaol)*

Another method is the use of *'perhaps this, perhaps that'*. This example
is from Dobu:

    nai leleleya, nai dumaduma-na *perhaps same, perhaps difference-its*

nai is frequently used in Dobu to suggest something specific, after a
general statement:

    si-tapwalolo, nai si-sida-sida *they-worship, perhaps they-*cont.-
                                                  pray.

110.   INTERROGATIVE WORDS AND MORPHEMES

Apart from the specific interrogative words, such as *'who'*, *'when'*,
'what', there are non-specific interrogative particles, which may be
found in clause-initial or clause-final position, or both. There are
also intonation patterns, which transform statements into questions.
In Muyuw, there can be series of interrogative clauses which have a
variety of intonation patterns: the earlier questions in such consecu-
tive series usually have rising intonation, and the last one or two have
falling intonation.

English-speakers find it difficult to detect the interrogative in-
tonation of sentences which are spoken in normal conversational situ-
ations. I frequently fail to detect that a Muyuw or Dobu sentence
directed to me is a question. When Europeans speak these languages
they plaster their questions with interrogative particles.

In Dobu the commonest interrogative particle is aga, with high and
falling intonation, at the end of a sentence. Used alone as an exclam-
ation, this word means *'well, fancy that!'*.

In Muyuw an interrogative clause may begin with tab- or tabta-, or
end with ke or ne with high intonation, or tan with low-pitched intona-
tion, which means *'were there any?'*.

Rhetorical questions are used in PTC. In Muyuw they are used
especially for emphasis and entreaty.

111.   FUNCTORS

All PTC languages have a variety of function-words or functors,
including exclamations, conjunctions, adversatives, and words or mor-
phemes for *'very much'*, *'enough'*, *'also'*, *'later'*, *'already'*, *'only'*,
etc. as well as location indicators such as *'here'*, *'near you'*, and
'there'. There seems to be little equivalence between one language and
another. If words seem to be cognate between two languages, the areas
of meaning and usages are probably different. Below are listed the
words for *'here'* and *'there'* in most of the PTC languages:

	here	there
Sud-Est	eke	eko
Nimowa	iyeya	tageiyeyake
Misima	iya yowe	uho yowoho
Budibud	iton	tonone
Muyuw	ane	one
Kilivila	besa	bese
Fagululu	ainia	loina
Yamalele	side bei	sino bei
Kalokalo	meina	bweina
Iduna	hide?i	yuwa?i
Bwaidoka	taidedeku	?
Diodio	ideðeine	wadeðeine
Wataluma	nofe	noko
Are	nina	nomai
Gabobora	uma	vini
Paiwa	weni	nokoni
Boanaki	weni	nokoni
Dawawa	iyuma	nokom
Kakabai	uma	nuwa
Wedau	weka	noře
Taupota	wehidana	no?oře
Garuwahi	wedahosi	nodahosi
Kukuya	taina	tanoi
Tawala	geka	noka
Wagawaga	tene	namihe?e
Bohutu	?ite	ne?i
Sinaki	nekai	wakai
Suau	?ina	ne?i
Tubetube	bwaite	bwainene
Duau	beka	yoka
Kurada	teina	tenem
Mwatebu	iga	nage
Sewa Bay	nai	namei
Dobu	gete	gote
Molima	bae	omode?e
Galeya	kamele	kano

Functors are often unusual in form, and difficult to translate into another language. Consider the English words *'fro'* and *'yon'* in phrases like *'to and fro'*, *'hither and yon'*, which have meaning only in a specific context. Two examples in Muyuw are ebouno and yod.

ebóuno bu-kú-m! *sooner* unreal-*you-come (if only you had come sooner!)*

bu-kú-touw yod! unreal-*you-embark indeed! (do you think you are going on this boat?)* This sentence is an insult.

Some functors are nouns or verbs used in a specialised way. Others are nouns or verbs which are fossilised or becoming fossilised. In Muyuw síngay is normally used without affixation as a superlative, but I have heard it used once as a verb:

síngay ávakaein *very big*

i-síngay-s 3-*excel*-pl.subj. *(they have excelled)*

The word ígaw in Muyuw has the form of a verb, and is occasionally used as a verb, but it is usually used as a time word meaning *'later'*. It has a shortened form ga-, which when prefixed to a verb indicates that the action was still happening at that time. The basic meaning of ígaw is *'still at that time'*.

ígaw gwad *still child (when he was still a child)*

ígaw i-si-sáwl-s *still* 3-cont.-*run*-pl.subj. *(they are still sailing)*

ígaw mo b-ei-m *later then* unreal-*he-come (he will come later)*

The functors and their usages constitutes a large area of study in each language. One needs a reasonable mastery of the language before the functors can be understood.

112. WORD-ORDER AND FOCUS

The preferred word-order for a simple transitive clause in PTC is subject-object-verb; but in the Kilivila Family it is subject-verb-object. Temporal words and phrases are usually first in a sentence. Locative words and phrases usually precede the verb.

Except for the tendency to put objects before the verb, there is a tendency for nouns, pronouns, and noun phrases to be near the pronominal affix to which they refer. However in natural spoken or written text, one finds practically any word-order. The object may be clause-final in Dobu, and the subject may be clause-final in any language. It seems that if the focus is changed, the word-order is also changed. If the subject is in focus it comes first, and there are various possibilities for word-order in the rest of the clause. If the object is in focus it comes first, and if the action is in focus then the verb comes first. In each case there are various possibilities for the word-order in the rest of the clause. As the subject, object, indirect object (if there is one), and verb can be placed in practically any order, there is great potential for ambiguity in these languages.

It is common to find the subject expanded into a descriptive noun phrase following a pause at the very end of the sentence. It seems to

be an additional comment, reminding the hearer who the person was who
did the action.   Other sentence-final additional comments may describe
the object specifically, give the reason for the action, or name the
instrument used.   In each case they are just 'tacked on', without any
relationship marker.

113.   CLAUSE CONNECTORS

Languages vary in the usage of clause connectors, and there is vari-
ation between the speakers of any particular language. Muyuw has very
few clause-level connectors. In Dobu they are used freely, being
phonetically attached to the end of the preceding clause, and followed
by a pause. In Dobu the conjunction signals whether the subject, or
focus, is going to change, or if it will be unchanged.

ga is used for sequences where the subject and focus are unchanged.

ta is used when there is going to be a change of subject or focus,
or if the same actor is performing a second action simultaneously.

be is used when the action is intended or future.

The same connectors can usually be used at word, phrase, clause, and
sentence level.

4.4.10.2.12.   *AMBIGUITY AND PRONOMINAL REFERENT*

114.   THE PROBLEM

There is no distinction in pronominal affixes in PTC between *'he'*,
'she', and *'it'*. Apart from the Kilivila and possibly Sud-Est Families
there is no distinction in the free pronouns.   In Muyuw some affixes
are used for both plural subject and plural object:

i-séke-s can mean:

'he/she/it gave to them'

'they gave to him/her/it'

'they gave to them'

In Yamalele, Kukuya, Wedau, and some other mainland languages the same
subject prefix is used for third person singular and plural subjects.

With no structural difference between a noun phrase and a stative
clause, and no structural difference between an independent clause and
most dependent clauses, it is difficult to be certain of the referents
of the pronominal affixes. Many are clearly ambiguous, and the context
gives the clues. There are, however, devices for clarifying pronominal
referents, and indicating when there is a change of subject or focus.
They are as follows:

115. SENTENCE AND DISCOURSE LINKAGE

Continuity in narrative is shown in a number of ways:

(a) The final verb, with its affixes, is often repeated at the beginning of the next sentence.

(b) A noun in the final clause of a sentence is often repeated with the morpheme which indicates 'previously mentioned', at the beginning of the next sentence.

(c) A new sentence starts with a time phrase which sets the scene for the next action.

(d) There are other specific linkage devices such as:

In Muyuw í-kous *it finished* shows that the previous action is completed.

In Dobu ʔenega *from it* introduces the sequel of the previous action.

116. POSSESSION AFFIXES

Possession affixes are used extensively with nouns. In English, where we would say *'the teacher'*, people of PTC would say *'our teacher'* or *'your teacher'* or *'their teacher'*.

117. DIRECT SPEECH

Direct speech is used in preference to indirect speech. In Muyuw:

i-lívan vägan b-i-nóun *he-said that* unreal-*he-go* means *'he said that he would go'* or *'he told him to go'*.

To be unambiguous, direct speech is used:

i-lívan, "Ku-nóun". *He-said, "You-go"*.

118. AVOIDANCE OF CLUTTERING BY OMITTING THE OBVIOUS

(a) Third person singular subject can be omitted.

(b) The plural marker can be omitted on a noun if it is in apposition to a plural pronoun.

(c) Aspect markers in a sequence of clauses need not be repeated after the first verb.

(d) Pronouns are omitted if they can be deduced by subtraction, as in Muyuw:

sou-gᵚ gwad na-kä́-touw *companion-my boy* real-*we*(excl.)-*embarked*

What is stated is that the speaker and other(s) embarked, and that he had one companion, a boy. It can be deduced that there were only two of them, the speaker and the boy. The pronoun yey *I* can be omitted, which, if included, would be placed first in the sentence.

(e) In Muyuw, where the suffix -s can indicate plural subject, or plural object, or both, it may be omitted for a plural object (if this is obvious from the context), to make clear the fact that the subject is singular.

> b-i-sék máyse-s b-éi-kew-s   unreal-3-*give.to pay-their* unreal-3-
> *take*-pl.subj. *(he will give to (them) their pay, and they will
> take)*

At the word level the rule is for the first verb to be

> b-i-séke-s   unreal-3-*give.to*-3pl.obj. *(he will give to them)*

The suffix -s is omitted because of the pressure at sentence level to
avoid ambiguity.

(f) There are other elliptical devices, by which whole words are omitted,
as in Muyuw:

> i-ní-neiv, nag; i-nóun   3-cont.-*search, not; 3-went (he searched
> for it, but did not find it; so he went away)*

In this sentence, confusion between the searcher and the sought is
avoided by using the single word nag to convey the concept of *'he did
not find it'*, and so there is no change of focus from the actor who did
the searching and the going.

119.   FINAL COMMENT PHRASES

   If any part of a sentence is unclear, this can be made explicit in
a final comment phrase, which is in apposition to its referent, and
more specific.   An example from Muyuw:

> si-kab-ká-kay yevagam tó-wen, gamagal   *their-place.of-cont.-bathe
> water thing-that, children (their bathing place was that water,
> the children)*

120.   SIGNALS OF CHANGE OF SUBJECT OR FOCUS

   The Dobu conjunction ta which signals change of subject or focus was
described in section 113.   In Muyuw this is the function of the adversa-
tive gog *but*, which follows the first word of the next clause, or is
combined with ta- ⌣ to- and contracted to form the conjunctions táge-,
tógo- *however*.

> taw í-yum, ná-kwav gog bo i-nóun   *man 3-return, his-wife but
> emphatic 3-go (the man returned, but his wife had gone)*

Using táge this would be:

> taw í-yum, táge ná-kwav bo i-nóun.

   In Suau, the conjunction to seems to function like Dobu ta.   I sus-
pect there are morphemes of this kind in all of PTC.

121.   RETENTION-OF-FOCUS MARKER

   In Iduna, the suffix -ma following the object suffix of a verb at the
end of a clause indicates that this is the focus of the following clause
or clauses:

> boi Yamoliliwa gi-ʔalika be wa-ʔela ga-yogo-na-ma wa-na-fata-na
> adamoya aku-bawe   *long.ago Yamoliliwa he-died and you-came I-kill-
> it-focus you-future-pay-it today my-pig (today you pay for <u>that</u>
> pig which I killed long ago when Yamoliliwa died and you came)*

122. CONCLUSION

Further research may disclose other methods by which ambiguity is overcome in PTC.

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No.	English	Sud-Est	Nimowa	Muyuw	Misima	Gumasi	Bwaidoka
1.	(his) hair	βuluβuluye	hulune	kunun	pupunona	kununa	kunuwana
2.	(his) head	baugitougito	kawun	kunun	kaununa	kununa	debaina
3.	(his) mouth	γai	hawane	wadon	awana	tobuna	awana
4.	(his) nose	boðu	busune	abunun	buhuna	kubuna	gabona
5.	(his) eye	mařa	matane	matan	matana	matana	matana
6.	(his) neck	nymo	dumone	kayon	mwamwarina	nukwatona	odona
7.	(his) belly	gamwe	tInIyene	nuwan	tIneha	gamona	gamona
8.	(his) skin	džImwai	dImwene	kaleivin	kunIs	saxava	bubuna
9.	(his) knee	βuβuye	φuφune	kItatun	epwakokona	aitutu	tuγana
10.	man	gumořu	tolomo	taw	tau	holoto	kaIva
11.	woman	weβo	yaoβe	vin	yova	vavIna	vavIne
12.	bird	ma?ą	man	man	bwasumo	manuo	manuga
13.	dog	buga	hewo	awukʷ	wanuka	weinia	galuweta
14.	he bites	?igařI	hayaa?ŋ	Iged	itar	ikanI	naðovaku
15.	he sits	?iřoidža	tuwodau	isIn	ImIsiyo	itisobu	vetoga
16.	he stands	?ulewady	midi	Itamanaw	imiriI	itaoya	mididI
17.	he lies	?iyena	Itlehiene	imasIs	ikenu	imasisI	enobaIa
18.	he walks	?ideloga	idodogan	inoun	inawanawa	ina	naudadana
19.	road	kamwaði	hiyade	ked	kamwasa	kenao	eda
20.	stone	vaři	humu	dakul	eku	Iusa	gabaIa
21.	big	Iayia	IahIne	avakaen	bwabwatana	gagaina	Iakaina
22.	small	natiye	taŋkai	kakIt	kekeIsi	giaina	kabisoŋa
23.	fire	ðigawunoI	hiwo	kov	hiuwo	yeu	ai
24.	smoke	mudu	mwaseu	musew	kasu	aubowo	sIo
25.	ashes	βuga	φuŋeIi	puIIkov	papakova	telexau	aufafa
26.	(his) ear	badIbařI	batInI	tegan	tanana	teyana	taga
27.	(his) tongue	mamIna	maIawiane	mayen	memena	maena	meya
28.	(his) tooth	ŋiŋi	ŋiŋine	kudun	nInina	salana	niyo
29.	(her) breast	ðu	siyune	susun	huIIna	nunu	agu(na)
30.	(his) hand	nimana	nImane	naman	nImana	nIma	nima
31.	(his) foot	γeγe	hehene	kaken	aena	aena	aye
32.	sun	βeřaI	paraI	kaIas	subweIu	nIyala	kawana
33.	moon	madžaIa	wahIyane	tIbukon	weIkena	wowoIna	vaIkoi
34.	star	agItarI	taIeyan	utun	putum	utuna	aIIabama
35.	cloud	gaIIii	yaIuyalu	Iov	yaIuyalu	geIeu	buibui
36.	rain	uguye	wesI	kweis	kehe	kuwana	we
37.	water	bwa?ą	bwai	yevagam	wewer	bweye	γufa
38.	root	waðIiiii	hewasI	gidwaIIn	ewahIr	Iam	waIama
39.	leaf	ðamwai	damwane	yagevin	Iamwana	γaoina	Iuku
40.	egg	bou	pou	pow	pou	puleotu	fou
41.	he eats	iyana	Ihan	ikam	ianan	ikaIka	γikani
42.	he gives to me	igwagia	igIau heau	isekegʷ	ipem	ivinIgu	iveIeku
43.	he sees	iðuwe	iφaidI	ikIn	ikite	igIte	gI?itana
44.	he comes	?imena	IeIam	im	Inem	ima	eIai
45.	one	řega	hotIa	katanok	maIsena	tayamo	seðana
46.	two	ayewu	hoiwo	kweIy	eIua	eIyuwa	Iue
47.	bone	wakenIa	dIyune	vetun	tutuwana	IuIuna	iuIu
48.	name	?idaI	hedam	yagan	aran	yoina	γeγana
49.	fish	mořo	yarugi	yin	moti	Iyana	Iγana
50.	ground	ðeIagwi	bwadebwade	pwepway	bIIIbIII	poyapoya	babi

CHART 1 (cont'd)

No.	Are	Taupota	Kakabai	Suau	Duau	Dobu	Motu
1.	uyawa	apara	dabana	maiyawa	tuma	ʔuyana	hui
2.	gayama	ʔunuʔunu	kununa	ulu	mwagu	debana	kwara
3.	kawa	gamona	gayana	awa	kahwa	ʔawana	udu
4.	nluna	niuna	isuna	isu	isu	ʔubusuna	udu baubau
5.	mata	matana	matana	mata	mata	matana	mata
6.	kamyo	uwana	gadona	gado	gařotohutohu	otona	ayona
7.	siaku	amuamona	bwagana	boga	gamwa	gamwana	boga
8.	kwapirl	opina	kwapina	opi	kwapi	bwalana	kopl
9.	mayere	aitutuna	tsuapekana	tull	kewatuhutuhu	ʔaetutu	tulna
10.	sebari	oloto	oloto	tau	lohea	tal	tau
11.	wasike	keduruma	walvini	sine	wahine	waine	hahine
12.	manu	klu	mwanua	manu	manua	manua	manu
13.	kukou	ʔouʔou	dagasl	kedewa	kedewa	kedewa	sisla
14.	kaniku	iklmai	kalatšlna	letai	ʔinall	ʔiʔeni	koria
15.	maklra	itugura	mia	iyebawa	ʔimlatol	ʔimiatoa	helai
16.	msiri	ivomahirl	mwolto	itolo	ʔitoholo	ʔitoolo	gini
17.	dauwa	ʔiʔeno	kena	iyeota	ʔikeno	ʔiʔeno	hekure
18.	yewo	iraumahirlnae	nawa	ilaulau	ʔinohonohodadana	ʔitauya	raka
19.	keta	tayaha	eta	doblla	keda	ʔeda	daya
20.	aklma	ɣaʔima	ɣaɣakima	weʔu	galma	gulewa	nadi
21.	kaikapuna	ɣaiɣalna	dididiga	laʔilaʔi	medouna	slnabwana	bada
22.	yogiyogina	habuluna	gaubona	gagllna	musemusena	gldalina	maragi
23.	keama	ʔeyagl	kal	oyagi	kaiwe	kaiwe	lahl
24.	kasu	bahu	sikeina	asu	kasu	ʔasu	kwalahu
25.	isara	gavuare	kovu	ahu	kahu	kalikau	lahi momoru
26.	taina	tanigana	beana	bea	tena	tenana	mala
27.	pepe	menana	menana	memena	memenana	meyana	mala
28.	nibo	iβona	mwakana	moʔa	sala	salana	isena
29.	susu	ɣuɣuna	susuna	susu	susu	susuna	rata
30.	nima	nimana	nlmatabana	nima	nlma	nimana	lma
31.	kae	ʔaena	kagaɣarana	al	kewa	ʔaena	aena
32.	kau	madega	suwara	mahana	suhata	sinala	dina
33.	nawalavl	nawařaβl	nawarai	navalai	waikena	nawalal	hua
34.	gwamegwame	kipora	klpora	lpora	kwadlma	kwadlma	hislu
35.	guba	yada	giou	yada	yaroyaroha	pwana	orl
36.	kusana	hauga	nabu	nabu	kwesu	ʔusana	medu
37.	okowa	waira	gauba	golla	walla	bwasi	ranu
38.	warowarowa	dedena	lamlam	lam	lamu	lamu	ramuna
39.	raurauna	luguna	iuguna	lugu	nabana	ɣawana	rau
40.	poupouna	pou	pouna	kaslno	pou	pou	gatol
41.	kekani	ʔiʔam	kukanl	iʔaiʔal	ʔikal	ʔiʔeʔai	ania
42.	keberlku	iveleʔu	kuvitegu	lmosegu	ʔihelegau	ʔiʔebwaegu	henla
43.	kekinanl	ʔiʔinana	kukitagu	iyeʔita	gebegau	ʔiʔita	itaya
44.	ebotubotu	ʔineʔi	kunato	ilauma	nahoma	ʔimal	mal
45.	kesana	ʔemosi	ɣaɣemota	ʔesega	kalgeda	ʔebweu	ta
46.	ruwamo	ruwaga	labu	labuʔi	labul	ʔelua	rua
47.	sirike	geamlna	siliʔena	siyana	luluna	luluna	turia
48.	waba	wava	isana	esana	sanlna	esana	ladana
49.	siawa	iyana	iyana	yama	iyana	iyana	gwarume
50.	tano	dowa	doɣa	tano	bareku	bareʔu	tano

CHART 1 (cont'd)

No.	Maleu	Nakanai	Kuanua	Lavongai	Nukaria	Gedaged	Buang
1.	lolowa	laiβula	pepena	huŋwi	r̃aulu	zaun	yuβizs
2.	kur̃ia	laγamala	uluna	βwaŋaŋ	pokoulu	gate(n)	yum
3.	aowa	lahar̃ela	aŋyęne	ŋur̃	pukua	awa(n)	aβim
4.	βania	lamalsula	ambilauna	his	kalhu	wi(n)	nexum
5.	er̃ua	lamatala	amitana	mwata	kanumata	mala(n)	malam
6.	γolla	lalohola	akoŋoñlna	ŋo?	komanu	gudu	kwam
7.	apwa	latlala	ambalana	βiŋa	manaβa	loan	ayem
8.	tinia	laβoβola	apalapakana	kulit	kir̃i	siliŋon	naβim
9.	naluβwa	latutula	ambukumbukuna	βusilai	tur̃i	dagun	lup
10.	natamta	hatamale	atutana	higenen	tanata	tamol	mandu
11.	newar̃i	hataβile	aβaβina	halna	tahine	pain	aβeγ
12.	namon	lamalu	ambeo	manl	na manu	ma	sokx
13.	naγaune	lapaya	apa^p	kawβek	manu kaltama	gaun	ano
14.	ikalake	tolo	ikar̃at	kapaŋan	etava	džaze	ga alam
15.	imate	eme pou	lki	slnu?	enoho	imatal	mindo
16.	imar̃i	magiri	itur̃	tuŋ	etu	ltiaz	ŋombare
17.	ikono	maβuta	iwa	mwatuŋ	takoto	iyen	ŋanguep
18.	ilala	tuga	iβana	φasal	ehar̃e	ltoz	ngana
19.	nar̃or̃o	lagauru	aŋa	salen	har̃ena	dal	ayata
20.	napot	laβati	aβat	ya^t	tehata	pal	ngoloŋ
21.	amβlŋe	elaβuru	aŋala	taβlri	hamataku	udžan	mboppata
22.	kapor̃ia	bisi	aikilik	wanlik	ponariklriki	kitek	mayen
23.	nar̃iŋa	lahaβl	aya^p	ku^t	teahi	dža	ŋuŋwa
24.	βuŋe	lasosoβu	ami	buŋ	teau	džakas	nuŋwaro
25.	nalua	labubur̃o	akambuneya^p	buta?	nar̃ehu	sagat	eβŋgweβ
26.	talŋe	lagaβusala	ataliŋana	tallŋa	kao tar̃ina	tiliŋan	niŋamrizs
27.	maiya	lakalameala	akar̃ameyana	kalkalame	ar̃er̃o	balen	ndayem
28.	r̃oŋe	lallbola	apalaŋiyene	ŋisa	hokotahi	liwon	neβum
29.	sua	susu(la)	ayuyuna	tus	teu	su	ar̃ur̃
30.	βaγla	lima	allmana	kuŋa	r̃ima	nlman	nemom
31.	aiya	βaha	akakene	kak	tuaβai	nien	rayamkotu
32.	newalo	har̃o	akeake	mwakar̃ap	tela	ad	ñemgotom
33.	natop	tayo	aŋgai	hulen	mar̃ama	fulei	kweβ
34.	naputom	matataβu	atuŋgul	kalto	tehetu	patui	mbotubuγ
35.	naγaγao	mor̃i	ambaku^t	kuku	kaniβa	timtaen	βakuβok
36.	nasaβa	hur̃a	ambata	laŋi^t	tewa	uwi	oomp
37.	nako	lalu	ataβa	laman	teβai	naz	bel
38.	nayoke	wala	aukor̃i	mis	teaka	dabin	ŋgoŋgo
39.	lolowa	lagalagalala	amapl	pan	te lau	zaun	kolerizs
40.	ŋalua	totolu	aklau	katui	te hua	patun	tsokŋaγis
41.	ikan	alia	iyan	aŋan	ekai	džanlyime	ŋgongua
42.	lkeβepaγao	ablala	itambar̃ yaume	alls	kamai	lpanaglme	ngomboβu
43.	lleye	hiloa	iŋlr̃e	ar̃al	eklte	lnasiylme	ŋguile
44.	imai	go mai	iβanautl	kame?	kuau	lsoyime	ŋgonam
45.	teatyaβollm	lsa	tlkai	poslkai	hokotahl	ta	ti
46.	lua	llua	aur̃ua	poŋwa?	elua	azu	lu
47.	βolβolla	tuhala	aur̃una	tawan	iβe	tlwon	tsake
48.	e?pasls	isala	ayaŋ	hasan	telnoa	neyan	arem
49.	naiya	lya	aen	iyen	ika	idž	gel
50.	natatano	magasa	apia	kono	kerekere	tan	ndom

CHART 2: FREE PRONOUNS

	Sud-Est	Nimowa	Misima	Budibud	Muyuw	Kilivila	Dobu	Duau	Suau
1sg.	iŋɔ	nau	nau	togʷ	yɛy	yaegu	ʔaboʔagu	yau	yau
2sg.	ðəŋ	huwo	owa	tom	yakʷ	yoku	ʔoyo	kowa	ʔowa
3sg.	iye	hiye	iya	ton	tˆowɛn	mtona	tauna	tauna	ʔiya
1pl.incl.	indʌ	ʔ	kila	tods	yˆakids	yakidas(i)	ʔaboʔada	kite	ʔita
1pl.excl.	ime	hamai	ama	tɔma	yʌkʌmˆɛy	yakamais(a)	ʔaboʔama	kai	ʔai
2pl.	yɔmi	humeu	kɔmiu	tomiy	yʌkʌmˆiy	yokomi	ʔomi	komi	ʔomi
3pl.	tiye	sidiye	elia	tos	tʌsˆiyas	mtosina	taudi	taudži	ʔisi

CHART 3: SUBJECT AND OBJECT AFFIXES

Subject	Bwaidoka	Wataluma	Are	Paiwa	Boanaki	Wedau
1sg.	ga-	a-	a-	a-	a-	a-
2sg.	u-	ku-	ke-, ku-	ku-	ke-	ma-
3sg.	gi-	i-	e-, i-	i-	i-	i-
1pl.incl.	ka-	ta-	ta-	ta-	ta-	ta-
1pl.excl.	a-	ka-	ka-	ka-	ka-	a-
2pl.	wa-	kwa-	ko-	ko-	ko-	o-
3pl.	i-	si-	si-	i-	l-	i-
Object						
1sg.	-ku	-ku	-ku	-ku	-ku	-u
2sg.	-ø	-wa	-m	-m	-m	-m
3sg.	-na	-ya	-ei	-i	-i	-i
1pl.incl.	-da	-ta	-ta	-ta	-ta	-ta
1pl.excl.	-ma	-kia	-kai	-gita	-ki	-lai
2pl.	-mi	-mia	-mi	?	-mi	-mi
3pl.	-di	-sia	-si	-si	-si	-i

CHART 4: PLURALITY OF KINSHIP NOUNS

	his older brother	*his older brothers*
Bwaidoka	tawagana	tawaganavo
Wataluma	tawagana	tawatawagana
Are	tuwana	tuwatuwana
Gabobora	togona	togotogona
Dawawa	tuwagana	tuwatuwagana
Wedau	tuwana	tuwatuwana
Taupota	tuwana	tuwatuwana
Tawala	tugona	tugotugona
Kukuya	akana	akakana
Kurada	tuwana	tuwanau
Dobu	tasina	tasinao

CHART 5: DATA ON THE TAUPOTA FAMILY

Free Pronouns	Molima	Are	Kukuya	Wedau	Garuwahi	Tawala
1sg.	iya?a	yaku	yauke	tau	ta?u	tau
2sg.	o?a	kom	wamke	tam	tam	tam
3sg.	tauna	kona	tauna	tauna	tauna	tauna
1pl.incl.	ida?a	kotai	itoka	tauta	tauta	tauta
1pl.excl.	ima?a	yakai	itoai	tauai	tou?ai	tiyai
2pl.	omia	komi	itomi	taumi	taumi	taumi
3pl.	taudi	kosi	tauwi	tauwi	tauhi	tauhi

Subject Prefixes	Molima	Are	Kukuya	Wedau	Taupota	Garuwahi	Tawala
1sg.	ya-	a-	a-	a-	a-		a-
2sg.	u-	ke-, ku-	e-	ma-	ma-		u-
3sg.	i-	e-, i-	i-	i-	?i-		i-
1pl.incl.	ka-	ta-	ka-	ta-	ta-		ta-
1pl.excl.	a-	ka-	a-	a-	?a-		to-
2pl.	o-	ko-	u-	o-	o-		o-
3pl.	si-	si-	i-	i-	hi-		hi-

Object Suffixes							
1sg.	-guya	-ku	-u	-u	-?u	-?u	-u
2sg.	-uya	-m	-m	-m	-m	-m	-m
3sg.	-yaya	-ei	-i	-i	-i	-i	-ni
1pl.incl.	-daya	-ta	-ka	-ta	-ta	-ta	-ta
1pl.excl.	-maya	-kai	-ma	-lai	-ai		-yai
2pl.	-miya	-mi	-mi	-mi	-mi		-mi
3pl.	-diya	-si	-i	-i	-hi	-hi	-hi
spouse	mwanena	kawana	awana	awana	awana	agwana	agona

CHART 6: DATA ON THE KAKABAI AND SUAU FAMILIES

Free Pronouns	Tawala	Wedau	Dawawa	Kakabai	Suau
1sg.	tau	tau	tauguya	tauguya	yau
2sg.	tam	tam	tam	tam	ʔowa
3sg.	tauna	tauna	taunaya	tauna	ʔiya
1pl.incl.	tauta	tauta	tauda	tauda	ʔita
1pl.excl.	tiyai	tauai	taumaya	tama	ʔai
2pl.	taumi	taumi	taumiya	temi	ʔomi
3pl.	tauhi	tauwi	taudžiya	taudži	ʔisi

Subject Prefixes	Tawala	Wedau	Dawawa	Kakabai	Sinaki	Suau	Bohutu	Wagawaga
1sg.	a-	a-	ɣa-	ya-	a-	ya-	ʔe-	ye-
2sg.	u-	ma-	kwa-	kwa-	u-	ʔu-	ʔu-	wo-
3sg.	i-	i-	e-	e-	e-	ye-	ʔi-	ʔu-
1pl.incl.	ta-	ta-	ta-	ta-	ta-	ta-	ta-	ta-
1pl.excl.	to-	a-	ka-	ka-	ita-	ʔai-	ʔau-	ʔai
2pl.	o-	o-	ko-	ko-	o-	ʔau-	te-	ʔau
3pl.	hi-	i-	se-	se-	te-	si-	sa-	ti-

Object Suffixes	Tawala	Wedau	Dawawa	Kakabai	Sinaki	Suau	Bohutu	Wagawaga
1sg.	-u	-u	-gu	-gu	-gu	-gu	-gu	-gu
2sg.	-m	-m	-m	-m	-mu	-mu	-m	-u
3sg.	-ni	-i	-na	-∅	-ni	-i	-n	-i
1pl.incl.	-ta	-ta	-da	-da	-da	-da	-da	-da
1pl.excl.	-yai	-lai	-mai	-mai	-mai	-mai	-mai	-mai
2pl.	-mi	-mi	-mi	?	?	-mi	-miu	-miu
3pl.	-hi	-i	-di	-dži	-di	-di	-di	-di

CHART 7: DATA ON THE DUAU FAMILY

Free Pronouns	Suau	Tubetube	Duau	Kurada	Mwatebu	Dobu
1sg.	yau	yau	yau	yau	taugu	ʔaboʔagu
2sg.	ʔowa	kowa	kowa	ʔowa	ʔoyo	ʔoyo
3sg.	iya	iya	tauna	yoi	tauna	tauna
1pl.incl.	ʔita	kita	kita	ʔita	tauda	ʔaboʔada
1pl.excl.	ʔai	kai	kai	ʔai	tauma	ʔaboʔama
2pl.	ʔomi	komiu	komi	ʔomi	ʔomi	ʔomi
3pl.	isi	siya	taudži	hisi	taudi	taudi

Subject Prefixes						
1sg.	ya-	ya-	ya-	ya-	ya-	ya-
2sg.	ʔu-	ki-	ku-	ʔu-	ʔu-	ʔu-
3sg.	ye-	i-	i-	i-	i-	ʔi-
1pl.incl.	ta-	ta-	ta-	ta-	ta-	ta-
1pl.excl.	ʔai-	ka-	ka-	ʔa-	ʔa-	ʔa-
2pl.	ʔau-	kwa-	wa-	wa-	wa-	wa-
3pl.	si-	si-	si-	hi-	si-	si-

Object Suffixes						
1sg.	-gu	-ma	-au	-au	-gu	-gu
2sg.	-mu	-wa	-o	-o	-mu	-yo, -mu
3sg.	-i	-na	-ya	-i	-na	-na, -i
1pl.incl.	-da	-ma	-da	-ita	-da	-da
1pl.excl.	-mai	-ma	-ma	-ai	-ma	-ma
2pl.	-mi	-wa	-mi	-omiu	-mi	-mi
3pl.	-di	-gili	-dži	-di	-di	-di

CHART 8: POSSESSION IN SINGULAR NUMBER

| | INTIMATE | | | INTERMEDIATE | | | DISTANT | | | FOOD | | |
	my	your	his	my	your	his	my	your	his	my	your	his
Sud-Est	-ŋu	-ni	-i				lo-	o-	le-	ðaŋu	ðani	ðai
Nimowa	-ø	-m	-ne				lo-	?	wana-	nahau	naham	nahane
Misima	-u	-m	-na	o-	am-	ana-	no-	wam-	wana-	aau	aam	aana
Muyuw	-gʷ	-m	-n	agu-	am-	ana-	guna-	mu-	na-	kagʷ	kam	kan
Kilivila	-gu	-m	-la	agu-	kam-	kala-	ulo-	m-	la-	kagu	kam	kala
Bwaidoka	-ku	-ø	-na	aku-	a-	ana-	yaku-	ya-	yana-	akuga	aga	anaga
Kalokalo	-gu	-mu	-na	kagu-	kamu-	kana-	yagu-	yamu-	yana-	kagu	kamu	kana
Kukuya	-ø	-m	-na	au-	am-	ana-	yau-	yam-	ya-	aumma	ammma	anamma
Tawala	-we	-m	-na				u-	om-	a-	(uyam	omyam	ayam)
Suau	-gu	-m	-na	?agu-	?am-	?ana-	egu-	em-	ena-			
Tubetube	-gu	-m	-na	kagu-	kam-	kana-	agu-	am-	ana-	kagu	kam	kana
Duau (Sigasiga)	-gu	-u	-na	kagu-	ŋ̊au-	kana-	igu-	nau-	ina-	kaguna	ŋ̊au	kanana
Duau (Guleguleu)	-gu	-?u	-na	kagu-	hau-	kana-	igu-	nau-	ina-	kagu	kau	kanna
Duau (Kasikasi)	-gu	-?u	-na	?agu-	?a-	?ana-	igu-	ino-	ina-	?agu	?au	?ana
Duau (Kelologea)	-gu	-yo	-na	?agu-	?am-	?an-	igu-	imu-	ina-	?agu	?ayo	?ana
Bunama	-gu	-u	-na	?agu-	?a-	?ana-	igu-	ino-	ina-	?agu	?au	?ana
Mwatebu	-gu	-yo	-na	agu-	amu-	ana-	igu-	imu-	ina-	aguwa	amuwa	anawa
Kurada	-gu	-m	-na	?agu-	?am-	?ana-	yagu-	yam-	yan-	?agu	?am	?ana
Sewa Bay	-gu	-yo	-na	agu-	o-	ana-	gu-	no-	na-			
Dobu	-gu	-yo	-na	?agu-	?amu-	?ana-	?igu-	?imu-	?ina-			
Galeya	-gu	-mu	-na	?agu-	?amu-	?ana-	?igu-	?imu-	?ina-			
Molima	-gu	-?u	-na	?agu-	?au-	?ana-	egu-	eu-	ena-			

CHART 9: SUBJECT AND OBJECT AFFIXES ON VERBS

Subject	Sud-Est	Nimowa	Misima	Muyuw	Gumasi	Iduna	Are	Tawala	Kakabai	Suau	Duau	Dobu
1sg.	ya-	a-	ya-	a-	a-	ga-	a-	a-	ya-	ya-	ya-	ya-
2sg.	u-	u-	u-	ku-	tu-	u-	ke-	u-	kwa-	ʔu-	ku-	ʔu-
3sg.	i-	i-	i-	e-/i-	i-	gi-	e-	e-/i-	e-/i-	ʔi-/ke-	ʔi-	ʔi-
1pl.incl.	r̃a-	ta-	ta-	ta- -s	ta-	ka-	ta-	ta-	ta-	ta-	ta-	ta-
1pl.excl.	a-	a-	a-	ka-	ka-	a-	ka-	to-	ka-	ʔai	ka-	ʔa-
2pl.	wa-	hu-	ku-	ku- -s	kwa-	wa-	ko-	o-	ko-	ʔau-	wa-	wa-
3pl.	ðe-	si-	(h)i-	i- -s	si-	hi-	te-	hi-	se-	si-	dži-	si-
Object												
1sg.	-ŋo	-au	-m/-u	-gw	-gu	-ku	-ko	-u	-gu	-gu	-gau	-gu
2sg.	-ŋe	-m	-wa	-m	-m	-ø	-m	-m	-m	-mu	-go	-yo/-mu
3sg.	-ø	-ne	-k/-ø	-ø	-ø	-na	-ei	-ni	-ø	-i	-ya	-na/-i
1pl.incl.	-nda	-de	-r̃a	-ds	-da	-da	-ta	-ta	-da	-da	-da	-da
1pl.excl.	-ŋa	-ai	-ma	-m(as)	-ma	-ma	-kai	-yai	-mai	-mai	-ma	-ma
2pl.	-mi	-u	-miu	-miy	-mi	-mi	-mi	-mi	?	-miu	-mi	-mi
3pl.	-ŋi	-di	-kir	-s	-di	-di	-si	-hi	-dži	-di	-dži	-di

CHART 10: CONTINUOUS MODE AND PLURAL SUBJECT

	he goes	he is going	he gives to me	they give to me
Sud-Est	iwa	iwawa	iwagiyaweŋo	ðiwagiyaweŋo
Nimowa	iyoge	iyeyoge	igiyauheyau	sigiyauheyau
Misima	inawa	inawanawa	ipem	(h)ipem
Muyuw	ín	inóun/ininóun	iséikeigᵂ	iséikeigᵂs
Gumasi	ina	inonoina	ivinigu	sivinigu
Iduna	ginauna	ginanauna	giveleku	hiveleku
Are	inae	inenae	ebereko	tebereko
Tawala	enae	enenae	iweleu	hiweleu
Kakabai	enau	enaunau	ivitegu	sevitegu
Suau	ʔilau	ʔilaulau	ʔimosegu	simosegu
Duau	ʔinaho	ʔinahonaho	ʔihelegau	džihelegau
Dobu	ʔitauya	ʔitautauya	ʔiʔebwaʔegu	siʔebwaʔegu

CHART 11: POSSESSION MORPHEMES

DOBU	mata *eye*	ʔwama *clothing*	waga *canoe*	masula *food*
1sg.	matá-gu	ʔagu-ʔwáma	ʔigu-wága	ʔagu-másula
2sg.	matá-yo	ʔamu-ʔwáma	ʔimu-wága	ʔamu-másula
3sg.	matá-na	ʔana-ʔwáma	ʔina-wága	ʔana-másula
1pl.incl.	matá-da	ʔada-ʔwáma	ʔida-wága	ʔada-másula
1pl.excl.	matá-ma	ʔama-ʔwáma	ʔima-wága	ʔama-másula
2pl.	matá-mi	ʔami-ʔwáma	ʔimi-wága	ʔami-másula
3pl.	matá-di	ʔadi-ʔwáma	ʔidi-wága	ʔadi-másula

MUYUW				
1sg.	máta-gᵂ	águ-kweim	gúna-wag	ka-gᵂ
2sg.	máta-m	ám-kweim	mú-wag	ka-m
3sg.	máta-n	ána-kweim	ná-wag	ka-n
1du.incl.	máta-d	áda-kweim	dá-wag	ka-d
1pl.incl.	máta-d-s	áda-kweim-s	dá-wag-s	ka-d-s
1pl.excl.	mité-m	amá-kweim	má-wag	káe-m
2pl.	mitá-miy	amí-kweim	mí-wag	káei-miy
3pl.	mité-s	así-kweim	sí-wag	káei-s

P A R T   4.5.

AUSTRONESIAN AND PAPUAN "MIXED" LANGUAGES

4.5.1. AUSTRONESIAN AND PAPUAN "MIXED" LANGUAGES: GENERAL REMARKS

A. Capell

4.5.1.1. THE IDEA OF A "MIXED" LANGUAGE

4.5.1.1.0. *INTRODUCTION*

The verdict of the Neogrammarians was that mixed languages do not exist. A language belongs to one family (or a branch of it) and not to another. Meillet seems to have hesitated to a degree. In his little *Méthode Comparative en Linguistique Historique* (Meillet 1925), chapter seven is devoted to 'La Notion de Langue Mixte'. In it he deals with language exchange, such as the adoption of French by the Frankish invaders of Burgundy, etc., with the matter of substratum, and finally on page 83 he writes:

> Nevertheless, it cannot be claimed that in certain favorable cases there have not been real Mixtures (mélanges). When such were discovered, the task of the linguist would be upset. If the history of several languages has been successfully shown by comparison, it has been certain that each new system could be explained from a single system as a starting point. If one had to recognise two initial systems with reactions on each other, present methods would not suffice. For to be right, one would have to choose between two sets of original forms, which would give rise to such arbitrariness that all demonstration would become almost impossible. In spite of hypotheses put out in this direction, linguists have fortunately never found themselves as yet in a definite position before such a difficulty. To get over it, linguists will have, if the difficulty is really met, to work out new methods, more delicate than those described here, and it would remain to prove them.

Much more recently, Biggs (1972:144) says:

> It will be agreed, I think, that anyone who speaks a language A, knows that he is speaking A, and not a different language B. Moreover, a bilingual can always distinguish between the two languages in which he is competent. True, he may use

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> words, phrases and whole sentences from both languages in a
> single discourse, but at any given point he is able to say
> which language is concerned. It is obviously impossible to
> *suddenly* scramble the two languages in such a way that they
> can be said to be thoroughly mixed... the continuing linguis-
> tic tradition of a language *cannot* be broken, unless it ceases
> to be spoken at all. At any one time a speaker knows what
> language he is speaking. He can never claim to be speaking
> two languages at once, or a fusion of two languages.

Both Meillet's and Biggs' arguments are perfectly true, but those who feel that there are "mixed" languages do not make any such claim. It is very easy to refute a claim that nobody is making!

Thus, while at various times there has been much discussion of the possibility of "mixed" languages, in practically every case the idea has been rejected by linguists. A language, they say, is descended from one ancestor, not two or more; to hold any other viewpoint would be to reject the entire concept of linguistic genealogy. Historic linguistics is imperilled by the proposition that mixed languages can exist.

The problem is recurring at the present day, especially in the classification of certain New Guinea languages. One area of dispute is the south-eastern Papuan region, especially that to the north of South Cape and Samarai, along to Collingwood and Dyke Ackland Bays. Two of these languages have been recently designated as mixed languages – Maisin of the northern area, and more recently Magori, on the south coast, inland from Orangerie Bay. To decide the issue, the idea of mixed languages in general and the nature of these in particular must be restudied.

The author has been a constant supporter of the idea of language mixing, and has been attacked for his views. Linguists have been satisfied to claim that a language may be extensively overlaid by in-trusive elements, but it remains basically a member of whatever family it originally belonged to. A Romance language, such as Spanish, may receive tremendous loans from outside - in this case Arabic - but it remains a Romance language. English may be heavily overlaid with French, but remains a Germanic language. The writer has been represented as claiming that:

> the number of elements from A and B is approximately equal
> and that the range of structural and semantic roles played
> by the sets of elements from A and by the sets of elements
> from B is substantially equivalent. (Grace 1965:3)

However, neither the writer nor any other linguist has ever claimed that a language has two co-equal ancestors! A language may indeed be influenced, even deeply, by another, but yet be classifiable as a mixed language. But a language may also be 'taken over' by another like a

wall whose mortar is eaten out by ivy and held together, so far as it is, in a new way. A mixed language cannot be analysed in terms of mathematical propositions of the A + B kind: it can only be said that an element alien to the original language has gained a dominating proportion of influence in it - as in business one company may gain a dominating proportion of shares in another business - though, of course, the method is different to that found in language.

Andrew Pawley has discussed this matter in a mimeographed paper (Pawley 1969). He says: "in a good many cases the criticims amount to no more than this: the genetic model does not allow mixed languages, therefore there can be no mixed languages". He shows that any definition of a "genetically diagnostic component" of a language will be circular, also that such an "unmixable inner core comprises only a very restricted part of any language". On such a basis, Austronesian languages as a whole would themselves probably be mixed languages, and such an interpretation is actually suggested - though not claimed as proved - in (I)2.10.1. Thence Pawley passes to consider English as one of the best candidates for the title of mixed language, saying:

> no one has ever systematically described the evolution of English syntax, but it is fairly clear that some styles have been deeply influenced by Romance models in many of their constructions. The area of English grammar that has proved impervious to borrowing is apparently pretty restricted.

These statements will be illustrated in the first section of this chapter by a brief examination of certain aspects of English, but before this is done, it is well to point out that, as in more than one case of an unsettled argument, one of the troubles may be lack of definition, or, to put it slightly differently, unconscious use of varying definitions of the same thing by different writers. It is therefore stated here and now that the writer agrees that the idea of a language belonging simultaneously to two different families is to be rejected. Even a so-called "mixed language" has a single parent-language. But such a language also has an invader, and when the balance of relationship to the original mother tongue - the true ancestor - is outweighed by the invader's contribution in lexicon and structure, it is right to speak of a mixed language. It seems wise to add 'and structure', for word-borrowing of itself does not as a rule disturb the essential nature of the language. Indeed there may even be mixing on the phonetic level, as in the case of the adoption of [ʒ] as a phoneme in English.

4.5.1.1.1. *ENGLISH AS A "MIXED" LANGUAGE*

Vocabulary borrowing alone, even though excessive (i.e., beyond the 50% of 'balance', as in English) cannot be taken as disturbing the

classification of a language, but when structural innovations become
numerous, there may be something to be said for the claim that a language
is mixed.

English is a Germanic language with heavy borrowing from Romance
sources as far as vocabulary is concerned. There are, however, several
important structural features that seem to have come in from outside.
One of these is exemplified in the sentence

(1) *He was given a book*

Logically, it is *'he'* that suffers the transfer but the book that changes
ownership. In Old English it was possible to say

(2) *him wearð bōc giefen*

This construction, with an initial dative, was possible in English as
in other Germanic languages. There are still a few relics of it as in
'methinks', in which *'me'* is apparently dative, but these are now archaic
and idiomatic in English, and in fact if used now they add a slightly
humorous touch to the statement. In modern Dutch, however, *mij dunkt*
is still current even though it is changing to *dunk mij* with the modern
syntactic order. Romance, however, as represented by Norman French -
after displacing a Germanic base language! - does not tolerate such a
construction, and the final outcome of the clash is (1), the only current
English expression. The rigid order of Romance has overruled the freer
order of the Germanic base language.

A second example is provided by the clash between the possessive in
-*'s, -s'* and that expressed with *'of'*.

In the sentences

(3) *The choice of a wise man may usually be accepted.*

(4) *The choice of a wise man as arbitrator is essential.*

(3) is the classical 'subjective' genitive and the other the 'objective'.
(3) may be rewritten as

(5) *A wise man's choice may usually be accepted.*

But if (4) is rewritten in the same way it becomes

(6) *A wise man's choice as arbitrator is essential.*

and it would at least be ambiguous: it would leave open whether the
choice came from the wise man concerning another person or whether the
wise man were himself chosen. Only the latter is the meaning of (4).
In American English (6) does tend to occur, but not in British English.

Sentence (5), however, is the normal mode of expression in all
Germanic languages: *'the man's house'* contrasts with French *la maison
de l'homme* - and indeed in most inflecting languages. Sentence (3) is
normal in Romance languages and others that do not have a genitive
inflection. In English, therefore, (5) represents the Germanic type of

genitive which is the 'basic' English type; (3) represents the influence of Romance - French - concurrent certainly with the breakdown of Old English inflection but helping to precipitate it. In such a regard, therefore, English is a mixed language.

Old English, like Latin and Greek, expressed both subjective and objective genitives by the same inflection. Quirk and Wrenn (1955) quote ðæs *biscopes bodung the bishop's preaching* as subjective and *to ēacan ð æs landes scēawinge besides the surveying of the land* as objective. In both instances Latin and Greek would follow the same principles; modern Romance (except Rumanian) would employ an equivalent of *'of'* in the second case.

With equal clarity, *'the selecting of a tie'* or *'the selection of a tie'* would be acceptable, but definitely not *'a tie's selection'* or *'a tie's selecting'*, because now there is a definite distinction between the form of subjective and objective genitive English, with a tendency towards replacing the inflected form (subjective) by *'of'* (objective, now becoming also subjective). The now classical *'the shooting of the hunters'* is ambiguous only because of this syntactic change; the *'of'* form could be passive, if strict rules still applied: *'the hunters' being shot'*, which could never be *'the being shot of the hunters'*. A semantic difference has sprung up in modern English between the two forms, but the existence of the two is due to language mixing. The Scandinavian languages are here the most archaic, in that the possessive is normally an inflected form, and *av* (*af*) is quite restricted. *'The completion of the report'*, *'the delivery of the lecture'* are only of one shape, though one can still say *'the lecturer's delivery'*. Dutch seems to be in a transition stage: *de aanwist van het land* is normal for *'the acquisition of the land'*. In English *'the land's acquisition'* would imply an action by the land itself.

All these cases exemplify language mixture - on a small scale in English structure, but nevertheless real, and serve to support the proposition, based on vocabulary borrowing, that English has some claim to the title of "mixed language".

The preceding section may have seemed to some superfluous or at least unrequired. Its point, of course, has been to exemplify the concept of language mixture in European languages so that it can be discussed more clearly in Austronesian languages. It has sought to stress the position that the term 'mixture' does not imply a sort of confusion of two quite separate languages, so that a person is, so to speak, using two languages at once and is not quite sure at any moment which it is. Such an idea is a caricature. Language mixture is a matter of percentage

'takeover' of one language from another, due to some definite historical
cause. It is now time to study the phenomena observable in the Austro-
nesian field. Attention will be given to two such areas: Eastern
Indonesia (in modern terms) and South-East Papua. The former will be
discussed in terms of the Flores language area, the latter in terms
chiefly of Maisin, spoken in the region of Collingwood Bay, South-East
Papua.

4.5.1.2. LANGUAGES OF THE FLORES AREA OF INDONESIA

4.5.1.2.1. *SCOPE OF THE AREA*

Included in this subgroup are Manggarai, Ngad'a, Li'o, and Sika on
Flores, Hawu and Dao farther south. They are close neighbours to the
non-Austronesian (NAN) languages of Alor and eastern Timor, and on the
north-east lie the languages of the Seran Group discussed in a chapter
on the 'West Papuan Phylum' (see (I)2.10.1.). Sumbawa to the west of
Flores is not unrelated, and it is said that earlier linguistic con-
ditions there were closer to Flores than those of the present day.
Sumbawa is therefore mentioned when relevant.

The languages have an Austronesian (AN) element, chiefly of vocab-
ulary, which varies from region to region. The vocabulary that has
been taken over includes the AN pronouns and numerals. On the phonetic
levels Verheijen (1967) in his *Kamus Manggarai* points out that in Central
Manggarai Dempwolff's *t' is represented by tj, not by s. It is possible
that the AN element in these languages is very early, stemming directly
from Proto-Austronesian (PAN) itself, not from a later stage of the
mother-tongue; s (Manggarai) and z (Ngad'a) arise from PAN *d, *ḍ. In
this case Manggarai /tj/ could be an actual retention, changed almost
everywhere else (and even in other parts of Manggarai) into s. Dempwolff
might then be right in positing not a sibilant but a plosive *t' as part
of his phonemic system. Verheijen, too, may be right in seeing
Manggarai as a "criterion language" from the PAN point of view. The
implications of this possibility for the history of AN are considerable.
In particular if Solheim's suggestion (Solheim 1974) that the Austro-
nesian place of origin was not the mainland of China but the northern
Celebes-Borneo-Southern Philippines region is tenable, then the AN
element in Flores might be extremely early.

Grammatically, none of these languages can be called fully AN: the
presence of AN vocabulary and features has misled students, when in
fact something of the "mixed" language type is the true situation. A
similar situation is to be seen in the effort of R.H. Codrington in his

Melanesian Languages (1885) to fit the Savosavo language of the Central Solomons into the Melanesian languages. A modern examination of the language will be found in (I)2.13.2. It is now quite clear that like other languages of the area, Savosavo is NAN, with some AN lexical borrowing. This was unknown in Codrington's day, and he assumed that all the languages of the region were Melanesian. Perhaps at the present stage it is better to call the languages of the Flores region basically and originally NAN with a high rate of borrowing from AN. A preliminary Manggarai 100-word list has shown 45 only that are AN.

4.5.1.2.2. *PROTO-AUSTRONESIAN GRAMMATICAL STRUCTURES IN GENERAL*

If the preceding statements are to be proved, it must be known what PAN structure really was. Brief consideration must be given to this matter.

Although Pawley (1972) has made an effort to establish the basic grammatical structures of what he calls Proto-Eastern Oceanic (PEO), he acknowledges that this is only tentative. No attempt has been made to do anything similar for PAN, with the exceptions of suggestions by Brandstetter (1911) and very recently by Dahl (1973). However, if any picture of divergent structures is to be reached, there must be know-ledge of that from which the structures diverge. In consequence, some-thing must be established about the chief grammatical features to be ascribed to PAN itself. If the Flores languages are to be established as justifying the term "mixed", it must be shown that they have still a radically NAN structure, no matter how much AN vocabulary may have been taken over into each of them. PAN and NAN must be established before they can be contrasted. The vocabulary could then, if space allowed and the subject demanded it, be studied separately or at least the relative proportions of AN and NAN lexicon could be estimated lexi-costatistically. This chapter sets out to show that if the idea of "mixed language" as set forth earlier is acceptable, these languages are covered by it. The first step, then, is to find what types of formal structure are commonest in acknowledged AN languages, and to compare or contrast this with the Flores languages, including Timor and Seran where available.

In the absence of a generally recognised 'PAN Grammar', Brandstetter's Essay II (Blagden 1916) will be taken as base, supplemented or corrected by Dahl's contribution (1973). Structures that fit neither of these patterns can be left for future reference - and there are such. At the beginning, it may be stated that the focus/voice structure of the northern Western Austronesian (WAN) languages, treated somewhat in

detail by Dahl, is not found in the languages of which Flores forms
part. On the other hand, the 'ergative' type, found in Flores, is not
included in WAN structure either by Brandstetter or by Dahl. To es-
tablish the contention that ergativity could well have been part of
some WAN language at least requires a special study that cannot be
undertaken here.

With this introduction, certain statements as to what constituted
an AN grammatical pattern in the earlier stages of development may be
made.

4.5.1.2.2.1. Proto-Austronesian Grammatical Structures in General Compared with Flores

Brandstetter divided the grammar between words of form and words of
substance. The latter contains general vocabulary, and can be con-
sidered only subordinately in the present study. The two classes of
limited scope where AN influence is strong are the pronouns and the
numerals of the Flores languages, and these will be given space here.

Verheijen himself points out that these languages do not possess the
formatives which characterise modern Indonesian (IN) languages (the AN
type) of PAN origin. The entire morphological system therefore rests
on principles different from those of PAN. While these principles are
not identical in all the languages of this south-central group, there
is a sufficient body of common structure, which is at the same time not
PAN, to be used as a guide to what the language could be like if AN
influences were abstracted. It is best to make some remarks on syntax
first.

4.5.1.2.2.1.1. *Syntax*

Certain features on the level of syntax stand out, most of which can
be seen as akin to those of the NAN languages to the east of them, in
Alor and Timor. The grammatical structure of Hawu deviates to a degree
but is not radically different.

In the NAN languages, the verb is invariable for person. In
Manggarai and Hawu, person is indicated by a pronoun after the verb, as
in Hawu ta kako ja *go-I, 'I am going', 'I shall go'*. Manggarai has
ŋo-k *I am going*, where the person suffix -k is AN *aku *I*, but the stem
ŋo *go* is NAN – and this combination is typical of much in the area.
In the other languages person is shown by a pronoun before the verb,
in keeping with their preferred S(O)V order; Hawu and Manggarai prefer
V(O)S. In both these languages the ergative construction occurs if V

is transitive. In Manggarai the ergative marker is lé, in Hawu ri. It
is surely not too imaginative to see Malay oleh in this particle, and
to regard the so-called Malay passive with or without di- and oleh as
really ergative. The writer at least does not think that it is impos-
sible and is inclined to regard the 'central' languages (Atjeh-Malay-
Java) as originally ergative languages also.

As noted above, one of the features of these languages is the adop-
tion of the AN pronouns throughout Hawu-Dao and Flores-Seran; in Alor
and Timor they were not adopted in the recognised NAN languages such as
Bunak and Makasai. In the ergative language of Hawu, the pronoun
follows the verb in all cases, and the ergative marker is used if the
verb is transitive. In Manggarai the pronoun suffixed to a transitive
verb is its object, the subject then being marked by a following free
pronoun with the ergative. So we have ŋo-k *I am going*, but tjampi-k
help me. Moreover, in a series of verbs, the suffix is added only to
the last: ŋo-t *let us go*, but ŋo tjeboŋ-t *let us go and swim*, and even
transferred to an adverbial phrase after the verb: ŋo tjeboŋ lau
tatjik-t *let us go swimming in the sea*. In a transitive clause, while
a pronoun object can be added to the verb, a subject is introduced by
the ergative lé:

> lé pai   pandé-d   lé   hau?
> *with what make-them erg. you*
>
> *'With what did you make them?'*

This follows from an ergative construction with a basic VOS order.

The wildest imagination cannot attribute structures of this kind to
PAN, and they are basic to these eastern languages. That such a con-
struction originally belonged at least to Western Timor appears in the
Western Timor practice of suffixing a pronoun subject to a verb even
when a pronoun subject precedes: Kupang au lako-ŋ *I am going*, and here
the suffix can be transferred to certain other units of the clause,
before the verb (Capell 1944,15:39).

The ergative construction is found also in Sumbawa, where the marker
is liŋ: ia beaŋ mo liŋ Salam lako guru *Salam gave it to the teacher*.
Here the same duplication of subject marker occurs: pronoun (ia) before
the verb and the other after the ergative. Sumbawa differs from Flores,
however, in not adding a suffixed pronoun object to the verb: sia tudja
aku boso *you pound me rice*, *'pound some rice for me'*.

4.5.1.2.2.1.2. *The Pronominal Systems*

Pronominal systems have often been included among the more stable
elements of a language; they are one of the things that help to mark

English not only as Teutonic but as western Teutonic. It is less usual
for pronoun systems to be borrowed in language contacts. In the Flores
languages and those of Seran the pronouns are AN - at least in first and
second persons - although there are some unexpected remnants in Seran.
What the pronouns of the pre-AN languages of Flores were can only be
guessed at, because in them an AN system has come into being. A contrast
is here presented between NAN pronouns in this region (Alor-Timor) and
AN pronouns (Flores-Seran) in Tables I and II.

The pronouns of Taole I, those of admittedly NAN languages, are
obviously not AN. Their nature is more fully discussed in (I)2.10.1.
Those in Table II, A and B, the Flores and Seran languages, are equally
obviously AN, except for a few of the Wemale (Seran) and Amahei (Amboyna)
forms.

The basic PAN pronouns have been taken as established by Dempwolff;
latterly, however, a revised form has been presented by Dahl (1973:122),
in which the Formosan languages are taken into account. These are
exhibited in Table III.

Detailed discussion of these pronouns will be found in Haaksma (1933)
and is not needed here. The point of interest about them, apart from
the fact that they are borrowings which have displaced some older forms,
is the different treatment they receive syntactically in Manggarai,
Ngad'a and Hawu (to pick three languages) from that which falls to them
in Western AN languages. The occurrence of NAN pronouns is seen in the
Seran and Amboyna examples, the more interesting in that they do not
occur in all the languages of those islands.

TABLE I: COMPARATIVE TABLE OF ALOR-TIMOR PRONOUNS (NAN)

Person	Abui	Bunak	Makasai	Fataluku	Oirata
1sg.	na, nedo	neto	ani	ani(ro)	anri
2sg.	e(do)	eto	al	e(ro)	e:ri
3sg.	he(do)	himo, homo	gi	tava(ro)	ue
1pl.incl.	pi(do)	i	fi	afi(ro)	apri
1pl.excl.	ne(do)	nei	ini	ini(ro)	inri
2pl.	re(do?)	el	i	i(ro)	i:ri
3pl.	he(do)	himo, homo	ena	tava(ro)	waye

TABLE II(A): PRONOUNS OF FLORES AND HAWU (SAVU)

Person	Manggarai	Ngad'a	Sika	Solor	Hawu
1sg.	(k)aku	dzao	aʔu	go	ya
2sg.	hau	kau	au	mo	au
3sg.	hia	gazi	nima	nae	no
1pl.incl.	(t)ité	kita	ita	tité(i)	ḍi
1pl.excl.	(k)ami	kami	ami	kamé	dji
2pl.	méu	miḫu	miu	mio	mu
3pl.	(s)isé	ḫemu	rimu	rae	no, na

TABLE II(B): PRONOUNS OF WESTERN TIMOR, SERAN, AND AMBOYNA

Person	Timor		Seran Wemale	Amboyna Amahei
	Roti	Kupang		
1sg.	au	au	yau	au
2sg.	o	ku	ale	ale
3sg.	ndia	un(a)	ili	iri
1pl.incl.	ita	kita	ita	ito
1pl.excl.	ami	kami	yami	ami
2pl.	emi	mi(a)	imi	imi
3pl.	sila, ala	one	sia	siri

TABLE III: PROTO-AUSTRONESIAN PRONOUNS AS RESTORED BY DEMPWOLFF AND DAHL

Person	Dempwolff	Dahl	
1sg.	*aku	*aku, a(N)kən	*ku
2sg.	*kaw	*iSu, ka	*Su
3sg.	*iya	*ia	*na
1pl.incl.	*kita	*(k)it$_1$a	*t$_1$a
1pl.excl.	*kami	*(k)ami	*mi
2pl.	*kamu	*(k)amu	*mu
3pl.	*t'iḍa	*t'iḍa	-

It is of interest to note that the inclusive-exclusive distinction
in the first person non-singular is present in both the AN and the NAN
languages. Cowan (1953) found it to be widespread among those NAN lan-
guages of the western and north-western parts of the New Guinea mainland
which are included in his study. It may therefore be possible to ascribe
it to the original NAN languages of the islands, but there is evidence
that it actually was a development, not an original feature. The evi-
dence for this is shown and discussed in the study of the West Papuan
Phylum (NAN) in (I)2.10.1. If the forms in pi in the NAN languages are
rightly interpreted as originally general ('one', on, man) expressions,
then their spread to the islands must have been very early, pre-AN.

The third person singular forms do not show the mutual agreement
that appear in the other pronouns, and AN i(y)a or na are not usually
in evidence. In the third plural however, they are found, and are often
compounded with the personal marker or article si (AN), but this is by
no means universal and looks like a later development on the spot.

In AN languages it is usual to find short forms of the pronouns
suffixed to nouns to indicate possession, e.g. Malay rumah-ku *my house*.
In this feature the Flores languages are largely, though not entirely,
deficient. In Ngad'a the particle da is employed with a kinship term:
da həma *his father, your father*; da həma gazi kənana *your father*. In
other cases, the cardinal pronoun follows the noun in an unexpressed
genitive relation: həma dzaö, həma kau *my father, your father*. Other-
wise simply da occurs: kiu da lima *cut his hand*; rae da saö *destroy his
house*; da hine həma gazi *his parents*. This is in keeping with the
normal placing of the genitive after the governing noun. Where two
nouns are in a genitive relation the order is N_1 + go + N_2 : dzara go
radza *king's horse, horse of king*, but ŋata can be substituted or added:
dzara ŋata radza, dzara go ŋata radza.

In Manggarai, however, there are suffixed pronouns, some of which
are used as in AN languages, e.g. aśeg *my brother*; others are based on
a root di which marks possession: rona d-aku *my husband*, and takes the
forms daku, di or de hau, diha, dité, dami, de méu and disé in the
various persons. However, the usage is not governed by the normal AN
rules; Manggarai has, for instance, nias djaraŋ-dé *where are our horses?*
using the suffixed pronoun. Moreover, the suffixed pronouns are trans-
ferred to a number of words which are not possessives, e.g. dio-n
different, apart, in dio-n kaʔéŋ data pélésina, dio-n dité *the spirits
and ourselves live apart from each other*; mori- *property of*: isé mori-d
atju hoʔo *they their property dog that, 'that dog is their property,
they own that dog'*.

In Hawu, there are no suffixed forms at all; possessives are treated
as adjectives and follow the noun directly, no matter what their nature:
djara ja *my horse*; are ja *my younger brother*; ana au *your child*; due dji
our palm wine.

In all these constructions there is very little that can be called
AN. It is in the eastern, Solor, area that a simplified form of AN
construction begins to appear: witi naku né onen *that goat its inside,
'the goat's temper'*, which is exactly parallel to Buru géba riné poson
man his heart. In Solor, however, there are suffixed pronouns which
are not limited to 'inalienables', e.g. laŋu-k *house-my*.

It would thus appear that AN pronominal forms have been borrowed into
these languages without full understanding of the AN usages. It is just
about this part of western AN where a distinction begins to be made
between nouns that do and nouns that do not take suffixed pronouns. In
the west there are no such subdivisions: apaŋ-ku *father my* and human-ku
house my. These subdivisions begin precisely in the areas under con-
sideration here: Flores, Seran, Timor and southern Halmahera. For
detailed examination of them see Haaksma (1933:chapter 6).

4.5.1.2.2.1.3. *The Numeral Systems*

As in the case of Dempwolff's pronoun series, those of his numerals
have recently been modified by Dahl in terms of more recent studies in
which the Formosa languages are accommodated, so that the two lists take
the following form:

	1	2	3	4	5
Dempwolff	ət'a, it'a	ḍuva	təlu	ə(m)pat	lima *(= hand)*
Dahl	it'a	dʒuSa	t_1əlu	Sə(N)pat_1	$l_1$ima

	6	7	8	9	10
Dempwolff	ənəm	pitu	valu	t'iva	puluh
Dahl	uən$_1$əm	pit_1u	ualu	t'iua	puluq

Dahl adds: "From 20-90 the numerals are generally composed of *puluq
preceded by the other numerals. UAN *ɣatut', 100, is not found in
Formosa." It is found, however, in the Moluccan area.

Contrary to expectation, if the Flores-Seran languages are really
basically NAN, the AN pronouns have been taken over in all of them (even
the less influenced Hawu). It is unexpected because pronouns usually
have been considered one of the 'deeper' elements of a language. How-
ever, in these languages, numerals also have been taken over, but not in
their entirety, as the pronouns have. Table IV shows the first ten
numerals in the Flores-Seran languages.

All these languages show themselves to have the AN decimal system except Ngad'a. Here is found what in the Melanesian area is referred to as 'imperfect decimal', i.e., a word for *ten* but from five to nine counting by additions to *'five'*. The numeral four, in Ngad'a, Li'o and Sika is NAN; from five to nine, the addition process is followed in Ngad'a and Li'o. Here, then, there is the partial obliteration of an earlier system of counting, more in line with the Melanesian type.

TABLE IV: NUMERALS IN THE FLORES-TIMOR LANGUAGES

	Manggarai	Ngad'a	Li'o	Sika	Solor	Kupang
1	-tja	(ə)sa	sa, esa	ha	toʔu, hé	mesa
2	sua	zuha, ruha	rua	rua	rua	dua
3	təlu	təlu	telu	telu	tə́lo	tilu
4	pat	vutu	sutu	hutu	pa	a:
5	lima	lima	lima	lima	lema	lima
6	enem	liməsa	lima sa	ena	nəm	eniŋ
7	pitu	lima zuha	lima rua	pitu	pito	itu
8	alo	lima butu	rambutu	walu	buto	falu
9	tjiok	tara əsa	era sa	hiwa	hiva	sipa
10	-mpulu	səhulu	sa mbulu	pulu	pulo	sŋulu

The AN numerals have been borrowed into the definitely NAN languages found in east Timor, such as Fataluku, where they show as follows: *1.* ukani; *2.* eče; *3.* utué; *4.* fati; *5.* limé; *6.* nemé; *7.* fitu; *8.* kafa; *9.* siva; *10.* taʔané. One, two and ten are still NAN, the others are borrowed. In Lovaea, however, which may be regarded in the present state of knowledge as an aberrant family-level isolate (see (I) 2.10.1.1.1.3.), all but *'ten'* seem to be AN: *1.* itetlá; *2.* urua; *3.* oke:lo; *4.* oaka; *5.* olima; *6.* one:me; *7.* o:iko; *8.* ósia; *9.* oava; *10.* ide:li. Here there is apparently confusion in the use of ósia for *'eight'* instead of *'nine'* and a strange word for *'nine'*; moreover, there is a prefix o-, which evidently represents wo-, a common classifier widely used with numerals in Timor, Leti, Wetar, Kisar and Seranlaut. The NAN Makasai has adopted AN words for five, seven, eight, nine, and Bunak has them for seven, eight, and nine. Evidently these replace an earlier quinary system. The whole series shows a penetration of AN into NAN areas.

The aberrant numeral for *'four'* is not entirely unexplained. Verheijen gives a Manggarai word wutuk *pile up*, as yams, etc., to which he tentatively equates Ngad'a vutu and Li'o sutu; hence the word would mean a

'pile'. In some areas, such as Vanimo in New Guinea, counting is by
fours, so that the equation is possible, and if it is correct, points
back to a system of counting not by fives but by fours as prevalent in
the Flores region. The Ngad'a and Li'o words for nine using tara əsa
one place era sa, seem to link with Manggarai tara *place, receptacle,*
e.g. tja tara tjepa *one receptacle for betel nut,* and Verheijen quotes
tara tjepa pitu 'tempat-tempat sirih (ada) pitu' *(seven receptacles for
betel nut)*. Even if these comparisons are correct, they represent ideas
quite NAN.

4.5.1.2.2.1.4. *Formatives*

The term 'formatives' is substituted here for Brandstetter's "words
of form", under which heading he includes articles, prepositions,
negation and conjunction. The last, however, belong to lexicon, and
as formatives the present chapter will treat articles, and verb and
noun formatives. All these play clear parts in PAN structure, but the
correspondences in the Flores languages are in most instances quite
different. In fact Jonkers, in his Dao story included in the *Album
Kern* (Jonkers 1903), stated:

> as far as the grammar (of Hawu and Dao) is concerned, the
> only prefix of Malayo-Polynesian origin that still has living
> power in Sawu (not to mention such petrified remains as ma,
> Sawu me, in manafu, Sawu menawu ('fall') etc.) namely, pa
> (Sawu pe) that forms causative and reciprocal verbs, is also
> met with in Dao: patalale, Sawu pelale 'let loose' ... But
> of the elements that form the newer Sawu grammar, such as
> the prefixes ta, do, etc., there is no trace in Dao.

Yet Kern had, in his 1892 work, tried to force Sawu into an Indonesian
pattern.

4.5.1.2.2.1.4.1. Articles

Articles play a definite part in AN languages, both western and
eastern. They are usually absent from the NAN languages in this area.
They are absent also from the Flores-Hawu-Timor-Seran languages here
studied. There are various means of emphasising or individualising a
noun in these languages, bringing it into topic situation, but no
defining articles like English *'a'* or *'the'*. Demonstratives are not
considered here, though the Manggarai equivalents are of interest in a
fuller study. For Ngad'a Arndt (1933a) states that there are no
articles, but go serves to mark emphasis. Neither are there any noun
classes even for possession in Flores - Seran has some suffixed pro-
nouns - and this holds for Manggarai also. Hawu, on the other hand,
has a particle do which is almost an article, but it is repeated in a

N + A phrase before both members: do d̪ida do medera *the house (the)*
high.   The first do sometimes does not appear: ana do iye *the good*
child or *a good child*; wowadu do worena *large stones*.   Capell (1944,
15:31) in dealing with articles in the NAN languages of Timor, remarked:

> there is not much to be said under this heading, because there
> is only one language in the Timor group in which they occur,
> and that is in Kupang.   In Roti there is a suffixed a that
> functions as an article, e.g. nau a 'the grass', and this is
> a word found in other parts of the IN area, chiefly Celebes
> and the north.

Brandstetter had already pointed this out (Blagden 1916:102), as well
as the fact that the a article in IN can be used either before or after
the noun in different languages.

The absence of articles in these languages is one departure from
common PAN usage which serves to set them apart.

4.5.1.2.2.1.4.2.   Formatives of the Verb Phrase

It is in the verb phrase that these languages depart most markedly
from the AN picture.   Brandstetter deals with certain active formatives:
ma-, n-, ma-ŋ-, ba-, -um- and what he calls passive formatives -in-,
ka- and ta-.   These would be analysed rather differently – and some of
them quite differently – nowadays; the point at the moment is that
whatever their function and history they do mark languages classifiable
as AN.   He mentions also a transitivising suffix -i and a causative
prefix pa-.   These all occur in Oceanic languages as well, and
Brandstetter might have included a reciprocal baɣi- prefix and a remoter
transitive -akən- suffix.   For these in PEO see Pawley 1972.   Various
modifications and compounds of them extend into eastern Melanesia and
some into Polynesia as well.   Thus in Efate (New Hebrides) there are
such forms as lifai *bend round*; malifai *bent*; lofa *a thing bent*; lofai
to bend something; malofa *bent*, as well as kalofa, kalofe *bent*, and
lofe *something bent about the loins*, cf. PN lavalava *loincloth*.

A quotation from Jonkers has already stressed that most of these
PAN formatives are missing, not only from the NAN languages of Eastern
Indonesia but also from Sawu and Dao.   They are in very weak evidence
also in the Flores-Seran languages.   Stresemann has a chapter on form-
atives in Seran and Amboyna (Stresemann 1927:147-65).   Some that are
probably AN such as -ən- appear only in Tifu (Buru) sometimes on a noun
base, and have no influence on its meaning, such as PAN *t'iku *elbow*,
Proto-Amboyna *siku, Buru əsnekun < səneku-n.   Similarly ma- may appear
without meaning, e.g. Proto-Amboyna *vina(y) *woman*, Sapalewa bina,
Buru fina, but Amblaw elfina, Nusalaut mapina.   This -ən- does not

appear to be AN (it should not be equated with -in-), but others appear
which are not AN at all, e.g. wai- as formative of a passive participle:
Proto-Seran, nəvu *pull out*, Paulohi wainehu *pulled out*. Alongside such
NAN formatives are found AN pa-, causative, ma-, active, and some others.

Even these, however, do not appear very commonly in the Flores-Hawu
region. Hawu has causative pə- < *pa- but even this within limits.
Ngad'a, for instance, does not use the common -i transitiviser; there
is no formal means of expressing transitivity: rəpu vedzo go tana *the
earth-spirit shakes the earth*, and tana kənana b'aï vedzo vali *the earth
shakes no more*. The complicated uses of pronouns to indicate transitive
and intransitive verbs in an utterance in Manggarai has already been
mentioned. If there is no expressed object, the verb can be regarded
as intransitive, but it may also be reflexive if a suffix is present
but refers to the subject: radja rémé haŋ-n *the king was at-eating*;
toé ma a atju te haŋ-d *there was no dog to eat-them*. The complications
of Manggarai appear in the following sentences:

> ba-s   l- ami mendo situ
> *carry-them* erg.-*we weights those*
> '*we shall carry those weights*'

> tuké-j   l- iha potjo   hitu
> *climb-it* erg.-*he   mountain that*
> '*he climbed the mountain*'

Even Malay djadi *become* (Manggarai djari) can also be transitive (*make*)
in the latter language. The chief deity is called djari agu dédék
creator and maker. Position in the sentence is enough to distinguish
active verb from passive participle: tapa nuru *roast the meat*, but nuru
tapa *roasted meat*; bo latuŋ *fry the rice*, but latuŋ bo *fried rice*.

Languages that structure in this way are quite apart from PAN types,
even if the bulk of the lexicon can be shown to be PAN.

Similarly in Ngad'a, verb and noun are often formally undistinguished,
voŋa *flower, to bloom* (PAN *buŋa); lië *fruit, bear fruit*. There is a
proverb d'u vatu voŋa, neë nage lië *till the stones flower and the rocks
bear fruit* (i.e., never) quoted by Arndt. Even a passive has no special
form: neha go saö *leave the house*, but saö da neha *the house is deserted,
deserted house*. A clear example of departure from PAN usage even in
the case of a PAN word is Ngad'a naŋi *cry* < PAN *(ŋ)taŋi, but naŋi can
also be '*cry for*', for which Oceanic languages produce *taŋi-si-a.

4.5.1.2.2.1.4.3. Formatives of the Verb

Formatives of the verb in the verb phrase are of importance in the
western AN languages, and have been mentioned above. Some are concerned

with tense indication, some with aspect and mood, some with voice. The
matter of voice in western AN languages is undecided; whereas it was
earlier held that all the languages had a passive voice, this is not
now so generally agreed. A recent Indonesian writer on his own lan-
guage even holds that the presumed Malay passive in di- applies only
to the third person; there is no passive for first and second person
(Slametmuljana 1969:97 and elsewhere). The present writer would go
further and hold that di- is not a passive marker, and Slametmuljana's
writing seems to be part of this interpretation. At the moment, this
is irrelevant; the point is that the Flores and generally eastern sec-
tions of western AN do not have possessive passive formatives at all.

Arndt (1933a) does not envisage a passive, but rather an impersonal
construction. Speaking of native marriage, he states that "when a woman
gives herself to the man's house, she becomes reckoned as a member of
the man's family". His text is:

mali hana fai   kəna da laä   ja saö hana xaki, kəena
     child female that   enters into house person male   that

gazi da ge ja neë meä hana   voha gɔ da da xaki kənana.
she   person   man that

This is an impersonal rather than a passive construction.

In regard to Manggarai, Burger (1946) is equally sure that the lan-
guage has no passive forms though some may seem to be passive: nuru tapa
roast (the) meat > tapa nuru *roast meat*; latuŋ bo: *fry the rice* > bo
latuŋ *fried rice*. These, of course, are adjectival or stative forms
rather than true passives. "If the verb stands in front of the noun,"
he says, "it is active." *The mother looks for her child* may be endé
momaŋ anak-n, but it may also be anak momaŋ le endén. This is not a
passive, because the verb carries no passive formative; it is an erga-
tive construction, such as has already been mentioned, and this is the
normal means of expression with a transitive verb: ite le hau? *Did you
see it?*; ita laku! *I saw it!* If the verb follows the noun it becomes
an adjective. Burger gives: téku wai *draw water*, but wai téku *(place
in river for) drawing water*; limé toso *pointing finger*; buru poté *wind
whirling*; ata tako *thief*; salaŋ tuké *an upward climbing way*.

It is thus clear that the AN infix -in- did not penetrate into these
languages, although Stresemann is able to show traces of it in the
Seran-Amboyna languages, if the infix -ən- is to be identified with it,
forming past participles passive.

The only AN prefix apart from the stative ma- that gained wide
currency is pa-, causative, and this is found in Seran and in Hawu (pə-),
but not in Flores. Causatives in Flores tend to be formed by means of
a root tau *do*. This is used literally in Ngad'a mihu tau go hapa vi

dihana? *You are doing what here?* In Manggarai it has a number of
derived uses, and Manggarai also has a verb hena-, answering to Malay
kena, e.g. inéwai hitu hena-n kéta oné nai-n *that girl pleased his
heart greatly*. It is only in Hawu and Dao that pə- functions as a
causative, e.g. pəḍa *be sick* > pe-pəḍa *cause pain to*. In this language,
curiously enough, the completive particle əla requires the following
verb to assume the causative form: əla pe-tao harihari *when he had done
all* from tao *do, make*; ta əla le harihari pe-kədji *when all (the rice)
had beem stamped*. In Solor also, a phrase takes the place of a causa-
tive prefix; in a story Arndt (1937) has mo ébaŋ raran, go pana *you make
free way I go*, i.e. *'set the way free for me to go'*.

The normal AN markers of tense and mood are not found in the Flores
languages. Various adverbial markers are used if time has to be made
clear. In Manggarai the time is often to be gathered from the context,
as some of the examples already given will have shown. Adverbs such as
meseŋ *yesterday*, diaŋ *now*, to?oŋ wié *a coming time* also help out time
indication, e.g. to?oŋ hia mai no?o *he's coming immediately*. Kudut
about to begin and tai *future* are not necessary, but it is interesting
to note that in Tetum, Betu and Waimaha (AN languages found in eastern
Timor) sei before the verb may mark a future. Kudut and tai point to a
later completion of an act. Completion may be marked by poli as in
poli lompoŋ toko-s ga *after eating they got up* (-s = *they*). Verheijen
traces this word to moli *finished*, as in haŋs méu gi-a? *Have you (pl.)
eaten?*, and links it with Ngad'a muli and Riung muli *all*: in which case
it is probably PAN *m-uli *behind, after*.

A future may be shown in Manggarai also by a suffixed -t: taé de
ronan: ŋo emi atin, aku-t haŋ *the man said, go and bring the..., I will
eat*. In this there is to be seen the verbal marker of Hawu, ta, which
may mark a future as in ta kako ja *I am going, shall go*, but simply
marks a verb as such. There is also maŋa *a sure event*: le mané ho?o
méu maŋa tiba nurus méu *in the evening you will get your food* - it is
certain that you will.

In Ngad'a there is a complicated system of modal particles, in which
tense plays only a small part. Some of the markers are:
(1) da: assertive: go hate gazi mu boza, da nira go musu *his heart
failed as the enemy came on*.
(2) le, emphasis or intensity: Malay lah: mai le *come now*.
(3) děle < da la: kami huge děle mogo *we are both of the same mother*.

It may also form a past participle passive equivalent to Malay and
related forms. Similarly, ziho hana *wash a child*; go hana da ziha *the
child washes (himself)*; go hana da ziha ya *the child has been washed
already*.

(4) mu means that something is done with some difficulty, or that it
'becomes' or is possible: go hate gazi mu bozo *he got angry*; gazi noö
mu rita *he could do nothing else*; saö kəna mu modu ya *the house is at
last ready*.

(5) mara *becoming through accident*: dzao da gohe go hulutu mara si *I
fell down and my knee swelled*. Mu si would be a sudden swelling.

(6) ba, equivalent phonemically to Malay be- but meaning *'but'*, *'yet'*,
hine vi supu, kau ba ŋiha b'əŋu *mother tells you to do something but
you put on a sour face*.

(7) noö, sequential: gazi da piha xui ŋiha vatu lanu noö punu nadzi
he puts the sacrifice on the altar, then says (a prayer).

(8) ŋa, nəŋa, continuity: raä ŋa surosuro *blood keeps flowing*.

(9) d'aŋa, d'ama, habit: rivu d'aŋa mera *the people have a proverb*.

   Although there is no completive particle, future may be indicated by
one of a number of markers which precede the verb: vi, ŋa, vəŋa, nəŋa,
bèŋa, or tuku.

   These examples are drawn from Arndt's (1933a) grammar. The system
they show seems to have nothing in common with PAN.

   Although there is no Li'onese grammar available, the examples in the
extant dictionary (Arndt 1933b) show systems similar to those of the
other languages, and quite apart from the PAN.

4.5.1.2.2.1.4.4. Formatives of the Noun Phrase

   The identity in form of noun and verb in PAN is not so frequent as
it is, e.g., in English - *'love'*, *'care'*, etc. In PAN there is a number
of formatives, among which Brandstetter (1911:39) mentions ka-, -an-,
and -an, prefix, infix and suffix all playing parts. In Flores such
identity is frequent, and there are few nominalising affixes. In Seran
there are numbers of them, but they are not identical with those of PAN
(Stresemann, 1927:147-64) and there are the noun suffixes already men-
tioned earlier. The Timor-Alor languages tend, however, to agree with
the Flores languages more closely.

   In Hawu a few prefixes are found, e.g. kiu *scrape* > kekiu *a scraper*,
but hi *a string* > hi djara *to tether a horse*, hi manuk *tie up a fowl*.
The same processes are followed in Ngad'a: voŋa (i) *a flower*, (ii) *to
bloom* - it is hard to say which is basic, but the word looks like the
PAN *buŋ *bloom*, *buŋa *a flower*.

   In Manggarai there is the same identity between noun and verb in
many cases, e.g. tjampé *to help*. *'Help'* - Malay bantu, bantuan. On
the other hand, the word ata *person* - common to all these languages -
serves as a relative pronoun, e.g. Manggarai danaŋ maŋa tjaŋata ana kaé

ata mata ende-n *once was a child small* ata *dead mother-his*, *'once there was a small child whose mother was dead'*.

It is not necessary to say more than this to show that the Flores languages have not much in common with the AN languages in the treatment of the noun.

4.5.1.2.3. *THE VOCABULARY OF THE FLORES AREA AS COMPARED WITH PROTO-AUSTRONESIAN*

A list of 192 English words used by Sneddon (1970:20-6) for comparison with Minahasa languages shows only three - *'mountain, sibling, vomit'* - that are not Teutonic. This is a very small proportion: of course, with a different wordlist many more might have appeared. The important point is that basic English vocabulary, as lexicostatisticians use the term, shows comparatively little borrowing from Romance sources. It is true that some items are not Anglo-Saxon, but are borrowed from Old Norse or other sources. Yet the great majority of words in use in colloquial English tend to be of Anglo-Saxon heritage. By way of contrast, only an average of 69 words out of 100 have been found to be of AN origin in Manggarai (according to the nature of the lists used), and in Solor only 22 such words appear on average. This fact has certain consequences which have influenced the classification of these languages. This section of this chapter will give 106 words in Manggarai, Ngad'a, Li'o, Sika, and Solor, and will thus provide information as to what those who support the idea of "mixed" languages really mean. The same process will later be applied in this study to the Maisin language and its neighbours in South-East Papua (see 4.5.1.3.2. below).

4.5.1.2.3.1. A Hundred-Word List in Flores Languages

On the evidence of the preceding pages, Flores languages might well be classified as NAN, like those of the Alor-Timor Group treated in the chapter on the West Papuan Phylum (see (I)2.10.1.). The difference lies in the fact that in the West Papuan Phylum languages, both vocabulary and structure are NAN. In the present instance, a proportion of the vocabulary is obviously borrowed from AN sources, and if Verheijen's observation about /tj/ is right, directly from PAN. The system here being followed is a modification of the normal lexicostatistical approach, in that only the PAN element in each language is statistically treated, not the NAN element. Cognate percentage count of interrelationship is given in the usual terms of percentages; a simple count of how many words of each language are PAN is given, and the proportion

of PAN in each language is then an indication of the relationship of
the languages to each other. The structures do not appear to indicate
a single basic proto-language. It is a matter of borrowing - mixing
with PAN - to a different degree in each language. The Seran languages
are differently constituted, and will call for a special note.

English	PAN	Manggarai	Ngad'a	Li'o	Sika	Solor
1. *all*	*abih	saŋge			nete, sawe	gə'tan
2. *ashes*	*abu	rawuk	awu	awu	awu	kavuk
3. *bad*	*d'ahat	da'at	see	ree	raa, gois	datan
4. *banana*	*punti	muku	muu	muu	muu	muko
5. *bark (tree)*	*kulit kaju	loke			ain ue	
6. *belly*	*tijan	bara		tuka	taiŋ	tai, alen
7. *betel*	*pinaŋ	ratji		keu	wua, taa	weu, malu
8. *big*	*ɣaja, laba	mese	meze, mere	mere, ria	gete	bəlaŋ
9. *bird*	*manuk	kaka leiap	manu (hen)	uge age	heneha horoŋ	ko:ton
10. *bite*	*kaɣat	akit		pekit	toki	gii, gike:
11. *black*	*ma+hitam	miteŋ	mite	mite	mitaŋ	miten
12. *blood*	*daɣah	dara	raa			mei
13. *bone*	*ḍuɣi (thorn)	toko	toko	toko		riu
14. *breast*	*t'ut'u	tjutju		susu	susu	tuho, korok
15. *burn, roast*	*tunu	tapa		bui, dzeŋi	bara	tuno
16. *child*	*anak	ana	ḥana	ana	me:	ana
17. *cloud*	*awan	rewuŋ			rewuŋ, kiu	kovan
18. *cold*	*diŋḍiŋ	tjeos, tjes		keta	bəlataŋ	gəletaŋ
19. *come*	*maɣi	tjai, mai	mai	mai	mai bou	pai, be:to
20. *die*	*mataj	mata	mata	mata	mate	mata
21. *dig*	*kali	tjake	seka	seka	gali	galin
22. *dog*	*asu	ajtu		lako	ahu	ahò
23. *drink*	*m-inum	inuŋ		minu	n-inu	n-inu
24. *ear*	*taliŋa	tilu	xiŋa	kiŋa	tiluŋ	tilun
25. *earth*	*tanəh	tana	tana	tana	tanah	tana
26. *eat*	*kaən	dako		ka	g-a	gaān
27. *egg*	*təluɣ	ruha		telo	teloŋ	teluŋ
28. *eye*	*mata	mata	mata	mata	mataŋ	matan
29. *father*	*y-ama	ema, amé	ḥema	hema, amé, bapa	ama	ama, bapa
30. *fear*	*takut	sihiŋ		tau	bərau, raeŋ	taku
31. *feather*	*bulu	wulu		sambebuar	wuluŋ	
32. *fire*	*apuy	api	ḥapi	api	api	ape:
33. *fish*	*ikan	ikaŋ	ḥika	ika	iaŋ	ikan
34. *flesh*	*isi	itji	xui, ui	isi, boti	botir	boti, mə'tan
35. *fly (n.)*	*laŋaw	lali	ḥalé			kanapuŋ
36. *fly (v.)*	*ləmbaw	lélap	léla	léla, haï	horoŋ	bəka
37. *foot*	*wahaj, kaki	wai'	wai, hai	(h)ai, ɣai	wai	iein
38. *fruit*	*buwah	wua	llë	wua	wuaŋ	wuan
39. *give*	*bəɣaj	takuŋ		pati	bəli	
40. *go*	*panaw	ŋo	duha	mbano	bano	na?i
41. *good*	?	dia	djia, ria	djia	epaŋ	əpan, ar'eŋ
42. *green*	*hidjaw	taä	djaä	djaä meta	daän	
43. *hair*	*bulu	wulu, wuk		kolo fu; (body: bua)	loweu, aiaŋ ro:n	rata
44. *hand*	*lima	limé	limé	limé	limaŋ	liman
45. *head*	*ulu	ulu	fu	kolo, ulu	aiaŋ	kotan
46. *hear*	*dəŋəɣ	dené	dené	lele	rena, diri	dəŋa
47. *house*	*ɣumah	mbaru	saö	saö o'ni	lepo, o'riὶ	iaŋo
48. *I*	*aku	aku	dzaö	a?u	au	go(?e)
49. *kill*	*bunuh	mbelé	vela, zoze	tebo, taumata	dola, bati	səbəlé
50. *knee*	*tuwəd	tu'us	ḥulutu			
51. *know*	*tahun	ŋepuk	beo	bmes	raitaŋ	koju
52. *leaf*	*ḍawən	sauŋ		até	roen	lolon
53. *lie down*	*inəp	toko		neté whohé	buhé, pəlain	

TABLE V (cont'd)

English	PAN	Manggarai	Ngaɗ'a	Li'o	Sika	Solor
54. *liver*	*ataj	atl	ḥati		wateŋ	aten
55. *long*	*pandaŋ	léwé		béva	bəlo:ŋ	bəlahan
56. *louse*	*kutu	nom			utu	kuto:
57. *male*	*laki	rona	xaki	haki, kaki	lameŋ, lai	atendikan
58. *moon*	*bulan	wulaŋ	wall	vula, moki	wulan	wulan
59. *mountain*	*gunuŋ	golo, pot	volo	keli	ili(ŋ)	kiwan
60. *mouth*	*babah	muü		vivi	ma:n, memuŋ	wowan
61. *name*	*(ŋ)ag'an	ŋasaŋ	ŋaza		naraŋ	naraŋ
62. *new*	*bəhaɣu	weru			wò	wuün
63. *night*	*(m)bəŋi	wié			gumaŋŋ	rema, nokon
64. *nose*	*(ŋ)lduŋ	isuŋ	ŋizu	idju	iruŋ	lrun
65. *not*	*di	toé		iwa	oa	eoŋ
66. *person*	*og'aŋ	ata	ata	ata	ata, hia	ata
67. *rain*	*hudjan	usaŋ			uraŋ	uran
68. *red*	*ma+lɣah	nôréŋ		déré, biru, mera	merak	mean
69. *root*	*vakaḷ, ɣamut	waké				amut
70. *rope*	*tali	tali, wasé	ḥazé, fadjé	adjé	tali	tale:
71. *sand*	*həni	laiŋ			nè	wera
72. *sea*	*tat'lk, laut	tatjik		lau, ae mesi	lau	tahi, lewaŋ
73. *see*	*kiṭa	(l)élo	ŋira	tei	g-ita	tədá
74. *seed*	*bld'i	wini	wini	wini	wini	kuloŋ
75. *sit*	*dukduk	lonto		d'adzo	dəri	tobo
76. *skin*	*kulit	kolé				kuli?
77. *sky*	*laŋit	awaŋ, laŋlt	lezo?	liru	ceu	kə'laŋ
78. *sleep*	*tldug'	toko		roké	dué, molek	turu
79. *small*	*dlklt	koé		loo	lotik	kesi, ka:ni
80. *smoke*	*at'əp	nus	nu	nu	nuhiŋ	nuhun
81. *snake*	*ulaɣ	kaka léwé		nipa	ular, er	ula
82. *stand*	*ḍlɣl	hesé		géré, dari	gera	deln
83. *star*	*bituhən	ntala	dala	dala	dala	patala
84. *stone*	*batu	watu	vatu	watu	watu	wato
85. *sugarcane*	*təbu	téu	təevu	sle: mi	tewu	tə'wo
86. *sun*	*aŋ'l	(mata)leso	lezo	ledzl	lero, dara	lə'ra
87. *that*	*(ltu)	hltu, hoö	kəna(na)	ia, tia	ia, tla	pi
88. *this*	*(lni)	hoö, o	diḥana		ei, etel	nawé, dewé
89. *thou*	*kaw	hau	kau		au	mo(?e)
90. *tongue*	*lldah	lema	rema	rema	maŋ	we:wel
91. *tooth*	*(ŋ)lpən	ŋis, ŋils	ŋiï	ŋiï	nluŋ	lpan
92. *tree*	*kaju	hadju	kadzu	kadzu	ai, pra(ŋ)	kajo
93. *two*	*ḍuva	sua		ruë	rua	rua
94. *walk*	*lakaw	lako	laä	mbana	bano	pana, le:ga
95. *warm*	*panat'	darap		roŋo	gahu	pəlaté
96. *water*	*wajəɣ	waé		aé	wajer	wai
97. *we (incl.)*	*klta	ita, ŋglta	klta		ita	tlte:
98. *we (excl.)*	*kaml	ami	kaml		ami	kamé
99. *weep*	*taŋit'	rétaŋ	rita	kel	dani	tani
100. *what?*	*apa	apa, ha	ḥapa, de	apa	apa	aku
101. *white*	*putlh	bakoko		bara	bura	buran
102. *who?*	*t'el	tjél	sel		hal	he:ge:
103. *wind*	*aŋln	buru		aŋi	aŋin	aŋi
104. *woman*	*(ba)blnaj	iné wal	ḥana fal	ata fal	ata dua	barakowaln
105. *yellow*	*kunlŋ	téé(k)	téo	tea	heret	k(an)una
106. *you (pl.)*	*kamlw	méu	mlu		mlu	mlo

4.5.1.2.3.2. Commentary on the List

While the available material has rather limited the number of words listed from each language, it is fairly obvious on the surface that Flores languages subdivide into western and eastern subgroups, the contrasts between which are interesting. In the list given, Manggarai shows 56 PAN roots out of 106, and Ngad'a and Li'o tend to group with Manggarai. Sika and Solor agree more closely with each other, and show a verbal structure in which the 'fusion' type of conjugation is present, as against the western group of languages. Solor words in particular show a much closer formal resemblance to PAN than do those of the western languages where the PAN root is found in both, and the eastern languages show a larger percentage of PAN vocabulary. As the present is not a lexicostatistic study, there is no point in going into comparative figures. In some instances interesting contrasts appear: for *'go'*, for example, Manggarai has a NAN root ŋo, but has the PAN *lakaw as *'walk'*, while Sika and Solor have (m)bano, pana, for PAN *(m)panaw. There are also instances of synonyms (whole or partial), one of which is PAN and the other not so, e.g. Manggarai tali or wasé for *'rope'*. The total impression gained is that PAN words have come to the eastern end of Flores first. In many cases they have not reached the west, e.g. *manuk *bird*, has been specialised to *'fowl'* except in Ngad'a; in Manggarai, *'bird'* is kaka lélap *flying creature* - and in point of fact Sika heneha horoŋ means precisely the same.

At the same time, there is very little agreement with Stresemann's Ur-Ambon or Ur-Seran, but it is noteworthy how frequently Verheijen in suggesting comparisons, refers to Menado (North Celebes) languages. This is something that needs further attention. In some cases doublets appear, e.g. Manggarai awum rewuk *ashes*, but rewuŋ *cloud*. Another point of interest is the agreement with Irarutu, in Geelvink Bay, New Guinea (Anceaux 1961), such as Ngad'a saö *house*, Irarutu sana, while in Ron sar is *'room'*. Irarutu dafa *yellow* agrees with Sika daha *ripe*. Some words are quite widespread throughout the entire region; such a one is ata for *'man, person'*. In Polynesia this is more often *'soul'*, and one wonders whether there may not be a connection such as that in English when one speaks of *'not meeting a soul'* in a given place.

It may be recalled that Kern found enormous numbers of metatheses in Sawu; in Manggarai loké *skin* represents PAN *kulit similarly but this seems to be very rare. Another example of interest is tilu *ear* which appears to represent PAN *tuli *ear wax*, and is shared widely over the region, but in Timor apparently only in Tetum tilu. On the other hand, the Northern Halmahera languages show no resemblances at all, nor do

those of the Kei and Tanimbar groups. Once again the impression arises
of a 'Flores' linguistic type which has been overlaid by strong influ-
ences from PAN. But this need not mean that the Flores languages (at
least west of Sika-Solor) are AN, any more than English is Romance.

4.5.1.3. LANGUAGES OF THE SOUTH-EAST PAPUAN REGION

4.5.1.3.0. *GENERAL VIEW OF THE LANGUAGES*

In the South-East Papuan region as here considered, languages are
more numerous than in the Indonesian area. As there Manggarai was taken
as basic and others compared with it, so here the basic language for
study is Maisin, a NAN language with a large overlay of AN, or, as
others have thought, an AN language with heavy NAN influence. In fact,
the two chief students of past years have been at variance about the
classification of Maisin. In 1911 Strong, then a member of the Papuan
Government Service, felt that Maisin was at base Melanesian, i.e. an
AN language.

> The language is remarkable in that it really appears to be
> one of the rare instances of a language with a grammar
> derived from two distinct sources. I have classed it with
> the Melanesian languages because it shows clear affinity
> with these, as regards both grammar and vocabulary.
> (Strong 1911:381)

The English student S.H. Ray came to the opposite conclusion, using the
same evidence - Strong's material. "The Maisin language would thus
appear to be originally a Papuan language which has adopted a number of
Melanesian words" (Ray 1911:405). Which, if either, judgement is right?
Fresh fieldwork in the area has been done by Dutton whose opinion is
stated in the words:

> My hunch (based entirely on the external evidence of the dis-
> tribution of Austronesian languages in Central and South-East
> Papua and particularly the new Magori evidence) is that Strong
> is probably correct. But until more detailed evidence is
> collected it is simply not possible to decide the issue.
> Historically, all the Maisin seem to agree that they all once
> lived in the Kosirava district but that those now living on
> the coast emigrated there only relatively recently.
> (Dutton 1971:8)

The present writer has done some such independent research at various
periods among the Collingwood Bay Maisin, and he has agreed with Ray
as against Strong and Dutton. The matter is therefore ripe for study
as a possible case of a "mixed" language.

My own study, as stated, was done among the Uyaku Maisin on the
coast, but Strong, as well as Dutton, knew that there is the northern
or Kosirava language in the marsh country along Dyke Ackland Bay,
amongst speakers chiefly of Baruga. Dutton's maps set out the situation
in an exemplary manner.

Maisin exists in two forms as Strong knew, though he did not examine both. My own material, gained from the Collingwood Bay coastal Maisin, which I have called Uyaku from the village to which most of the speakers belonged, is limited to southern Maisin. Dutton, however, has recorded material in the northern or Kosirava dialect, used in the marsh country inland from Dyke Ackland Bay, and this has marked differences, especially in the use of a noun ending which is completely absent from Uyaku Maisin. This is seen even in AN loanwords, e.g. *'blood'*: PAN *daRah, Wedau tara-, Ubir tar, Uyaku ta:, but Kosirava tari; *'belly'*: PAN *tiyan, Mukawa sia-na (with possessive suffix 3rd sg.), Uyaku tina, Kosirava tinaɣʷi; *'knee'*: PAN *tuhud, Wedau ae tutu-na *leg its elbow*, Uyaku tu, Kosirava tuɣi. Whereas, however, for *'my knee'*, Wedau would say aeu tutuna, Uyaku has au tu, and Kosirava au tuɣi. In NAN words, e.g. *'liver'*, Uyaku has obuŋ, whereas Kosirava shows obumi. This noun ending characterises the Kosirava dialect. In Uyaku also there is an intransitive subject marker ka: fi ka i rufi *the bird flies*, Kosirava fiɣi i lulufi; *'the banana is ripe'*: Uyaku me ka i mu, Kosirava me i muri. This ka appears to be present in Kosirava as an indefinite noun marker, whether nominative or object, e.g. *'I pour water'*: yuŋga a vísini; *'I draw water'*: yuŋga a yasi. In each case Uyaku would have yuŋ. Also *'I spear a pig'* (as against *'the pig'*) in Kosirava is siko ka a kosi. In Kosirava the final syllable seems to disappear in combinations such as N + A: yumi *water* > yu fufufi *hot water*; yu kororo-ɣi *cold water*. Uyaku has no parallel phenomenon, and at the present stage of study the consonant of the suffix is uncertain; Dutton's transcriptions are not uniform, and /ɣ/ has been adopted as a cover sign and not as a phonemic symbol, though it may ultimately prove to be one.

It seems best to adopt the method which Ray followed, viz., to place Maisin in the setting of all the South-East Papua (SEP) languages spoken about Collingwood Bay and Dyke Ackland Bay, rather than to isolate it from its neighbours, as would be done, of course, in writing a grammar of the language. It is really just one of a considerable number of languages, all of which look like candidates for classification as "mixed", spoken in the area, often in considerable geographical confusion. Miniafia is one of such 'broken' languages; so is Ubir, and so is Maisin. Dutton's (1971) excellent map 2 shows these facts very clearly. Some of the languages are obviously NAN, others are of the "mixed" type at present under discussion. Onjob, for example, is NAN, but Ubir, Oyan and Oreresan, are "mixed", like Maisin. Maisin in its northern form (Kosirava) is entirely embedded, as it were, within Baruga, a NAN language of the Binandere group, and yet it shows AN structural traits and

vocabulary. Moreover, this vocabulary has no connection with Baruga.
It would seem that the Binandere group in the form of Baruga has moved
south and swallowed up Maisin, yet even so, while this is quite under-
standable, why should Maisin have AN structural elements, even though
it may have AN vocabulary? Such questions as these must be kept for
the final commentary (4.5.1.3.2.1.).

For a beginning, some standard of reference is needed, if the lan-
guage is to be regarded as a 'mixture' of any sort, and again the
standard of reference is AN. In this case, however, PAN will not do,
as it did in the Indonesian situation. A better standard is provided
by Proto-Oceanic (POC). The difficulty here is that POC grammar has
not been reconstructed, and any such thing as a proto-New Guinea-Oceanic
cannot be assumed. Some evidence is contained in other chapters of this
volume, e.g. 4.3.0., but the 'AN' reference will have to be something
rather more general.

4.5.1.3.1. *STRUCTURAL FEATURES OF THE LANGUAGES*

4.5.1.3.1.1. Syntax of the Clause

In syntax, the typical structure of AN is S-V-O; in some cases there
is an alternative V-O-S or even V-S-O. The syntactic arrangement in
Maisin and all the SEP languages is S-O-V, which is definitely not an
AN order. They belong to the group called by Capell AN_2 (Capell 1969;
1971:241-4). This S-O-V order does not appear in any fully AN language,
without external influences, but it is a feature of the vast majority
of NAN languages in New Guinea, the Solomon Islands, etc.

In SEP, S-O-V is the prevailing sentence arrangement in languages
that are on other grounds quite clearly AN. It may be shown in examples
from any of the languages within the group included here. In Wedau,
for instance, one says:

```
     S        O          V
     oroto    natuna     i     inanai
     man      child-his  he    saw-him
```

The same sentence in Mukawa is pipiya/natuna/ki kitai. In just the same
way Maisin has tamateŋ ari teiti i katti *man*-ergative *his child he saw*.
The only difference is that Maisin has an ergative construction lacking
in the other languages.

4.5.1.3.1.2. Relator-Axis Phrases

Below the syntactic lies the phrase structure and again there are
types characteristic of AN and of the New Guinea NAN languages. One
point of interest is the occurrence of preposition or postposition. The

fourth rule amongst Greenberg's (1963) universals of language is that
if a language has OV order it usually has postpositions rather than pre-
positions. This is true in all the SEP languages that have been classed
as AN_2, except for the locative preposition in certain of them. Whereas
a NAN language such as Binandere has oro da *house in*, an eastern Oceanic
language such as Malo of the New Hebrides has lolo na vanua *in the
house*. SEP AN_2 languages mostly all have postpositions, e.g. Dobu anua
ʔenaya *house in*. Maisin not only has *'house-in'*, but a series of cases
of which the locative is one: va *house*, seemingly an AN word (PAN
*balay) > va-re *house-in*. Most of the other languages in the region,
however, have a preposition for *'in'* but postpositions for every other
related concept. Thus Wedau shows au numa *in house*, Mukawa kau yove,
but Ubir go-ai *house-in*, like Motu ruma-(a)i. Not only so, but the
syntactic positioning for *'in'* is irregular in some of the languages.
Compare Binandere

    mamo   da oro   da asima ena
    my-father of house in I-live

with the locative phrase in Panayati

    nam   wa-na limi-a
    my-father his   house-in

to which Dobu tamagu ʔina anua ʔenaya, Motu tamagu ena rumai and Ubir
tamau an go-ai, correspond. In Wedau one says

    ama-u   a-na au numa
    father-my his in house

and similarly in Mukawa tama-ku ka-na kau yove. Obviously the preposi-
tional form is 'out of place' in these languages. An adjective also
upsets the patterning: Wedau

    numa au ɣaeɣaena
    house in big

matched by Mukawa yove kau kaikapona *house in big* = *'in the big house'*.
In a longer phrase this order is retained: *'in my father's big house'*:

    Wedau   amau au numa ɣaeɣaena

    Mukawa tamaku kana kau numa kaikapona

Incidentally, these sentences show the mixture of AN and NAN vocabulary
that marks the area, the latter usually differing from language to lan-
guage. This 'inessive' preposition is the only one in the language,
but lest the natural response 'AN borrowing' is made, it should be noted
that kau is apparently not an AN word and so could not be part of the
AN word-store. PAN *dalem *inside* seems to be the commonest locative
root in the AN languages elsewhere, e.g. the Malo lolo na vanua ni mama
quoted above, and Mota aio imʷa-n tamak *in my father's house*, and Numfor
in western New Guinea, ro kma jedi rum rum bieda *in father my house his*.

Maisin has nothing of this 'contamination' whatever its origin; there
the phrase is au yabi ari va nombo-re *my father his house big-in*, the
locative ending being transferred to the final unit of the phrase: va-re
house in > va nombo-re *house big-in*. The preposition is out of keeping,
but it has not come as an AN element.

4.5.1.3.1.3. The Noun Phrase

In the noun phrase, then, Maisin has a type of 'declension' that is
quite NAN. It has also an ergative case. Contrast:

    tamatti i fe-anaŋ
    man   he fall-will

    tamateŋ ka-seŋ   i tarawusi
    man-erg. *stick-with he hit-him*

The first sentence being intransitive has its subject in the nominative
case with no suffix; the second being transitive has its subject in the
ergative with suffix -eŋ, which is also instrumental (ka-seŋ) *stick-with*.
As a matter of fact, this sentence is ideal to highlight the problem of
this chapter. Tamatti *man* represents PAN *tawu *man* + *matah *ripe, adult*,
a compound word for man that first appears in Eastern Indonesia and then
occurs in scattered languages as far east as Fiji (taŋata); from this
AN compound root (which must have come into Maisin 'ready-made') an
ergative-instrumental is made with -eŋ. Then ka *tree, wood* looks like
PAN *kayu *tree* and is found in all the neighbouring languages except
Mukawa and Gapapaiwa (keyama) as kai or ai. From this is formed an
instrumental ka-seŋ in which the medial consonant is completely unex-
plained: it cannot be thematic, which would have given *kayeŋ. These
examples are symptomatic of the "mixed" conditions prevailing throughout
this SEP region, not only in the limited area which is the subject of
the present chapter.

4.5.1.3.1.4. The Verb Phrase

Another feature which might be expected to coincide with the OV lan-
guage type is a prevailing inflection by suffix. This has appeared in
the Maisin case system and in the use of postpositions. It should also
appear in the conjugation of the verb. The NAN languages such as
Binandere have suffix conjugation; the AN languages outside New Guinea
prepose a person-marker which is historically a shortened pronoun to
mark the actor: Mota, na te van *I shall go*; ko te van *you will go*; or
Nggela tu vano *I go*; te vano *he goes*. But Binandere has t-ena *I say*;
t-eta *you say*; t-era *he says*, etc. The languages under consideration
here, however, all conjugate by preposed particles, like VO languages,

and the particles are of AN origin. Thus, *'I stayed'* (past tense;
present reduplicates and is not so suitable as an example here):

	Wedau	Mukawa	Ubir	Maisin
1sg.	a ma	a ma	a ma	a tauk(k)e
2sg.	u ma	ku ma	u ma	ku tauk(k)e
3sg.	i ma	ki ma	i ma	i tauk(k)e
1pl.incl.	ta ma	ta ma	ta ma	ta tauk(k)e
1pl.excl.	a ma	ka ma	a ma	ka tauk(k)e
2pl.	o ma	ko ma	o ma	ku tauk(k)e
3pl.	i ma	te ma	si ma	ti tauk(k)e

There is perfect agreement here, although the actual Maisin verb differs
as a morpheme from the others - the k(k) represents a facultative gem-
ination. This again is typical: structural agreement along with lexical
disagreement of Maisin.

Tense is expressed by means of a preposed particle: Wedau a na ma
I shall stay; in NAN languages tense is expressed by suffix, and this
is done also in Maisin: i fe-anaŋ *he fall-will*. Binandere has t-a-na
speak-shall-I, with a different arrangement but yet suffixal. Here there
seems to be a mixture of method as between AN and NAN patterns, with AN
structure in most of the languages but NAN structure in Maisin. The
future marker, na, in Wedau a na beu *I shall fall*, Mukawa a na peku,
Ubir a n feu, appears clearly first in the languages of Seran in
Indonesia, and extends as far east as Fiji: au na (m)bale *I shall fall*.

One exception to the postposing of determinatives is the negative,
and here again Maisin stands apart from the immediate group but agrees
with other NAN languages farther away. The common AN negative is a form
of *ta, *sa, and in Maisin sa occurs but only as the first member of a
discontinuous morpheme sa...ka: i sa-fe-anaŋ-ka *he will not fall*. In
Wedau this is eɣa i na beu, Mukawa kega ki na peku, Ubir men i n feu.
In Baruya (a member of the Angan stock-level Family, Trans-New Guinea
Phylum) in the Gulf Province, th- negative is ma-...-y, e.g. ma-n-y-ɫw-
ano *I have not finished eating* (see (I)2.7.4.5.1.). Both these types
depart from the common AN system, but Maisin comes closer to the Papuan
models than do the other languages.

Within the verb phrase itself, NAN languages of New Guinea are often
marked by complication of tenses and moods, and Maisin is not exception.
In addition to the complication of possible tense endings, the various
tenses can be superimposed, resulting in an agglutinative type which
is set out below:

Suffix	Meaning
-ø	aorist: statement without regard to time
-ati	assertive and hence past time: i feati *he fell*
-anaŋ	doubt and futurity: i feanaŋ *he will fall*
-me	immediate result: i feme *he fell immediately*[1]
-aka	speaker's expectation: i feaka *he is about to fall*
-akafe	unfulfilled expectation: i feakafe *he would have fallen*
-ateni	desiderative: i feateni *O that he might fall*

Combinatory forms: example i femeakafemate *he would certainly have fallen but for...* Not only is the suffix system un-AN in general, but the agglutination is very marked.

4.5.1.3.1.5. Pronouns

Another diagnostic feature of AN nature or at least influence is the pronoun system. It is noticeable throughout the present study that AN pronouns tend to appear in originally NAN languages – in fact, a language such as Hawu in Indonesia shows relatively few AN elements except for some general vocabulary and the pronouns. Table VI shows the PAN pronouns and those of this area:

TABLE VI: PRONOUNS OF THE MAISIN REGION

	PAN	Wedau	Mukawa	Paiwa	Anuki	Ubir	Oyan	Onjob	Maisin
1sg.	*aku	tau	yauku	taku	tagu	yau	ayu	na	a
2sg.	*kau	tam	kom	tam	tom	om	o	ga	e
3sg.	*iya	tauna	kona	touna	touna	on	i	me	ai
1pl.incl.	*kita	tauta	kota	touta	touta	ot	it	nu	aiti
1pl.excl.	*kami	tauai	yakai	tokai	tokai	wei	aki	nu	aŋ
2pl.	*kamiw	taumi	komi	tami	tami	omi	kwa	ja	eŋ
3pl.	*siḍa	taui	kosi	e	sai	osi	i	ma	ei

A full examination of the above table is impossible at this point. It has been discussed fully in Capell 1943. The SEP languages tend to add possessive suffixes of AN origin to noun stems, some of which, at least, are AN, e.g. *tawu *man, person*, which is the basis of the Wedau ta-u *my person*, ta-m *your person*, etc. Capell 1943 shows that this system is found on some of the outlying islands as well as on the mainland. Mukawa has a more complicated system, which is also discussed in that work. The Collingwood Bay languages, however, have adopted the simple PAN forms with phonetic modifications. Onjob is NAN and serves as contrast.

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[1] An example in Dutton's lists reads a isemi a isemi a wakasi *I stand, I stand, I'm tired*. As the entry for *'stand'* is a iseri the -me tense in Kosirava dialect would seem to take this form.

What of Maisin? Ray said, "This shows clearly the separation of
Maisin from the Melanesian as well as its position as an independent
Papuan language" (Ray 1911:399) and this is right. Moreover, Maisin
pronouns not only do not fit the AN pattern, but they have complications
in their grammatical use: (a) they have case system, like Maisin nouns,
including an ergative case. Actually there is an intransitive suffix
-ro, used in a verbless sentence: a-ro tamati *I am a man*, and a nom-
inative suffix used in an intransitive clause: a-ka *I*, answering to the
noun usage in, e.g. tamatti ari asaŋ ka Totoima *a man whose name was
Totoima*. (b) It also has an emphatic series suffix -we as in a-we a
ranaŋ *it is I who am going*.

4.5.1.3.1.6. Possessive Markers

In AN languages, possession is often a complicated grammatical affair.
In Papuan languages there is usually a possessive of the form *'me-of'*,
'him-of', etc. In Maisin this is so, but with modifications, resulting
in a set of possessives:

1sg.	au
2sg.	ai
3sg.	ari
1pl.incl.	aiti
1pl.excl.	aŋ
2pl.	eŋ
3pl.	ei

Apart from a possibly accidental resemblance of au *my* to a common AN
au *I*, these are not AN. But AN languages frequently distinguish 'in-
alienable' possessions such as parts of the body and kinship terms by
suffixed pronouns, e.g. Mukawa tama-ku *father my*; mata-ku *eye-my*.
Maisin has taken over this system: for *'leg'* it has

1sg.	ke-u
2sg.	ke-ŋ
3sg.	ke
1pl.incl.	ke-ti
1pl.excl.	ke-ŋ
2pl.	ke-ŋ
3pl.	ke-i

First singular is straight AN, cf. Wedau ae-u *leg my*, -ti is the -ta
of AN, with vowel weakening as usual in Maisin; the -ŋ of other persons
results from consonant changes normal in Maisin, so that the total
system of suffixed possessives in Maisin can be regarded as AN borrow-
ings. Yet why just this part of an AN pronoun system that generally

hangs rather well together in AN languages? Moreover, case endings can
be added: ke-u-seŋ *with my leg*, ke-m-eŋ *with your leg*, ke-r-eŋ *with his
leg*, etc., all exhibiting morphophonemic changes that point back to the
original AN suffixes. In fact, Maisin morphophonemic changes are quite
elaborate, though they lie outside the present paper.

   Suffixes are also used as objects to verbs, as is not unusual in AN
languages, but here again, Maisin has its own way of dealing with them.
The set is:

1sg.	-reŋ
2sg.	-reŋ
3sg.	-si
1pl.incl.	-reti
1pl.excl.	-reŋ
2pl.	-reŋ
3pl.	-ri

The phonemic history of these is also outside the present paper, but
their AN origin can be shown.

4.5.1.3.1.7. Person Marking in the Verb Phrase

   The Maisin language has also taken over the AN system of indicating
the persons of the verb by means of preposed particles which are by
nature abbreviations of the pronouns, and this in spite of the fact that
the free pronouns of the language are not AN. The following Table VII
shows the person markers - which are independent of tense, in comparison
with other South-East Papuan languages:

TABLE VII: PERSON MARKERS IN SOME SOUTH-EAST PAPUAN LANGUAGES

	Maisin	Ubir	Mukawa	Wedau	Motu
1sg.	a	a	a	a	a
2sg.	ku	u, e	ku	u, e	u
3sg.	i	i, e	ki, ke	i, e	i, e
1pl.incl.	ta	ta	ta	ta	ta
1pl.excl.	ka	a	ka	a	a
2pl.	ku	o	ko	o	o
3pl.	ti	si, se	te	e	e

   These particles are not only AN but they are members of one particu-
lar group of AN, which seems to have originated in South-Eastern
Indonesia (in modern terms) and which differ from those more general in

Oceania. The main point here is that they are AN, so that the whole
Maisin pronominal system, apart from cardinal pronouns, seems to have
come from AN sources.

4.5.1.3.1.8. Other Structural Features

There are certain other morphological components in which some lan-
guages of the SEP group exhibit AN elements while others - usually in-
cluding Maisin and quite frequently Ubir - do not. Some of these may
be looked at briefly.

One is the formation of agent nouns. Human agency is indicated in
Wedau by a prefixing of tau- to a verbal root: nola *work* > taunola
worker, actor. This is found round South Cape and westwards to the Motu
language and its neighbours and represents AN *tawu *man, person*, and it
reappears in the islands to the east, and in some of the northern New
Guinea Austronesian languages. In Kuanua (Rabaul) to marks a male
personal name, and is found in words for *'who?'*: to-ia (masc.), as
opposed to ia-ia (fem.); Dobu to-gimwani *trader*, etc. North of Wedau
this prefix does not occur, but agency is marked by a postposed particle
which varies from language to language: Mukawa bitana, Ubir orot *(man)*
and other particles and suffixes; Maisin fafusi: examples are Mukawa
saibira bitana *worker*, Ubir fourisotin *(do-them-person)*; Maisin nane-
fafusi. It is interesting to notice not only that Wedau is the only
language of this group that has introduced an AN agent marker, but has
prefixed it, whereas all the others suffix it. Ubir orot *man* is cognate
with Wedau oroto and other cognates occur in the islands; but orot keeps
the general pattern of an OV language and follows the verb while tau-
breaks the pattern and precedes the verb. This is a sure mark of
borrowing.

A second feature is the presence in Maisin of a regular formation of
plurals, both for nouns and for adjectives. The plural indicators seem
to be rather irregular. A few examples used by Ray (1911:398) may be
reproduced here: daŋ *betel nut*, pl. danjiŋ; sino *dog*, pl. sinotano;
also tamatti *man*, pl. tamatise *men*; woyaŋ *hill*, pl. woyanse. Case
endings are added after the number markers. In adjectives, plurals
often add -ri to the stem - and this looks like the 2nd pl. obj. marker
-ri mentioned earlier: wena *hard*, pl. wenari. In a few cases the plural
is a suppletive form: taubaŋ *good*, pl. borege. In others again there is
no separate plural, and changes due to morphophonemics are also present.

In general, these plural forms are NAN, and could be paralleled in
other NAN languages. When plurals of this kind occur in AN languages
they tend to be partial reduplications.

Space considerations preclude a deeper study of Maisin structure,
but before the next section of the subject is treated, it should be
mentioned again (see 4.5.1.3.0. above) that Maisin exists in two dialects.
This fact was remarked on by Strong, but he dealt only with one, the
dialect studied also by the present author. The dialect studied hitherto
is that of Uyaku and a few other small villages on Collingwood Bay.
Dutton (1971), however, took vocabularies from the northern dialect,
Kosirava, which is marked on his map. This is an inland dialect, spoken
in the marsh country abutting on Dyke Ackland Bay, as has already been
mentioned above in 4.5.1.3.0. Local story says that the Collingwood
Bay groups migrated from the north about 200 years ago. This may well
be true, but there are some difficulties in the way. The chief of these
is that Kosirava has a noun ending which is not present in the Uyaku
dialect and which is also not AN. A few examples are given, in which
the ending -wi is used as indicator. This varies between -wi, -γi, and
-vi according to phonetic rules. Examples drawn from Dutton's lists:

English	Kosirava	Uyaku
mother	yo-vi	yo
brother	ye-γi	yei
neck	ketu-γi	ketu
finger	fake suγeni	fake djira
breast	eimi-γi	susa
water	yu-mi	yuŋ
earth	yabu-γi	yabu
tree	ka-γi	ka:

This short list shows the differences in form, and also, in passing,
the difference in actual vocabulary: there are AN words in Uyaku that
are not present in Kosirava. Unfortunately, no continuous text has
been gathered in Kosirava, so that nothing can be said about any gram-
matical differences between the dialects. A few short phrases included
by Dutton's informants suggest that there are some variations. It seems
that the noun ending is lost in combinations: *'dog'*: Kosirava ta'ruγi,
Uyaku ta'ru; *'dog's tail'*: Kosirava ta'ru fo'yani, Uyaku ta'ru fo'yaŋ;
'bird's feather': Kosirava fi (fi-yi) vuvudi, Uyaku fi vuvudi. Yet in
Kosirava it may be added to the possessive suffix in an AN word: ke-u-γi
leg-my-N (Uyaku ke-u).

The evidence from structure cited up to this point suggests that in
all really diagnostic features, Maisin is NAN, with some penetration of
AN features. The other languages of the area are more deeply penetrated
by AN features, but they also basically retain much of their original
NAN identity. Attention must now be turned to lexicon.

4.5.1.3.2. *THE VOCABULARY OF THE MAISIN DIALECTS*

The two Maisin dialects studied here have been presented in the framework of the surrounding languages, about whose classification as Austronesian, albeit sometimes specified as 'New Guinea Austronesian' (NGAN) there has been no controversy. As a matter of fact there well could be one, for although they show many more morphological traits of AN character than does Maisin, they still have their own peculiarities.

4.5.1.3.2.1. A Hundred-Word List of Maisin and its Neighbours

It seems best therefore to present a hundred-word list of the whole set of languages considered, so that it will appear what AN element is present in these languages on the lexical level as well as on the morphological. The PAN guide list has here been replaced by a Proto-Oceanic (POC) Guide List, based on work by Grace (1969), which is discussed in the following commentary (4.5.1.3.2.2.). POC is probably historically closer to South-East Papuan than PAN would be, although there are difficulties which will be mentioned below. The list is not actually the same as that used in 4.5.1.2.3.1. above to illustrate the Flores languages, but it would not seem that makes any real difference. The comparative vocabularies follow in Table VIII.

TABLE VIII: COMPARATIVE VOCABULARIES OF MAISIN AND ITS NEIGHBOURS

English	POC	Kosirava Maisin	Uyaku Maisin	Ubir	Onjob	Mukawa	Gapapaiwa	Wedau
1. *all*		bese		eŋ'gon	eŋ'gona	ereonoasi	pearisi	ana'ta:pui
2. *ashes*	*apu, ndapu	isáni	isáŋ	isár	daŋkum	isara	yapukare	lapukare
3. *bad*	*(n)saqat, ala	sem'beyi	si:	komasin	afo:na	goyana	berona	apoepoena
4. *bark*	*(kuli kau)	ai 'yandori	ka yandó	korofin	it reta	kwapiri-	beka-	opi-
5. *belly*	*tia	tínayi	tina	ya:-	daman	sia-	manawi-	manawa-
6. *big*	*moRa	djo:ndjayi	nombo	gagamin	koura	kaikapona	gamona	yaeyaena
7. *bird*	*manu(k)	fiyi	fi:	kiviu	ekwetu	manu	kiu	kiu
8. *black*	(PAN: *hitam)	gambubi	gambubi	gugurin	kuruma	dudadumana	dudadumana	gawarana
9. *blood*	*daRaq	ta:ri	ta:	tar	dirin	tara-	tara-	tara-
10. *bone*	(PAN: *tulaŋ)	eituri	tukali	rarik	rárikan	sirike-	tuwiri-	gelami-
11. *breasts*	*susu	emiyi	susa	susu-	tofen	susu-	susu-	yuyu-
12. *burn*	*tunu	karati	fuŋ, fufu	a'ras	oke	karasi	karai	arai
13. *butterfly*	*mpempe	karikabi	'bimbaba	fefek	arafafak	arabembemta	bebabeba	bebeu
14. *canoe*	*waŋka(ŋ)	wa:yi	wa:	wa:		waka	waka	wa:
15. *cloud*	(PAN: *awan)	go:soyi	forogi	kasakasau	kasakasau	karekarewa	karekarewa	apau
16. *cold*	*ma(n)di(n)diŋ	kórorogi	ko'roro	yagur	odjowa	yagura	nuba	ubauba
17. *come*	*mai	ra(yi)	ra	nat	anen	botu	pisi	nei
18. *die*	*mate		mati	rabób	bomisii	rabobo	sirage	iraye
19. *dig*	*kali	yasi	yasi		ora	karoi	yabai	yarai
20. *dog*	*ŋkaun	ta'ruyi	ta'ru	kuke	kuke	kakou	koukou	auwou
21. *drink*	*(q)in(m)	umi	kuŋ	toman	ave naina	tomai	umai	umai
22. *ear*	*taliŋa	kariayi	karia	tai'na-	ikaran	taina-	teini-	taniya-
23. *earth*	*tano(q)	ya'buyi	ya'bu	tafanam	na:r, foro	tano, bodu	tano, doa	tano, doa, dobu
24. *eat*	*kani	a:ni	aŋi	am	avenaten	kam, kani	kam, kani	am, ani
25. *egg*	*(qa)toluR, mpou	miúndjuyi	mundju	fofun	nasi	paupauna	(pou)pouna	pouna

TABLE VIII (cont'd)

English	POC	Kosirava Maisin	Uyaku Maisin	Ubir	Onjob	Mukawa	Gapapaiwa	Wedau
26. eye	*mata	ma'taɣi	ma'ta	ma'ta	yaman	mata-	mata-	mata-
27. fat (n.)	*mona(q)	jejauwi	go:	mo'mo-	oren	wairoro-	monamona-	monamona-
28. father	*tama-	yabi	yabi	ta'ma-	batun	tama-	mamai	ama-
29. fear	*mataku	yawari	yawa, kaya	beru	ainen	nagara	ririmona	rovo-ei
30. feather	*(pulu manu)	vuvudi	vuvudi	kaya, kai	suma	kasawa	tawara	tawara
31. fire	*api	wo:ri	wo:	waingat	oma	kai karakarasina	kai karakarata	ai araratana
32. fish	*ika(n)	manáɣi	maná	iyan	iyan	iana	iana	iana
33. flesh	*pinsiko		funa (body)	bion	kiuta	bio-	vio-	vioa-
34. fly (n.)	*laŋo	djinondi	djinondji	saveveg	oratag	namogabura	nawagara	nabugara
35. fly (v.)	(PAN: *ləmbaw)	lulufi	rufi	rob	babaram	veraverau	rovo	rovo
36. foot	*kaki	ke(u)ɣi	ke-	a:-	man	kae-	kae-	ae-
37. fruit	*pua(q)	korari	kosá	uan		ua-	ua-	ua-
38. give	(PAN: *bəɣay)	meni	me	it-, forag-	wanen	berei	verei	verei
39. good		taubani	taubaŋ	momogín	sarakke	gairena	baibaina	aiaina
40. hair	(PAN: *buquk)	sawi	sa	tefá-	guma	uyawa	uyawa	apara-
41. hand	*lima	fakeɣi	fake	ima-	janin	nima-	nima-, ima-	ura-
42. head	*ŋpatu	jilaɣi	jila	uni-	dewan	gayami-	gayami-	kola-
43. hear	*ndoŋo	ruaɣi	tua	tatám	nunen	nonori	(vi)anei	nonori
44. hot	*pana(s)	fu'gu:fi	fu'fu:fi	forabin	weta	borabora	muyamuya	vibola
45. house	*Ruŋma(q)	va:ɣi	va:	go:	go:	yove	numa	numa
46. I	*au	a	a	yau	na	yauku	taku	tau
47. kill	*punu			yasubun	kwain	kasibunui	virabobona	viraɣeni
48. knee	*tuqu(d)			sindan		maere-	tuapore-	ae tutuna
49. know	*mataqu			sagób	fijimeŋ	kiuri	akovi	nonori (hear); araramani
50. leaf	*ndau(n)	falaɣi	fara	roro-n	itu(ŋ) ba	raurauna	sepenina	ruguna

TABLE VIII (cont'd)

English	POC	Kosirava Maisin	Uyaku Maisin	Ubir	Onjob	Mukawa	Gapapaiwa	Wedau
51. *lie down*	*eno			embubur	utaŋ	daua	kena	matave *(sleep)*
52. *liver*	*qate	obumi	obuŋ, kate	ate-	urigan	katekate-	katekate-	ganigani-
53. *long*	*lawas	ya:fabeɣi	mose	weronin	mira	kaidagimina	gurigurina	manmanaina
54. *louse*	*kutu, tuma	tuma	tuŋ	kut	utu	kutu	tuma	utu
55. *male*	*laki	tamatti	tamatti	orot	yoteg	sebarena	sebarena	orotona
56. *man*	*tawmatah	tamatti	tamatti	orot	yoteg	pipiya	wawaya	rava
57. *moon*	*pula(n)	yamaɣi	tambuŋ	roke	doke	nawaravi	nawaravi	nawaravi
58. *mountain*	*hulu/ni/vanum	woyani	woyaŋ	oyau	ojawa	koya	koya	ola
59. *mouth*	*ŋusu	kavaɣi	kava	awa-	noten	kawa-	kawa-	gamo-
60. *name*	*ansa(n)	numbwe	asá	wabi-n	djaude	waba-	wava-	wava-
61. *neck*	*Ruqa	ketuɣi	ketu	anyo-	kwanen	wasoge-	wakapaki-	wataba-
62. *new*	*paqoru	vauni	vauŋ	bobon	agago	wauna	vouna	vouna
63. *night*	*ŋpoŋi	tumba:ɣi	foiŋ	fom, rabirabi	mume	pom	didibara	didibara *(darkness)*
64. *nose*	*isu(ŋ)	isuɣi	isu	aburu-	fijan	niu-	gia-	gia-
65. *not*		sa...ka	sa...ka	men	ina	kega	ke	eɣa
66. *one*	*sakai	sesei	sesei	kaita	kemakiki	kesana	sago	tagogi
67. *red*	*meRa(q)	muri	mu	murin	uku	tarotarona	yebayebarina	lebalebarina
68. *road*	*sala(n)	yetáɣi	yetá	et	et	keta	keta	eta
69. *root*	*aka	(ka) riti	(ka) riti	aweroro-n	fu'ti	warowarowi-	warami-	warami-
70. *sand*	*one	u'dumuɣi	maŋ'gu	gasa	ganasa	busaya	gonugonu	bubu, tore
71. *sea*	*tasi(k), lau(t)			kamit	kamita	boga	yegai	boga
72. *see*	*kita	ti	ti	it-	enen	kita	kita	ita
73. *skin*	*kuli	funaɣi	funa	korofi-n	etan	kwapiri-	imini-	opi-, ini-
74. *sit*	*nopo	taka-	tauki	mair	au'ron	makira	makae	kiala
75. *sky*	*laŋi	toddi	toddi	safám	kunún	sapama	sapama	mara

TABLE VIII (cont'd)

English	POC	Kosirava Maisin	Uyaku Maisin	Ubir	Onjob	Mukawa	Gapapaiwa	Wedau
76. *sleep*	*matudu(R)	matruri	ma'tu	enbubur (PAN: *ənay)	uten	daua	kenanunuwapa	matave
77. *small*	*(dl)iki	mirirati	rati	kafakakai	aŋkiki	yogoyogona	gisina	keikeina
78. *smoke*	*qasu	ka'su:ɣi	ka'su	bakur	kumfor	kasu-na	bau	bau
79. *stand*	*(tu ?)	seri	(se)reise	tawar	wedjonen	msiri	mairi	(vo)mairi
80. *star*	*pituqu	damaneɣi	kimi	siribod	damota	gwamegwame	gwamegwame	ubona
81. *stone*	*patu	beŋgíni	kímati	agim	domoi	akima	wakima	gaima
82. *sugarcane*	*tɔpu	touɣi	tou	keya	ke:	tom	tom	tom
83. *sun*	*qanso	feféladji	ya	wera	ja	kao	madega	madega
84. *swim*	*ka(ou)	yewani	yewaŋ	aib	tugenen	toiya	yeka	vilala
85. *tail*	*iku	foyani	foyaŋ	kukegin	ero	nui-	gui-	gui-
86. *thou*	*koe	eɣi	e	om	ga	kom	tam	tam
87. *tongue*	*(a)me(na), meya	me(u)ɣi	me-	fafe-	fefan	pepe-	pepe-	mena-
88. *tooth*	*(ln)ipon	nuwaɣi	nuwa	wa-	noten	nibo-	tona-	ivo-
89. *tree*	*kau	ka:ɣi	ka:	wengar	itur	keyama	keyama	ai
90. *two*	*dua	sɨndei	sandei	rua-m	amega	ruamo	rua	ruaɣa
91. *walk*	*lako	ri	ra	bab		yewo	baba	babara
92. *water*	*wai(R); (n)danu(m)	yumi	yuŋ	sarew	saru	okoa	okoa	waira
93. *we (incl.)*	*kinda	aiti	aiti	ot	nu	kota	touta	tauta
94. *we (excl.)*	*kami	aŋga	aŋ	wei	nu	yakai	takai	tauai
95. *what?*	*nsapa	avaini	avaiŋ	abi (fan)	eme	awaki	avai	aiwai
96. *white*	*puti	ka'saɣi	foe	kakayin	kasako	poepoena	poepoena	ararapoerina
97. *who?*	*nsai	saraɣi	sera	iai	djot	kotoi	iai	aiai
98. *woman*	*(pa)pine	sauki	sauki	yever	djever	wasike	wavine	wavine
99. *yellow*	*aŋoaŋo; deŋa (turmeric)		ga'bo	yano	gabor	yanoyanona	yanoyanona	leɣeoɣana
100. *you (pl.)*	*kamu	eŋ'ga	eŋ	omi	dja	komi	tami	taumi

4.5.1.3.2.2.   Commentary on the List

So far as the AN element in these vocabularies is concerned, the first
point to notice is that it is too small for any of them to be regarded
as properly AN languages. Either it is a case of heavy borrowing - in
some cases, such as Onjob and Maisin, not so heavy - or of linguistic
'mixture', and that is really the point at issue.

Certain facts make themselves clear immediately.
(1) None of the languages has anything like 50% AN content. Wedau shows
42%, Mukawa and Gapapaiwa each shows 37%, the Maisin dialects present
20%, and 23%; and Ubir only 20%. It has never been argued that Ubir
may not be AN, probably because its grammar is very similar to those
of the other languages (excepting always Onjob, which is accepted as
NAN). Yet its percentage is actually less than Maisin, but Maisin
grammar has far less AN colouring than Ubir grammar. Kosirava Maisin
lacks some AN words that are found in Uyaku Maisin: there could be two
strata here. At the same time, Kosirava Maisin is entirely surrounded
by, embedded in, Baruga, a member of the NAN Binandere group. Moreover,
Maisin tradition, as noted by Dutton, is that this Kosirava is the
earlier form, and that Maisin has moved out to the coast only in the
last couple of centuries. The result is a very confused situation.
(2) It needs always to be remembered that lexicostatistics covers only
a tiny proportion of a language (lexicostatisticians usually overlook
or prefer to disregard this fact, although it really does have consid-
erable bearing on classification). The vocabulary may represent what
is statistically the commonest and basic as far as 'security of tenure'
is concerned, but it is still not the whole language. In the present
situation, it is apparently a case of a northward spread, for Ubir is
an outpost of the Wedau-Mukawa group, which itself has Taupota and other
southern dialects as members. It is into this northern group of the
Wedau language set that Maisin has moved from the west, and Miniafia
has branched off it to the north, creating a little more geographical
confusion. The final difficulty is: why should a completely isolated
language, like Kosirava Maisin, have any AN content at all, when it is
surrounded by languages that have none, and which all look north or west
for their relatives? In the region of Uyaku Maisin, Ubir, Oreresan,
Oyan and Miniafia are its neighbours and these all form a sort of sub-
branch of the Wedau-Mukawa group. Not only considerations of space but
insufficient vocabulary has prompted the omission of these other lan-
guages from the present table.

They can, however, be diagnostic of subgrouping, e.g. No.35, *'foot'*,
where Maisin has ke-, presumably *kaki, comparing with Wedau ae-, Mukawa,

Gapapaiwa kae-, while Ubir has a-, Oyan, Miniafia au-, and Anuki again
kae-. These could also link with the root of PAN *vae (Maori waewae),
for which Grace provides no entry.

(3) In a few cases other obvious roots are found which are directly PAN.
It will be noticed that the basic list given here is Proto-Oceanic,
and not, as for the Flores languages, Dempwolff's PAN (or any revision
of it). They have been taken from Grace 1969. This itself is a highly
composite list and not well digested. It seems to contain too many
incompatible elements in the form of quasi-synonyms which will be dis-
cussed below. However, this list has been used because it would natur-
ally seem that eastern New Guinea languages would be less closely con-
nected with PAN than with some such later development as the term POC
implies. In some cases, however, the present set of languages have PAN
cognates, not POC, e.g. No.34, 'to fly', for which Grace gives *kapa(k);
but the verb occurs in Wedau and Gapapaiwa as rovo, Ubir rob, Oyan
robarob, which does look like PAN *ləmbaw. Even where two roots, such
as *kutu and *tuma (both PAN and POC are partial synonyms: 'head house'
and 'body louse' respectively) occur in our region, they are not dis-
tinguished as they are at the PAN stage and usually also at the POC
stage, but in South-East Papua they occur as between languages: *kutu
in Wedau, Mukawa, Ubir, Oyan, and *tuma in Gapapaiwa and Maisin. Again,
while PAN *manuk, POC *manu is usual for 'bird', these languages show
Ubir kiviu, Gapapaiwa, Wedau, Tavara kiu alongside Anuki manu, Oyan and
Miniafia mamu: this last is a most unusual assimilation but could well
spring from inaccurate hearing, but kiviu, kiu is obviously a different
root that might usually just be regarded as NAN. But Capell (1943:165)
recorded Sa'a kiukiu wagtail, kiokio kingfisher (a possible doublet)
and Tonga kiu snipe, Fiji kiokio chicken. He concluded that "the root
meaning is simply 'the cry of a bird', and the final vowel is indeter-
minate". The question, then, is how did this word, rather than *manuk
get into this part of South-East Papua? Maisin here has a NAN root.

(4) There are numbers of local NAN sharings, for a full discussion of
which see Capell (1943:190-7). In the same volume (pp.168-90) Capell
suggested that there would seem to have been a number of NAN regional
languages in these parts of New Guinea before the coming of the Austro-
nesians, and the common NAN vocabulary of the north-east coast regional
language might well be re-studied along with AN elements which are the
concern of the present study.

(5) On the other hand, there are a few cases of obvious PAN and some-
times POC also, which differ from those given in the POC column of
Table VIII. Thus, for No.17, 'come', PAN *maɣi, POC *mai appears in

some of the languages, but Mukawa has botu, which seems to recall PAN
*bətu *appear*. For this Dempwolff referred to Fiji, Sa'a and Samoa, in
each of which it is present, not as replacing a *'come'* root, but in the
special sense of *'appear'*, *'be born'*, etc. In the count of cognates,
such a 'stray' PAN root, like *ləmbaw, has been counted in the total
percentages. Again, under No.5 *'belly'*, Wedau manawa-na, Gapapaiwa
manawi-na *his belly*, contrast with POC *tia, PAN *tiyan which are found
even in Maisin. This *manawa is given by Grace 1969 as "OC", i.e.
"POC obtained by converting reconstructions in Capell 1943 into POC
shape by regular rules". Actually it is rare, and has Polynesian
occurrences for the most part as *'breathe'*: see the entry in Dempwolff
1934-8 s.v. ńawa *soul*. There is no space to develop the difficult and
risky but quite reasonable statement that this is one of a number of
'Polynesianisms' present throughout South-East Papua: Capell had done
a little of this towards the end of his 1943 publication.

The above is still somewhat superficial but South-East Papua is a
notoriously tangled region, about which endless discussion might be
possible. Without entering into this, another difficulty arises that
has repercussions not only in the local instance but on the reconstruc-
tion of PAN as a whole. The matter is the large number of apparent
synonyms that appear both in Grace's 1969 list and (though to a smaller
degree) in Dempwolff 1934-8. To state the difficulty rather crudely,
there seem to be enough quasi-synonyms to provide more than one proto-
language! Even in structure this lack of agreement appears. To take
one example: a recent paper by Wolff bears the title 'Verbal Inflection
in Proto-Austronesian' (Wolff 1974). This is based on Philippine and
Formosan languages, and it might be easy enough to say that the system
he describes refers to a common ancestor of these two groups only. From
his title, however, the inference is that the focus-voice systems he
describes there are being ascribed to the parent language as a whole.
Similarly, and it would seem quite independently, Dahl (1973:119) treats
these same forms and comes to the conclusion that the system may have
been PAN in spite of its absence from the modern languages over the
remainder of the Pacific. It is an extreme instance of assigning a
retention (if it is so) in one modern group to a position of basic im-
portance in the mother tongue.

One counter-example may be suggested to show how doubtful this pro-
cedure really can be. By far the most widespread marker of futurity in
Oceanic is na, e.g. Tuna na/a (morphophonemically determined) as in
na vano *he will go*; Fijian e na lako kokoya *he will go*, and here in the
South-East Papuan region Wedau a na nae *I shall go*; Ubir a n an *I shall*

go, Mukawa a na nae. Yet the languages treated by Wolff and Dahl prefer to mark futurity either by an initial consonant change (h-) or by partial reduplication, e.g. Tagalog basa *read* > babasa. The westernmost occurrence of na is apparently in eastern Indonesia: Saparua and Nusalaut in the Seran area (Haaksma 1933:160 for examples). Brandstetter (in Blagden 1916:193) writes of future formatives that one "has a wide distribution, and none therefore can be styled common IN". He also mentions amongst such future markers da (found, e.g., in Bare'e da ku kita *I shall see*) which is found in Dobu marking a potential: Bwaidoka, like Wedau, has na for a future, but Dobu does not. Similar remarks can be made not only about NGAN but also PEO reconstructions. In fact, the same objections are open to the use of terms such as 'stock', etc. (e.g. Wurm 1971:542, fn.1): if Maisin has some 23% agreement with POC in the list given, it can hardly be one of the "languages classified as belonging to the same family". But the lexicostatistical list is itself only a small fragment of a language: the 20% Maisin agreement within this list is 20% of a very small part of the language. It is questionable what value such limited classifications have at all, especially when the grammatical structures of the languages do not tally so very closely.

Strong overestimated the Melanesian resemblances of Maisin very seriously; Ray was much closer to the truth. It seems very definitely a case in which a true mixture has taken place: words have come in from AN sources, apparently at different times and in different ways, and so have constructions till the result is something that at the present day contains elements of both groups, not in conflict with each other – Biggs may be right in asserting that a speaker always knows what language he is speaking, but there is no implication that he knows what the history of that language has been!

4.5.1.4. SUMMARY

In addition to what has been said in this chapter about the Flores languages in the Western Austronesian region and Maisin in South-East Papua, as well as Dutton's work on Magori in southern Papua (see 4.5.2.), a short statement may be referred to which was published by Hans Kähler in 'Analecta et Additamenta' in *Anthropos* (Kähler 1942-5:889-90). In this paper he discussed "mixed languages", and in the course of it, he first defended the id–a of their existence, and then gave a short description of three cases in which he considered the term applicable in Indonesia. He speaks first of a "limited penetration and settlement of a foreign people amongst another already settled". This corresponds

to what has been said above about 'invaders'. Next comes the contrac-
ting of mixed marriages, the women amongst primitive peoples being the
most conservative element; thirdly, "the structure (and word-store) of
these two contacting languages must reach such a stage of relationship,
that no forbidding degree of mixing (of people) results". He feels that
geographically close neighbours are the most likely to produce such
mixed languages. He then proceeds to discuss three languages in
Indonesia which he considers "mixed".

The first such language is Sichule, on Simalur, which he considers
to be a mixing of the speech of Nias invaders with certain of the earlier
peoples. He mentions a number of features which lead to the conclusion
of language mixing: (1) the so-called 'emphatic' case, which is used
according to strict rules in Nias, is used irregularly in Sichule; (2)
the 'personal prefixes' are partly of Nias origin, partly borrowed from
Simalur, the language of the other part of the island; (3) the numerals
are partly Nias, partly Simalur and partly Minangkabau; (4) in the verb,
there are affixes of Nias origin side by side with others of the same
meaning from Simalur; (5) of 'condition' words (PAN *maR), there is
similar simultaneous occurrence of forms derived from Nias and others
of Simalur origin; (6) sentence structure is closer to Simalur than to
Nias type; (7) about 25% of the word-store is Nias, modified according
to local phonetics; and finally, (8) the personal pronouns are pure
Nias.

His second case is Enggano, one of the southern outliers of Sumatra,
because this has the normal phrase structure of Philippine languages
mixed with the verbal phrase structure of the nearer languages. The
third is the Orang Badjo of the Togian Islands in the Tomini Gulf,
which he considers has been influenced not only by Bugis and Makasar
but also from the Malacca region. He does not list details as fully
here as in the first instance, and the evidence would need to be studied
in detail.

Kähler has since published a Simalur dictionary (1961) and texts
(1963), a comparative vocabulary of Sichule (1959) and a structural
study of the language (1955). He made a very thorough study of Enggano
(1940, 1954-64).

Another language stated to be probably a mixed language is that of
Batjan of southern Halmahera, again in the area of Western Austronesian.
In this case the relevant statement is: "The language of this island,
which from its negative marker should be called Moyo, is a mixed lan-
guage, as there is no second in the area so far reviewed" (i.e., no
other quite like it) (Adriani and Kruyt 1912:vol.3:295). The statement

is not properly followed up in the volume and information on Batjan has
not increased since the authors wrote, so that no judgement can be made.
The statement as it stands serves rather as a warning against an all too
easy attitude to languages which do not conform with already existing
ideas. Mixed languages may be realities, but they are not so easily
proved.

The concept of mixed language has been used recently also by
Haudricourt (1971:383) in speaking of the Uvea language of the Loyalty
Islands, a basically Polynesian language, of which he writes:

> The belief of certain authors that this language is a dialect
> of Wallis is erroneous. In reality it is a good example of a
> mixed language: borrowings from neighbouring Melanesian lan-
> guages are sufficiently numerous and common for the consonant
> system to be considered as identical with the preceding lan-
> guages (sc. those of the New Caledonia mainland); on the other
> hand the morphology and phonetic systems are very Polynesian.
> Most traits, such as the retention of s, of t + i, and k are
> close to the Polynesian language of Futuna (Horn Island)
> although some words are treated differently, e.g. te-hila *steel*
> where s > h.

Once again, although the author may be right, the case is 'not proven'
on the evidence offered.

The case of Maisin and the neighbouring languages seem to be somewhat
different. The paucity of the AN material is noticeable; the "mixed"
nature of the grammars of these languages stands out clearly to a student
coming from insular Melanesia, and by way of contrast with the southern
members of the group - a geographical group only - the still smaller AN
content of Maisin is enough to put it on the NAN side of the scales.
The author feels that the term "mixed language" is suitable for Maisin
as it is for western Flores.

The whole study actually has wider implications than might appear on
the surface. It has indeed been said that if one speaks strictly, all
languages are mixed. A case has been made out for the Germanic branch
of Indo-European as a "mixed" language: a high percentage of Germanic
vocabulary does not seem to go back to proto-Indo-European, and Germanic
has made significant departures in proto-Indo-European accentuation and
morphology as well: witness in the one case the initial stress accent
and in the other the formation of past tenses by the use of the aux-
iliary that appears in English as *'do'*. A recent writer has pointed
out (what others had already argued at greater length) that at least

> one prehistoric development of Germanic, however, may be
> referred to a known source. Germanic has reduced the Indo-
> European tense system to two terms: present and preterite.
> This arrangement has an exact analogue in Finno-Ugrian.
> Since Germanic was in contact with this family in antiquity,

> one may regard the Germanic two-tense system as a typological
> calque on Finno-Ugrian. Furthermore, this family of languages
> is characterised by initial stress. It is not unthinkable
> that Germanic stress is due to influence from the same quarter.
> (Lockwood 1969:123-4)

This thought recalls a remark made earlier: the number of synonyms
to be found (including close variants in form, and semantic shifts) in
Grace's POC (1969) and at times even in Dempwolff 1934-38. The present
writer feels that 'PAN' is not yet a fully clear entity, and no theory
of Proto-Oceanic, whether eastern or western, is satisfactory. Are we
dealing with one language and its descendants (including dialects that
may go back to PAN) or with more than one, with a prehistoric 'language
mixture' that it may be too late to untangle?

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4.5.2. MAGORI AND SIMILAR LANGUAGES OF SOUTH-EAST PAPUA

T.E. Dutton

4.5.2.1. INTRODUCTION

Along the south coast of Papua are to be found remnants of a number of languages that fit the description of "mixed" languages in the sense being used in this volume. These languages - Magori, Ouma, Yoba, and Bina - occupy various positions along the coast and inland of the eastern end of Table Bay in the west and the western end of Orangerie Bay in the east. Of these Magori is the largest and best-known, having been discussed in some detail by me in 1971 (Dutton 1971b), while the others are more recent 'finds'. Historically, Magori has long been somewhat of an enigma since it was first mentioned in early Government and Mission reports. It remained so until 1969 when I collected more comprehensive materials in it that have enabled us to understand its nature better. Since then, N. Thomson and I, following up questions raised in my account of Magori, have collected similar materials from the few surviving members of the other three languages mentioned. Although these materials have not been analysed in detail yet, it is clear from a preliminary investigation of them that all four of these languages are closely related although each has undergone different changes resulting from different degrees of contact with neighbouring languages. In the following account, I elaborate on these features and in the process indicate the way in which these languages are "mixed" in the sense indicated above.

4.5.2.2. THE SETTING

As already indicated, Magori, Ouma, Yoba, and Bina (hereafter Magori and associated languages) are small languages spoken by residents of various villages along and inland of the south coast of Papua between Table and Orangerie Bays - see Map 2 in (I)2.9.1.
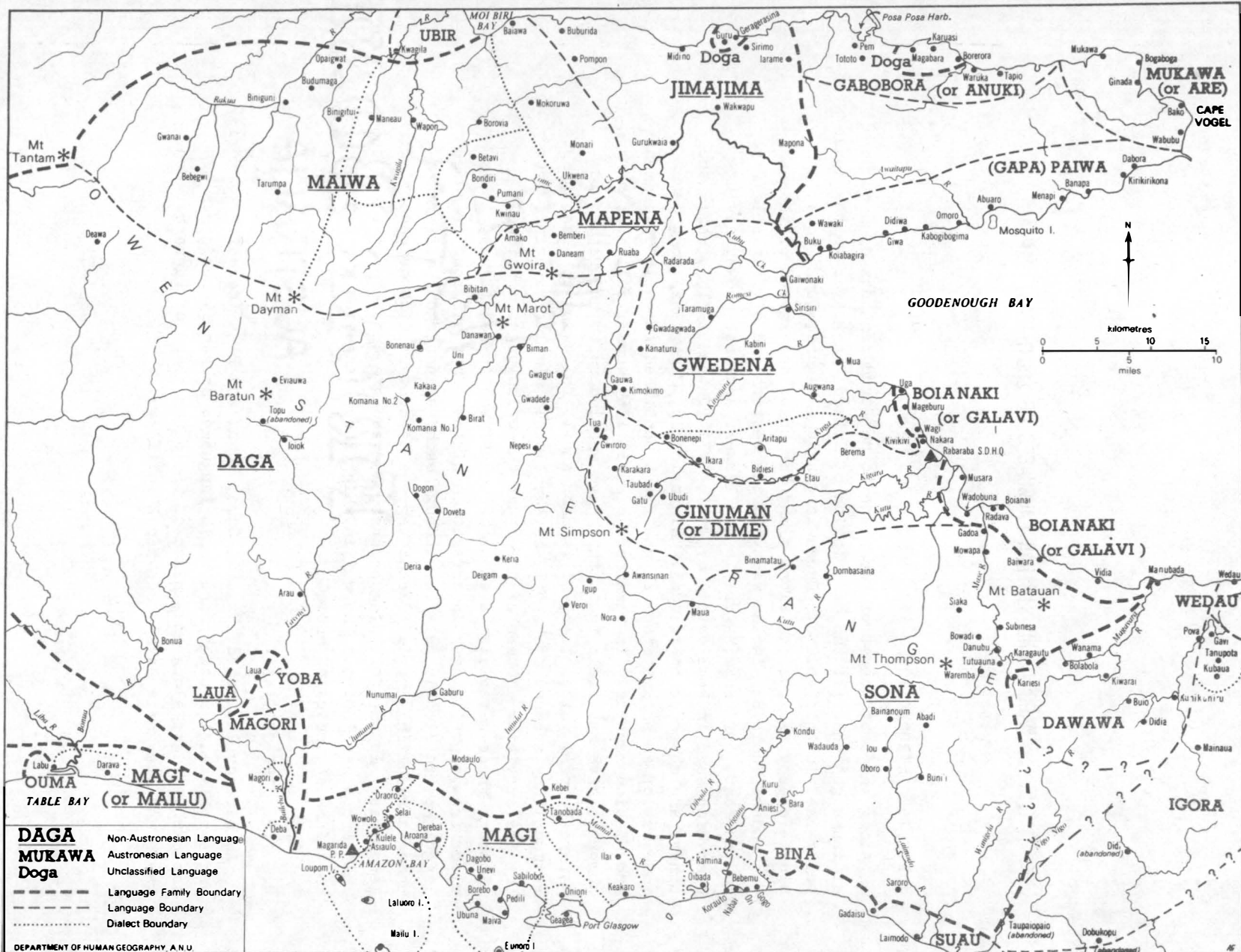
MAP SHOWING LOCATION OF RECENTLY DEFINED LANGUAGES AND
DIALECTS ON THE SOUTH COAST OF PAPUA (AFTER DUTTON 1971a)

Ouma was formerly the language spoken in villages of the same name
reported by early Government officers and missionaries as being several
miles inland up the Bonua River that flows into Table Bay but now rep-
resented by only four speakers living in the small village of Labu (51)[1]
on the coast near the mouth of that river. Nearby was, and still is,
Magori, spoken in the two villages of Magori (124) and Deba (39) situ-
ated inland and on the coast beside the lower reaches of the Bailebo
River at the eastern end of Table Bay. Inland of Magori was Yoba
formerly spoken along the middle reaches of the Bailebo River just men-
tioned but now only remembered by two speakers, a man, Aruba Inabe, and
his mother, Bo'odi, at present living in Laua village (31) in the same
area. Much further east was Bina inland of the western end of Orangerie
Bay. Today the only surviving speakers of this language are an old man,
Tabi Koakoa, married into and living at Nabai (49), and his sister
living at Gogosiba (56), both Magi villages in Orangerie Bay.

Speakers of the four languages to be discussed here are also fluent
in Magi, the dominant (socially and economically) language in the area.
Many also know and use other languages such as Laua and Daga spoken in
the same villages and inland.

Laua and Magi are members of the Mailuan Language Family which is
spoken along the south coast and offshore islands between Cape Rodney
and Orangerie Bay and inland of Cloudy Bay. Daga is the principal
member of the Dagan Language Family spoken inland of the south coast
occupied by members of the Mailuan Family and across the mountainous
interior to the north coast around Collingwood Bay. Both families are
non-Austronesian (hereafter NAN) and are named after the largest language
in each - Magi (or Mailu) on the coast and Daga (or Dimuga) inland.[2]
In referring to these in this paper I shall use the names Magi and Daga
except when quoting from earlier sources or when referring to the speech
community of Mailu Island, the largest and best-known group of Magi a
few miles offshore of Amazon Bay. Unless otherwise noted the communalect
of this island will be taken as 'standard' Magi in what follows.

East and west of the Mailuan Family along the coast lie Austronesian
(hereafter AN) languages which belong to various subgroups of Oceanic
languages.[3] In the west there are Keapara, Sinagoro, Motu, and others
which Capell (1943) divides into two subgroups, I and II, characterised
by various phonological, grammatical, and lexical features. Pawley
(1975) has also studied these more recently and groups them together as
the Central District languages with subdivisions corresponding approx-
imately to Capell's areas I and II. Although the actual differences
between these two classifications is not important to what follows, it

is important to note that the easternmost members of these groups -
notably Sinagoro and Keapara - are of particular interest to us and will
be mentioned quite frequently later on.

   Similarly in the east there are numerous collections of dialects and
languages, as yet unsystematically studied, scattered around the coast
and across the offshore islands and archipelagoes. These have also
been most thoroughly studied as a group by Capell (1943) (see also
Lithgow's chapter 4.4.10. in this volume) who divides them into various
subgroups, of which Group III will be of particular relevance to the
forthcoming discussion. This group occupies the area between, and south
of, Orangerie Bay and the China Straits. The closest member of this
group to Magori and associated languages is Suau which consists of a
number of dialects beginning with Gadaisu spoken in the village of the
same name and in that called Laimodo nearby in Orangerie Bay.

   Note, however, that all of the AN languages of South-East Papua (SEP)
(excluding Kiriwina, Gawa, Murua, and Nada (and perhaps the languages
of the Amphlett Islands)) have certain characteristics in common which
distinguish them from other AN languages of other parts of Papua New
Guinea. Capell (1943, 1969, 1971) calls the two types AN_1 and AN_2 and
enumerates various typological differences between them, the principal
difference being that those around SEP, hereafter AN_2, have the sentence
order Subject + Object + Verb (or SOV) whereas those elsewhere (AN_1)
have the order SVO.

   However, to account for the areal diversity within the uniformity of
the AN_2 languages, Capell (1943:168) postulated that the ancestors of
these languages had come into contact with three prehistorical NAN
regional languages in SEP - North-East Coast, South-Eastern, and Central
- which, he says,

       can be shown to have each been characterized by a certain
       type of grammar which has determined to a large extent what
       elements of IN(donesian) grammar should be taken over in
       each region and what forms both grammatical elements and
       words could take.[4]

That is to say, all AN_2 languages of SEP represent various degrees of
AN-NAN 'mixtures'. Generally, however, the influence of AN and NAN
languages upon each other have not been so great as to mask the genetic
identity of individual languages (in terms of the AN-NAN distinction
being used here) except for Maisin, which has already been discussed
in some detail by Capell in the preceding section, and the four languages
which are the subject of this paper.

4.5.2.3. PREVIOUS STUDIES

As already indicated, Magori is the only member of these languages that has ever been commented on before. It was first reported by Bell (1908:137) who mentioned three hill-top villages in the Bailebo River valley - Magori, Deba and Laua[5] - and noted that the Laua people spoke a language "quite distinct from Deba and Magori people". He mentioned that he had collected a short vocabulary from Laua but this was not published with his report.[6]

Soon afterwards, however, Strong (1911a), then Government Anthropologist, published short lists for Laua and O'oku, a village "somewhere to the west of Laua" (Strong 1911a:205). These lists showed enough similarities with a Mailu list that he had also collected that Strong included them as independent though related members of a Mailu Group of languages (Strong 1911a:204). Later (Strong 1919), he published a list for Magori also. This likewise contains a large share of Mailu vocabulary.

Several years later, Grist (1926), another Government officer, published an account of the linguistic situation of the south coast, in which he included Laua and a hitherto unmentioned village, Ouma, in the Magori language (Grist 1926:92, table in paragraph 792). This latter village is apparently the same as that marked as New Ouma on Saville's (1926) map accompanying his volume *In Unknown New Guinea*. This village was at the mouth of a small river which, Saville (1926:306) says, was "known at the coast as Ovesa, and inland as Bedila". This river is shown flowing into Table Bay a few miles west of the Bailebo already mentioned and is the same as the Bonua marked on present maps.[7] At that time New Ouma was apparently the modern counterpart of an earlier village of the same name (marked Old Ouma on Saville's map) situated about eight miles inland up the same river on the edge of an "immense deep swamp" (Saville 1926:306) in which Saville (1926:307) later discovered the remains of another village submerged in the water and which the old people of Darava (or Daroa, a Magi village on the coast nearby) told him was called Goilamari. Unfortunately Saville did not discuss the linguistic or social affiliations of Ouma and/or Goilamari and/or their reasons for moving. We now know, however, that both these refer to different villages of the same group[8] and that the present-day village of Labu is a continuation of New Ouma.

Meanwhile Grist's account of the linguistic situation in this area was followed by Ray's (1938) survey of the languages of the old Eastern and South-Eastern Divisions of Papua. In this, Ray could only summarise much of the information just discussed[9] and set up (in much the same

way as Strong had done earlier) a Magori Group of languages consisting
of Magori, Laua and O'oku, related to the NAN Magi Group nearby. And
this is how they have generally been regarded, except for the misgivings
expressed by Capell already noted, until I re-surveyed the area in 1969
as already indicated, and discussed the language publicly in Dutton
1971b. On that occasion I argued that Magori was basically an AN lan-
guage whose lexicon has largely been borrowed from neighbouring NAN
languages, especially Magi, nearby. I also argued, on the basis of
slight lexical and grammatical evidence, that Magori was most closely
related to Sinagoro (in Capell's - 1943 - area II) some 100-odd miles
to the west rather than to the geographically nearer Keapara and Suau.
Historical implications of this most-probable connection were also
discussed.

Recently, Pawley (1975) has taken the lexical evidence contained in
that paper and analysed it along with, as already noted, that for AN
languages of Capell's (1943) areas I and II. His conclusion based on
phonological evidence is that the position of Magori is not clear from
the presently available evidence. However, it is clear that while it
cannot be excluded from an Eastern subgroup (containing Sinagoro and
Keapara) of the Central District languages it cannot on these grounds
be definitely assigned to that subgroup.

So at this point there is no argument about the status of Magori.
Its exact relationship with other languages of the area, however, is
not yet clear. Even so the range of possibilities is extremely narrow
and limited to those languages geographically closest - viz. Sinagoro,
Keapara and Suau. In what follows then we shall restrict our investi-
gation to these areas and languages. As a method of proceeding I shall
repeat much of what was in my earlier unpublished paper on Magori and
use that as a base for discussing the new languages Ouma, Yoba, and
Bina. In doing this I shall be seeking answers, not necessarily in-
dependently, but finally, to the following questions:

   (a) Are the four languages related, and if so, how closely and in
       what way?
   (b) Were these languages originally AN or NAN?
   (c) What was/were the prime influencing language/s?
   (d) What is/are their sister language/s?
   (e) What do answers to (a)-(d) tell us about the linguistic pre-
       history of SEP?

4.5.2.4. SOCIO-CULTURAL, HISTORICAL, AND ECONOMIC BACKGROUND TO MAGORI AND ASSOCIATED VILLAGES

For reasons bearing on the linguistic picture some social and his-
torical account must be given of Magori and associated villages. The
following general and particular accounts are based on early Government
records, Saville (1926), Malinowski (1915, 1967) and a recent study of
the Magori land-tenure system by Teasdale (1967), a former Government
Anthropologist.

4.5.2.4.1. *SOCIO-CULTURAL BACKGROUND*

Culturally, the Magori and associated villages differed little from
their surrounding neighbours, the Daga inland, and the Magi along the
coast. They built hill-top villages arranged around an open place or
'street' where feasting and dancing were held. Each village had its
own dubu or men's house in which were conducted important ceremonies
associated with initiation of young men and head-hunting. Each village
was surrounded as necessary and practicable by protective palisades in-
side which tree houses or platforms were built as final defence points
from which stones and spears could be hurled at assailants. Houses
were constructed of sago palm and raised off the ground, though they
were much smaller and of poorer construction than those of the Magi along
the coast. By all accounts too the villages were generally in a filthy
state resulting from the practice of keeping pigs therein.

Because of their positions on hill-tops food and water had to be
carried up to the villages. Taro, bananas, sweet potatoes and sugar-
cane were the chief foods, supplemented by locally grown coconuts and
sago obtained mainly from the large swamps in the tract of country known
as Lea just west of the mouth of the Bailebo River. This was the same
swamp from which Mailu and Loupom Islanders (Malinowski 1915:594) also
obtained their sago, so that, as Malinowski (1915:598) notes, "they had
to be on the watch for the Magori people, and while working the sago
had to set scouts". In these swamps the Magori also sometimes caught
fish in traps constructed out of upright logs.[10] At other times
wallabies, pigs, small game and birds were hunted (always at the great
risk of surprise attack by strangers) in the no-man's-land of forest and
swamp separating the Magori and other 'tribes' from one another. They
chewed betel nut and smoked tobacco.

Much of the social life of the village revolved around the feasting
and dancing associated with head-hunting. As already noted each village
contained a dubu, or men's house, in which skulls and bones of victims

were smoke-dried and hung.[11] They buried their dead in the village.
The implements of war were the spear, club, bamboo knife and the shield.
Spears and shields, Bell (1908:137) noted, were "of similar design to
those of Cape Nelson as also their pig traps though the Magori know
nothing of these people".

   Cooking pots and probably armshells and axe/adze heads were obtained
in exchange for feathers and food from the Magi along the coast. These
items all originated, however, from Mailu Islanders who were the great
traders in these particular commodities. The pots they made on their
island where the villagers specialised (and still do) in their manu-
facture and the shells and axe heads were obtained in exchange for
various items with peoples of the Aroma and Mullins Harbour areas west
and east respectively. It is not known whether the Magori once knew
how to make pots but Saville (1926:21) reports that

> inland from the shores of Amazon Bay I have found bits of
> pottery bearing different patterns from those of the Mailu.
> And the Mailu man tells me that long ago there were people
> living there who were potters, but that he "finished them
> off".

We shall return to this later.

   Finally, according to Bell (1908:138-40) the inhabitants of Laua,
Deba and Magori were much the same physical type, the only difference
between them being that Magori and Deba natives were in better condition
than the Laua ones because of a better food supply. He gives the
following description of Laua villagers:

> (They) were, as a whole, like many other small tribes of
> inland bush natives, very poor in physique, some dark skin
> and others light. There are traces where they have married women
> from the coast and other villages within a few days' journey
> of them. The men are short, with hair frizzy. They do not
> tattoo. There is nothing very noticeable with the exception
> of their physique to distinguish them and the women from the
> natives round about Kurere on the south coast[12]... The Laua
> women are short, and mostly dark skin. The hair is straight.
> The grass petticoat is worn. The face and body is tattooed
> similar to the Mailu women... (There is) little attempt at
> personal adornment. The men wear a strip of native cloth,
> or at times, only a thin cane round their waists.

4.5.2.4.2. *HISTORICAL BACKGROUND*

   The three present-day villages of Deba, Laua, and Magori are the
continuations of earlier villages of the same names, which at first
contact were perched for protection on the tops of steep rocky hills
commanding the immediate area. They have moved to their present posi-
tions in historical times following the establishment of government
control over the area and the cessation of hostilities between them and

the neighbouring 'tribes'. Labu, as already noted in Section 4.5.2.3.
above, is a continuation of various villages which at first contact
were located in swamps surrounding the Bonua River inland of Table Bay,
although now it is predominantly Magi. Bina no longer exists but was
said by Tabi Koakoa to have been situated on Gaua Mountain up the
Origuina River that flows into Orangerie Bay. Further details of the
relationships of these villages to one another, so far as these are
known, are given in the following individual accounts of Magori, Deba,
and Laua.

4.5.2.4.2.1. Magori Village

   This was the largest of the three former hill-top villages situated
about four to five miles inland. It consisted of two sections of
approximately equal size (26 houses apiece): Magori proper, and Poi, a
little further up the same ridge. According to Saville (1926:308) the
Magori were close allies of the Maisi villages (Dagobo, Unevi, Borobo)
and neighbouring ones in Mayri Bay and Millport Harbour to the east and
the true gara (from Mailu gara *spear, war*) villages of the Mailu
Islanders offshore. Saville (1926:208) says, "It was among these people
that the Mailu did their headhunting". But the Magori also had allies
in villages friendly with the Mailu, and even had "one sub-clan at
Kurere (that) was related by marriage to Magori", though this did not
necessarily protect Kurere from danger of attack by the Magori (Saville
1926:208). The Magori are also known to have been on a changing rela-
tionship with their nearest neighbours and relatives, Deba, who they
are known to have killed on occasions (Saville 1926:209). They also
attacked Dalava on the coast about ten miles to the west. They them-
selves were, however, regularly attacked by the Velavelai (Macdonnell
1911; Wuth 1913) until peace was established between them by Armit
(1914). They are known to have spoken Magi though few Magi know or
ever knew Magori.

   Accounts differ as to the prehistory of the Magori. According to
tradition related to me by N.P. Thomson, the Magori used to live further
east over in the region of the Origuina River inland of the western end
of Orangerie Bay. Here there were supposedly two villages speaking the
'original' Magori language. One of these villages was called Bina.
About the last quarter of last century, however, these Magori quarrelled
about the ownership of the moon and split up and pushed overland west-
wards, travelling between the Magi on the coast and the Daga inland who
were still further inland up the southern slopes of the Owen Stanley

Range at that time.   Some Magori stayed around Bina but today there are
only two surviving members of that group.   Teasdale (1967:8-11) gives
the following account:

> The oldest resident of Magori, Orai, of Diadubu clan, could
> recall tales of migration of the Magori people originally from
> a site on a river named the Amini River, said to be close to
> Abau.[13] Over many years the Magoris shifted from mountain top
> to mountain top in search of a secure fortress with good water
> and adequate space, until finally they settled on the top of
> Babaga Mountain to the south-east of their present site.   It
> was whilst hunting from this settlement that a leader named
> Banibaia investigated the present Magori mountain, with its
> favourable water supply and good unoccupied land, and brought
> the Babaga settlement to establish Magori village there.
> Sometime later a split occurred over adultery, and a man named
> Baguna Dida led a faction to establish a second village, Goili
> Aura,[14] on the adjacent hill top.   Thus originated the two
> present day auras (phratries) of Magori village.
>   According to Orai's stories, at about this time a faction
> split from Magori and travelled to Woro Mountain, close to
> Lake Abati, where they founded Deba village.   People of present
> day Deba maintain, however, that they had always resided at
> Woro Mountain, that they have no stories of previous migra-
> tions, or of any connection with Magori until three clans
> split off from Magori and came to join them at Woro Mountain.
>   Deba was the site at Woro Mountain when the Missionary
> W.J. Saville, first came to the district in 1900.   Saville
> was one of the first Europeans with whom the Magori villagers
> were familiar.   He mentions having visited the village on two
> occasions prior to an instance when he went to investigate
> some murders committed by the Magoris in 1906 (1926:108).
> The Goili Aura section of Magori had murdered four people of
> Deba and Oma (near Darava).   It was through this incident
> that Magori's first contact with Administration occurred.

Subsequently, Armit (1914:85) encouraged the two sections of old
Magori to move to a new site, Goiliauwa, now generally simply Magori,
on the lowlands near the river.

4.5.2.4.2.2.   Deba Village

According to Bell (1908:139) Deba was the highest of the three
early villages under discussion.   It consisted of 26 houses atop Woro
(or Oro) Mountain about seven miles inland.   The villagers were forced
to move from this seemingly safe position to the coast about 1911
following attacks upon them (and Laua) by Velavelai natives from behind
Cloudy Bay in 1909 and 1911.   According to Teasdale (1967:13) the Deba
people first

> shifted to the site of the Lea coconut patch a short way from
> their existing position, but a little later they moved to the
> present spot near the mouth of the Bailebo River.   Because all
> their own land had been abandoned at Woro Mountain the Deba
> people were forced to obtain land at their present site from
> their Magori kinsmen, and the current ownership of this land
> is a bone of contention among the Magoris.

Though this does not quite tally with Macdonnell's (1911:105) report
that "they joined with the natives of Laruolu Island and built another
village on the seashore at the mouth of the Eroro (= Bailebo) River"
it is not very relevant to the present essay except that it indicates
different connections between the Deba and Magi from those of the Magori
whose connections as already shown were to the east.

4.5.2.4.2.3. Laua Village

At first contact this village must surely have been one of the most
inaccessible in all Papua. Bell (1908:137) relates how the village
could only be reached by

> an almost perpendicular climb over fallen trees, dry scrub,
> ...slippery sharp-pointed volcanic rock...crevasses and up
> wood ladders. The top of the hill...(was) one mass of these
> sharp rocks, standing up ten, twenty, and thirty feet from
> the ground. Between some rocks the crevasses are twenty to
> thirty feet deep, and below in one or two are small caves.
> A pathway is made from one rock to another by means of flat
> boards and saplings... Many of the houses in the village
> were built with their floors level with the top points of
> rocks and presented quite a singular appearance with their
> supports of various lengths reaching the sides below, wher-
> ever a holding for them could be found. The houses were
> built of sago leaf very poorly, and similar in construction
> to those on the coast.

According to Teasdale (1967:14) the Laua claim a close connection
with Deba, but on the basis of a period of joint residence at Woro
Mountain.

Modern Laua, though boasting only 35 inhabitants, contains elements
of three distinct groups - Laua proper, Oba and Deba.

> The Lauas believe that their original habitat was at a place
> called Ulsani Mountain close to Abau. They left this site
> for Loi Mountain near the present site of Bonua at the Bonua
> (Oveta) River. Fights with the Velavelai people, however,
> caused the Lauas to make a series of migrations to mountain
> tops named Bo, Oro Orama, Lauoro, Aebaga, Gormana, and last...
> of all Garagarama Mountain, which was close to Woro Mountain,
> the habitat of the Debas. The Lauas claim that at this last
> spot they made gardens together with the Debas... Because of
> the raids from the hill people the Lauas left their site close
> to Deba and went to a spot on the Bailebo River named Anamala,
> where they remained for many years. Shortly after their
> arrival they say they were joined by a contingent of Deba
> people seeking refuge, the rest of the Debas went down to
> establish their present coastal settlements.
> The Lauas claim that about the time of the war their people
> began to die in great numbers, and fearing that evil magic
> may have contaminated the village site, they shifted, first
> to Odiabi Mountain, but this spot was not better, then back
> to Anamala, then to their present location below Berere Hill
> about two miles from Anamala, which proved a satisfactory
> place.

...The third element in the make-up of Laua consists of
people who claim they originally belonged to a village named
Oba[15] and that they came from the east and spoke a language
distinct from those of the Magori, Dimuga and Mailu. There
are still one or two residents of Laua today who can speak the
old language. The stories of the Laua people tell how, like
the other peoples, the Obas migrated from hill top to hill top
in search of better conditions and security. Their earliest
remembered site was Danawan Mountain close to Baniara, from there
they moved to a mountain above Nunumai and thence to Vagusu,
Agima and Gemabe Mountains north of Magori and east of the
Bailebo River. In this vicinity the land is still said by the
Magoris to belong to Oba. The Obas finally fled Gemabe Mountain
to escape from enemies; some went north to Keremaruge Mountain,
some joined the Laua and Deba peoples then at Anamala.
    Because the Laua people fled their own land adjacent to the
Bonua River, the land that they now occupy and all the land
extending to Deba's Woro Mountain is said to belong in fact
to the Deba people. Moreover a large proportion of Lauas are
of Deba origin. I was told that the present residents of Bonua
are composed of a branch of Arau, a Dimuga village, which went
there following an internal quarrel, and that they purchased
their land from Laua owners. I could find no actual record
of this happening.
    Over the years parties of Laua folk have attempted an
unstable settlement at Bonua.

According to Bell (1908:137) the Laua natives nearly all spoke the
Magi language which they learned from the coast people with whom they
traded for cooking pots etc. Thomson (1975) classifies Laua as a
Mailuan language most closely related to Magi on the coast.

4.5.2.4.3. *ECONOMIC BACKGROUND*

Some of this has been touched upon above. But to recapitulate: the
three associated villages were a small, relatively closed group,[16] in a
constantly changing friendly-unfriendly relationship with their neigh-
bours, especially the Magi who were in a dominant position because of
the trading activities of a small section of them. These were the
Mailu Islanders, the largest Magi community, who were the leading traders
of the whole south coast from Hula (Hood Point) in Capell's (1943) area
II to the west, to Suau in Capell's (1943) area III to the east.[17]
According to Malinowski (1915:506) these islanders were feared by main-
land communities. In annual trading cycles between areas II and III
they exchanged pigs, dogs, feathers, perineal bands, string bags, short
strings of rounded shell discs, spears, armlets, and coconut water-
bottles obtained from Capell's (1943) area II mainly for armshells,
stone axes, adzes, obsidian, dogs' teeth and seed necklaces, sago, mats,
pots, black-lip shell knives, scrapers from area III most of which were
in turn taken back to area II to exchange for the goods just listed.

In the west the chief point of contact was Aroma (especially Maopa) and
that in the east around Mullins Harbour to Suau (or Stacey) Island.
However, they had indirect connections with groups beyond these ex-
change points. For example, the string bags of area II came from inland
Rigo in exchange for fish (Saville 1926:161) and the best axes and
stone came from inland and north of Mullins Harbour across to the north
coast. Some of the exchanged items travelled beyond these points by
intermediate trading connections, e.g. those between Keapara and the
Western Motu in which armshells obtained from Aroma were traded for
sago; those between Hula and neighbouring areas and Motu; and those
between the Motu and peoples of the Gulf of Papua and intervening areas
to the west.[18]

4.5.2.5. MATERIALS AND METHOD

The linguistic materials on which this paper is based consist of:
(a) basic vocabulary lists of approximately 270 items;
(b) some elicited grammatical materials; and
(c) a short text in Magori.[19]
The vocabulary was obtained using S.A. Wurm's modified TRIPP list
'Lexicostatistical Comparisons, Highlands Districts, T.P.N.G.' which
was designed to help determine the degree of genetic relationship
between languages in New Guinea by comparing percentages of shared
cognates.[20] It is the same list as I have used in previous linguistic
survey work in SEP.[21]

In comparing the phonologies and grammars of the four languages with
AN languages of SEP I have used Ray's (1907), Capell's (1943, 1971),
and Pawley's (1975) accounts as the principal sources, supplemented as
necessary by reference to other individual accounts of particular areas
or languages and more recent materials collected by myself and others.
For NAN languages I have relied on my own 1971 account supported by
particular studies like Saville's (1912, 1935a) of Magi.

In dealing with the vocabulary I have attempted to look at it from
different points of view by grouping and analysing the items in various
ways. One way of looking at the vocabulary is by lexicostatistics but
this in itself will not be sufficient. Additional historical information
can be obtained by subcategorising the vocabulary according to general
lines of agreement which cut across the AN-NAN distinction, e.g. grouping
items which are common to at least one AN language, and/or Mailuan
Family languages, and/or at least one NAN language other than Mailuan,
etc.

The results of these analyses give a fairly clear and revealing pic-
ture of the relationship of Magori and associated languages to one
another and to other languages of SEP as will be seen below. Of course
these techniques are not, in themselves, held to prove anything - they
merely serve to indicate possible directions for further investigation
leading to an explanatory hypothesis which should fit well with other
extra-linguistic facts and be as natural as possible.

4.5.2.6.   DISCUSSION OF RESULTS: THE HISTORICAL STATUS OF OUMA,
             MAGORI, YOBA, AND BINA

In this section each of the three linguistic aspects - phonological,
grammatical, and lexical - of the four languages under discussion will
be examined and discussed separately to see what historical conclusions
can be drawn from each.

4.5.2.6.1.   *PHONOLOGICAL EVIDENCE*

Phonologically all four languages are very similarly structured and
differ little from neighbouring AN and NAN languages.[22] All have simple
five vowel systems and equally simple consonantal systems with the
following common to each: p, t, k, ' (glottal stop), b, d, g, m, n, v,
r, i, e, a, o, and u. Ouma has in addition /h/ which occurs irregularly
as a reflex of POC *t (e.g. POC *mata *eye* > maha) and is probably
diagnostic of borrowed words. In all languages /p/ may be realised as
[p] or [ɸ/f], /t/ as [ts] or [s], and /r/ as flapped [r] or [l]. Glottal
stop is suspect, especially initially, and may be subphonemic. All
syllables are open and there are no consonant clusters.

No historical conclusions can, however, be drawn from these corres-
pondences. For that we have to turn to established or proposed proto-
forms to see what sound laws these languages exhibit vis-à-vis other
languages in reflecting, if they do, those proto-forms. Normally, of
course, it would be necessary to test all cases but since we know from
previous studies[23] that at least Magori is basically AN and probably
most closely related to neighbouring languages in Capell's (1943) areas
II and III, it will only be necessary to look at PAN reconstructions,
or that subset of them which is currently called POC to which languages
of SEP are known to belong. Conveniently too, as already mentioned,
Pawley (1975) has just recently discussed what he calls the Central
District languages and Magori in some detail. In this article he shows
that the Central District languages and Magori have undergone nine
phonological innovations in their treatment of POC phonemes which marks

them off as a closed subgroup within Oceanic. These innovations are:

(1) POC *k is lost;

(2) POC *l is lost before i and u;

(3) POC *u merges with POC *i as i after *ol or *ul;

(4) POC *d, *nd and *R fall together;

(5) POC *s and *ns fall together (a) either as a flapped r, or
      (b) as a stop d, t, k;

(6) Word-final consonants are lost in absolute final position, i.e.
      when not followed by a suffix;

(7) POC *y is lost in the context *a-u;

(8) POC *ñ merges with *n;

(9) POC *q is lost.

Although not all of these can be regarded as of equal importance
(because some are not exclusive to the Central District languages) they
do, nevertheless, as a group mark off the Central District languages
and Magori as having separate histories from the rest of Oceania. Those
languages that seem closest to these are Suau (Capell's - 1943 - area
III), Dobu (Capell's area V) and Molima (also Capell's area V). How-
ever, Pawley showed that these languages did not undergo innovations
(1), (5b), and (6) and possibly (2), (3), and (9). In other words,
these six innovations can be set up as test or diagnostic cases for
deciding whether any new language belongs to the Central District lan-
guages or not. Let us look therefore at the new languages Ouma, Yoba,
and Bina in these terms to see how they pattern as against Magori. For
comparative purposes Gadaisu will also be included in this as the closest
member of the Suau dialect chain.

TEST 1: POC *k is lost

Evidence (1) *k	(12)[24] *kampu burn	(24) *kani eat	(31) *kalopa fire	(36) *kaki foot	(62) *ka(dr)aŋpa new	(72) *kita see
Ouma	ua	ani	arova	ae	gadara	isa
Magori	gabu	ani	--	ake	gadara	--
Yoba	--	ani	karoa	--	gadara	--
Bina	gabu	ani	karoa	--	--	ita
Gadaisu	gabu	kani	--	kae	--	kita

	(86) *ko(e) *thou*	(89) *kayu *tree*	(93) *kita *we*(incl.)	(94) *kami *we*(excl.)	(100) *kamu *you*(pl.)
Ouma	oni	au	ita	ai	omi
Magori	oni	--	ita	nai	umui
Yoba	oni	--	ita	nai	omui
Bina	moni	--	ita	nai	umui
Gadaisu	koa	--	ita	ai	komi

	(36) *kaki *foot*	(91) *lako *walk*
(ii) -*k-		
Ouma	ae	wa'a, vao
Magori	ake	eau
Yoba	gogu(?)	eau
Bina	gogu(?)	yao
Gadaisu	kae	yao

Observations:

Although the evidence is patchy and far from satisfactory it does sug-
gest that Ouma at least, and to a lesser extent Magori, Yoba, and Bina
participate in this innovation as distinct from Gadaisu, which, except
for two cases (both pronouns) does not. That is, Magori and associated
languages seem to be more akin to languages to the west in this feature
than they are to those to the east (Capell's - 1943 - area III).
Gadaisu, on the other hand, seems to belong clearly to those to the
east, which generally reflect POC *k as glottal stop or k.

TEST 2: POC *l is lost before i and u

Evidence

	(19) *kali *dig*	(22) *taliŋa *ear*	(25) *qatoluR *egg*	(40) *pulu *hair*	(41) *lima *hand*	(42) *qulu *head*
Ouma	--	ta'a	--	'ulu(?)	ima	--
Magori	--	--	ato'i	--	ima	uru
Yoba	--	taia	katino	--	ima	kuru
Bina	keria	taia	katino	--	nima	kuru
Gadaisu	--	taina	katino	fufuia	nima	kuru

Observations:

While this set of forms shows that POC *l is generally lost before i,
there is conflicting evidence for loss before u. Consider, for example,
sets (25) *'egg'*, (40) *'hair'*, and (42) *'head'*. This conflict suggests
that either Gadaisu has borrowed from Magori and associate languages or
that some of those languages have borrowed from Gadaisu since Suau

dialects usually retain *l as either l or n, e.g. ulu *head* < *qulu,
and nima *hand* < *lima.

TEST 3: POC *u merges with POC *i as i after *ol and *ul

Evidence

	(25) *qatoluR *egg*	(40) *pulu *hair*	(42) *qulu *head*
Ouma	--	'ulu(?)	--
Magori	ato'i	--	uru
Yoba	katino	--	kuru
Bina	katino	--	kuru
Gadaisu	kataino	fufuia	kuru

Observations:

No conclusions can be drawn from this sparse evidence.

TEST 4: POC *s and *ns fall together either as a flapped r or as a
        stop t, d, k

Evidence

(i) *s	(3) *(n)saqat *bad*	(10) *suRi *bone*	(11) *susu *breast*	(58) *solo *mountain*	(64) *isu(z) *nose*
Ouma	davau	tu'a	--	oro'u	--
Magori	--	tiria	kuku	oro	--
Yoba	--	--	'u'u	worei	--
Bina	--	--	'u'u	oroi	--
Gadaisu	--	tiada	tutu	woroi	isu

(ii) *ns	(60) *qansan *name*	(83) *qanso *sun*	(97) *nsai *who?*	(12)[+] *ta(n)si *sibling, same* *sex, younger*	(237)[+] *pinsa *how many*
Ouma	ara	--	arei	tari	rivaha
Magori	aka	--	a'ara	tagi	vika
Yoba	--	--	--	ta'i	--
Bina	a'a	--	aikara	ta'i	bi'a
Gadaisu	esa	odaoda	sai	tati	fisa

Observations:

This is an interesting set of data which suggest that Ouma has had a
separate history from Magori, Yoba, and Bina. Gadaisu on the other hand
is quite distinct and follows the typical Suau pattern in the east.
Thus Ouma shows separate reflexes for both *s and *ns (in the one case
d, t, and ∅, and in the other r) which contrasts with Magori (which
reflects *s and *ns as k generally but sometimes as t and ∅) and Yoba
and Bina (which reflect *s and *ns as glottal stop and sometimes ∅).

_____

[+]from MS list by Wurm.

TEST 5: Word-final consonants are lost in absolute final position, i.e.
       when not followed by a suffix

Evidence	(7) *manu(k) bird	(45) *Ru(n)ma(q) house
Ouma	--	numa
Magori	--	numa, ruma
Yoba	manu	ruma
Bina	manu	numa
Gadaisu	manu	ruma

Observations:

On the basis of this sketchy evidence all the languages under investi-
gation including Gadaisu have lost POC word-final consonants.

TEST 6: POC *q is lost

Evidence	(3) *(n)saqat bad	(42) *qulu head	(52) *qate liver	(60) *qansan name
Ouma	dava'u	--	areme	ara
Magori	--	uru	--	aka
Yoba	--	kuru	--	--
Bina	--	kuru	karamena(?)	a'a
Gadaisu	--	kuru	kate	esa

Observations:

There is weak evidence here to suggest that POC *q is regularly lost in
Magori and Ouma but only sometimes in Bina and Gadaisu. The evidence
for Yoba is unsatisfactory. On this basis then Ouma and Magori fall
together and are distinct from Bina and Gadaisu which also fall together.

    In review then we find that in two out of the three strongest test
cases that Pawley establishes (notably our tests 1 (= Pawley's 1) and 4
(= Pawley's 5b)) Magori and associated languages agree with one another
and the Central District languages. Gadaisu on the other hand follows
the general rules of Capell's (1943) area III with which it is classified.
In two other test cases (notably our tests 2 (= Pawley's 2) and 6 (=
Pawley's 9)) Magori and associated languages show mixed results sugges-
ting that there are interference phenomena involved, probably with
Gadaisu nearby which shows similar results. This suggestion is strength-
ened by test case 5 (= Pawley's 6) in that all the languages, including
Gadaisu, show agreement with the Central District languages. Test 3
(= Pawley's 3) provides no results.

In consequence it appears that all four languages under review are closely related and show parallel developments in their phonological histories with the Central District languages to the west rather than with Suau of Capell's (1943) area III to the east. There is little strong evidence here, however, for subgrouping Ouma, Magori, Yoba, and Bina although tests 1, 4, and 6 do suggest that Ouma has had a separate history from the other three. The situation is complicated, however, by the fact already mentioned that it looks as if Bina particularly, but also the other languages to some extent, have been in contact with Gadaisu with mutually disturbing results.[25]

4.5.2.6.2. *GRAMMATICAL EVIDENCE*

This is the best evidence of the general status of Magori and associated languages. They are clearly AN of subtype AN_2, the predominant variety of South-East Papua.[26] Thus these languages have, for example:
(a) Subject-Object-Verb structure. Consider for example:[27]

    Ouma: kativa na'a aha-na-(a)i tere
              knife table top-its-at you.put.it

              'Put the knife on the table!'

    Magori: kative a-vata   ata-na   tere
              knife at-table top-its you.put.it

              'Put the knife on the table!'

    Yoba: matiti kae-tini ata-na u-tere
              matches at-tin   top-its you-put.it

              'Put the matches on the tin!'

    Bina: matiti tebolo lutu-na-e u-tere-a
              matches table top-its-at you-put-it

              'Put the matches on the table!'

(b) A pronominal system which distinguishes between first person plural inclusive and exclusive forms, e.g. all the languages have ita *we*(incl.) versus ai or nai *we*(excl.).[28]

(c) A possessive case system which (for all except Ouma) distinguishes between two classes of nouns for possessive suffixation, viz. alienable and inalienable. For the former the structure is nau N_1 -gu *my* N_1 and for the latter nau egu N_2 *my* N_2. Compare for example the following:

	Alienable			Inalienable		
Ouma	au egu doi	*my*	*land*	au egu baba	*my*	*father*
Magori	nau egu arima	*my*	*land*	nau tama-gu	*my*	*father*
Yoba	nau egu gidagida	*my*	*land*	nau tama-gu	*my*	*father*
Bina	nau egu gidagida	*my*	*land*	nau tama-gu	*my*	*father*

For the full set of pronouns in each language see Subsection 4.5.2.6.2.1.1. below.

(d) A verb structure which includes short form pronoun-cum-tense prefixes. These are discussed further in Subsection 4.5.2.6.2.4. below.

(e) No definite or personal articles.

(f) A numeral system based on 5 and 10 - that is, numbers 1 to 5 and 10 are independent forms whereas numbers beyond 5 and 10 are based on 5 and 10 respectively. Compare, for example, the following:

	Ouma	Magori	Yoba	Bina
1	ohabu	'ana'oni[29]	kanakoni[29]	kanakoni[29]
2	{a'i hairi	buau	buau	buo
3	aheri	aiteri	aiteri	aiteri
4	{vahi rogou	vati	vati	vati
5	ima	ima	ima kana	ima
6	ima riria 'una	ima reria 'ana	ima reria kana	ima riria kana
7	ima riria a'i	ima reria buau	ima reria buau	ima riria buo
8	ima riria aheri	ima reria aiteri	ima reria aiteri	ima riria aiteri
9	ima riria vahi	ima reria vati	ima reria vati	ima riria vati
10	rogo'una	nanau'ana	nanaukana	aukana

(g) Formation of postpositions from nouns.[30] Compare, for example, the following:

	Ouma	Magori	Yoba	Bina
on top of N	N ahana-(a)i N *top-its-at*	a-N ata-na *at-N top-its*	kae-N ata-na *at-N-top-its*	N lutu-na-e N *top-its-at*
under N	N gabila-(a)i N *under-at*	a-N godava-na *at-N under-its*	kae-N gaburere-na *at-N under-its*	N gabula-na-e N *under-its-at*
inside N	N ena gui-na-(a)i N *its inside-its-at*	a-N guni-na *at-N inside-its*	kae-N autu-na *at-N inside-its*	N yau-na-e N *inside-its-at*
behind me	gedu-gu-ai *back-my-at*	a-deni-gu *at-back-my*	kae-deni-gu *at-back-my*	deni-gu-e *back-my-at*
in front of me	taga-gu-ai *face-my-at*	a-voira-gu *at-face-my*	kae-voira-gu *at-face-my*	vaira-gu-e *face-my-at*

(h) Adjectives comprised of duplicated elements. Compare, for example:

	Ouma	Magori	Yoba	Bina
good	vauvau	ragi	'ae'ae	'ai'ai
long	maenawore	baibai	ruberube	maiaou
red	{ kakakaka rararara	morimori	ko'iko'ia	koikoi'a
white	goiagoia	goagoa	goiagoia	goiagoia
black	dubaduba	dubaduba	dubaduba	dubaduba
yellow	gobugobura	gobugobura	gobura	{ gobugobura eti'etia

    Yet precisely because these languages are so typically AN$_2$ in gram-
matical structure it is much more difficult to identify a sister language
from amongst the mass of similarly structured other AN$_2$ languages of
SEP. As far as the evidence is diagnostic of sister relationships at
all it is in favour of a western, rather than an eastern connection in
that the grammatical features of Magori and associated languages agree
more consistently with those of languages of Capell's (1943) areas I and
II than with those of any other areal group, especially area III which
is the most suspect because of its geographical proximity. The evidence
to be considered can be conveniently grouped and discussed as follows:
    (1) Pronominal System;
    (2) Relativisation;
    (3) Prepositions;
    (4) Verb Structure.

4.5.2.6.2.1. Pronominal System

    The most that can be said of this evidence is that it shows no clear-
cut connection. In the subjective and emphatic forms there is slightly
better agreement in forms with languages of Capell's (1943) areas I and
II, while in the possessive and objective pronoun suffixes there is
about equal agreement with languages to the east.
    Consider the following:

4.5.2.6.2.1.1. *Subject Pronouns*

    In general the subject pronouns of AN languages of SEP fall into two
groups:
    (1) "those formed purely on an IN basis" (Capell 1943:211);
    (2) those formed partly or wholly on a "demonstrative basis", i.e.
on a base related to IN taw *man, person, body* (Capell 1943:211, 217).

The two are geographically distinct. Thus the former are to be
found in languages of "the south coast from Roro to South Cape ... and
the southern islands as far eastwards to Sud Est" (Capell 1943:204),
i.e. in areas I, II, III, (the southern part of) X, and XI. The second
type are to be found elsewhere. The Magori and associated languages
subject pronouns belong to those of Group I, and within this group to
those of the languages of areas I and II to the west, as can be seen by
inspection of Table 1 below, which is based on Capell (1943:204-18).
The second singular and plural forms oni/moni and umui/omui are particu-
larly diagnostic.

TABLE 1: SUBJECT PRONOUNS[31]

Language	1sg.	2sg.	3sg.	1pl.incl.	1pl.excl.	2pl.	3pl.
Mekeo	rau	oi	ia	ia	rai	oi	ai
Pokau	rau	oni	ia	ita	rai	oi	ia
Doura	nau	oi	ia	ita	?	?	ia
Kuni	iau	oni	ia	i	ai	imwi	isi
Kabadi	nana	oni-na	ia	isa-da	nai-da	ui-da	ia-da
Motu	lau	oi	ia	ita	ai	umui	idia
Sinagoro	ɣau	ɣoi	ɣea	ita	ɣai	ɣomi	ɣea
Keapara	ɣau	oi	ia	ia	ai	omi	ira
Aroma	au	ɣoi	ɣia	ɣi:a	ai	ɣomi	ira
Ouma	au	oni	ia	ita	ai	omi	ida
Magori	nau	oni	ia	ita	nai	umui	idi
Yoba	nau	'oni	ia	ita	nai	omui	idi
Bina	nau	moni	ia	ita	nai	umui	idi
Suau	ɣau	'owa	ia	'ita	'ai	'omi	isi
Tubetube	ɣau	kowa	iya	kita	kai	kwamiu	siya
Rogea	ɣau	kowa	ia	kita	kai	komiu	sia
Sariba	ɣau	koa	(tenem)	kita	?	komi	siya
Panayati	nau	owa	ia	kira	hama	komiu	heria
Sabari	nau	huwo	ia	hita	hamai	kimiu	ai
Sud Est	ɣinu	ɣönu	ɣia	ɣinda	ɣini	ɣoni	ðie

4.5.2.6.2.1.2. Emphatic Pronouns

In Magori, Yoba, and Bina these are of the form tibo- + personal
pronoun possessive suffix, and in Ouma possessive pronoun + voina.

Examples:

Ouma: (nau) egu   voina   bua'a
           (I)   poss.   emph.   I.did.it

           'I did it myself.'

Magori: (nau) tibo-gu   ma'abi
           (I)   emph.-poss.   I.did.it

           'I did it myself.'

Yoba: (nau) tibo-gu   ma'abi
           (I)   emph.-poss.   I.did.it

           'I did it myself.'

Bina: (nau) tibo-gu   ma'abia
           (I)   emph.-poss.   I.did.it

           'I did it myself.'

Excepting Ouma (where the structure and forms seem to have been borrowed from Magi)[32] the form of emphatic pronouns in these languages is similar to that of emphatics found in AN languages in most neighbouring languages though those to the east (Capell's – 1943 – area III) are slightly different in form. Thus in Motu (area II) the emphatic subject pronouns are of form tibo- + possessive pronoun suffix while in Suau they are of the form bo- + possessive suffix.

4.5.2.6.2.1.3. *Possessive and Object Pronoun Suffixes*

These are:

	POSSESSIVE[33]				OBJECT			
	Ouma	Magori	Yoba	Bina	Ouma	Magori	Yoba	Bina
1sg.	-gu	-gu	-gu	-gu	-gau(?)	-gu	-gu	-gu
2sg.	-m	-u	-m	-m	?	-o	-m(u)	-m
3sg.	-na	-na	-na	-na	-a/∅	-∅	-∅	-a
1pl.incl.	-?	-da	-da	-da	?	-da	-da	-da
1pl.excl.	-?	-mai	-mai	-mai	dai(?)	-mai	-mai	-mai
2pl.	?	-mu	-mui	-mi	?	-mu	-mui	-mi
3pl.	?	-di	-di	-di	-di'i(?)	-di	-di	-di

Several things are noteworthy about these forms:

   (1) Possessive pronoun suffixes are non-diagnostic of subgroupings and of sister relationships since similar forms occur widely throughout SEP (Capell 1943:223-4). The one exception is the third person plural forms which are divided between those ending in a (e.g. da, ta, la, ra), characteristic of Capell's (1943) areas I and II, and those ending in

i (e.g. di, si, ki) elsewhere. Magori and associated languages obviously belong to the latter group and hence may be said to be connected to the east in this regard rather than to the west.

(2) Objective pronoun suffixes in Magori and associated languages are the same as possessive pronoun suffixes except for third person singular forms where Ø- or -a *him, her, its* corresponds to -na *his, hers, its*. Thus Magori and associated languages can be seen to be similar to most other AN languages in having the same sets of suffixes for possession and object suffixes to verbs (Capell 1943:226).

4.5.2.6.2.2. Relativisation

This evidence strongly suggests a western connection. The evidence to be considered corresponds to that discussed by Capell (1943:201-3) for SEP generally as 'agent' and 'local' nouns which are special cases of the more general process relativisation. Here Capell notes that:

> The agent is expressed throughout SEP by a derivative of IN
> taw, man; in the west and centre this becomes tau-na, its man,
> men of ..., and in the east tau or to immediately before a
> simple verb. ... In the west is, e.g., Motu kaha, help >
> hǎkaha, help (n.) > hǎkaha tauna, helper, lit. man of helping;
> Sinaugoro, dogo, help > vǎdogo, helper > vǎdogona tauna, helper;
> Keapara uɣunaɣi, to send > vǎ-uɣunaɣi auna, messenger. The
> literal meaning is the same in each case. ... In the eastern
> half of SEP tau, to or tai, according to language, is prefixed
> to the verb. Thus: Wedau giu, teach > taugiunina, teacher;
> Suau yama, to fish > tauyama, fisherman; Tubetube sagui, to
> help > tosagui, helper. ... It will be seen how different is
> the treatment in the east and west, even while the elements are
> the same.

Local nouns are parallel in structure and distribution. Thus Capell notes (1943:202-3):

> Specific nouns of place are not formed in the western and central
> languages. In Motu, "market place" is hoihoi gabuna, buying
> its-place; in Keapara voi ɣabuna. In the eastern languages the
> locative prefix is very important. The root seems to be kaba,
> and it has a very wide distribution: ... Examples in the
> better known languages will suffice. Panayati: an, eat >
> abaanan, eating place. ...

In Magori and associated languages relative clauses have the structure:

Sentence + tau / gabu... + personal pronoun possessive suffixes.[34]
         man   place

Examples:

   Ouma: bura du'u tau-na
            pig spear man-poss.

            'pig spearer'

            pereni ena buibui   gabu-na
            plane its come.down place-poss.

            'airfield'

Magori: nau kirai gori tau-gu
             *I   pig   spear man-*poss.

             'I'm the pig spearer'

             pereni ena yamayama gabu-na
             *plane its come.down place-*poss.

             'airfield'

Yoba: nau ua'a ginigini tau-gu
             *I   pig spear   man-*poss.

             'I'm the pig spearer'

             ripa   vatavatena ava-na
             *speech listening thing-*poss.

             'tape recorder'

Bina: mo'o ginigini tau-na
             *pig spear   man-*poss.

             'pig spearer'

             mitini riba vataina ava-na
             *machine speech listening thing-*poss.

             'tape recorder'

These can be seen to be identical in formation to those of Capell's
(1943) agent and local nouns in Motu, Sinagoro, and Keapara in particu-
lar, and more generally, to languages of his areas I and II.

4.5.2.6.2.3. Postpositions/Prepositions

Phrases expressing direction towards and locations in Magori and
associated languages are of two types:

(a) those marked by the suffix -ai or -e (as in Ouma na'a ahana-(a)i
*(table top.*poss.*-at) 'on top of the table'* and Bina vaira-gu-e *(face-
my-at) 'in front of me'*), and

(b) those marked by the prefixes a- or kae- (as in Magori a-vata
ata-na *(at-table top-its) 'on top of the table'* and Yoba kae-deni-gu
(at-back-my) 'behind me').

These forms are obviously related to one another and to corresponding
-ai and kai- suffixes and prefixes found in Capell's (1943) areas I and
II, and III respectively.[35] They also suggest a subgrouping that goes
contrary to other evidence so far considered, viz. that Bina is most
closely related to Ouma rather than to Yoba or Magori.

4.5.2.6.2.4. Verb Structure

The most notable things about the verbal system of Magori and associ-
ated languages are:

(1) the 'short pronoun' forms (as far as they are evident from the material collected) are all very similar and correspond a little more closely to those of languages to the west than to the east. Consider, for example, the following chart derived from Capell (1943:221) and based on his summary account:

> the short pronouns (of SEP) group themselves fairly easily
> into two groups: the languages west of Hood Pt. (i.e. areas
> I and II), and those east of that point. The differences are
> not great, but they are distinctive. ... The contrast is not
> absolute, and ... examination ... will show exceptions.

Person/Number	Ouma	Magori	Yoba	Bina	Areas I and II	Gadaisu (Area III)	Elsewhere
1sg.	a-	e-	e-	a-	a	a-	ya, na
2sg.	u-	u-	u-	o-	o	ku-	(k)u
3sg.	e-	i-	i-	e-	e	e-	i
1pl.incl.	ta-	ta-	ta-	ta-	ta	ta-	ta
1pl.excl.	a-	a-	a-	a-	ta, ma	ka-	(k)a
2pl.	o-	o-	o	o-	o-	ko-	(k)wa
3pl.	ti-	ti-	ti-	ti-	se	ti-	ai

(2) Magori and associated languages seem to be distinctive in their treatment of tense. On present evidence they have a fairly complex tense/aspect system for which it is difficult to find parallels in the available literature.[36] Capell (1943:255) distinguishes two general types of verbal systems amongst the languages of SEP along the following lines:

> (i) A type nearer the Papuan, has tenses fairly well defined
> by means of short pronouns, verbal pronouns and suffixes,
> sometimes by a combination of those methods. This happens
> in languages of the west and central groups, on the NEC and
> in Dobu; Kiriwina stands on the border of the two styles. Its
> forms are rather more definite than those of the second area,
> but less so than those of the mainland.

> (ii) In the second group are the languages of Suau-Sáriba-
> Tubetube, with Panayati and Sabari on the borderline. In-
> formation is rather vague for Sud Est, but it seems to belong
> here. Tense is only indicated in a very elementary way. ...
> In this ... group the scheme of tenses is rather a division
> between the real - be it present now and already past - and
> the unreal, be it future or merely possible, with a tendency
> to express as much as possible in a "historic" tense, regard-
> less of actual time. The only suffix is that of the past.
> (Capell 1943:255)

In these general terms then Magori and associated languages may be said to belong to Capell's first group. Beyond this we may note that the tense system in these languages is built up of prefixes or particles

(depending on interpretation) incorporating the short pronouns with aspectual differences signalled by suffixes to the main verb or its expansion (e.g. Magori eau-veato-ro *(go-habitually-continuous)* '*(subject) habitually goes*'). Three tenses are distinguished - present, signalled by a zero morpheme; past, signalled by b; and future/irrealis (?) signalled by m.[37] Leaving aside the aspectual features of Magori and associated languages for which there is insufficient comparative evidence to discuss it, the tense system of these languages may be considered in form and function.

Taking the future tense marker m first. Parallels are to be found in the irrealis marker ma in many of the languages of SEP. In those languages in which it occurs it combines with the future markers pa (or variants) or ka (or variants) to form an irrealis, e.g. Motu bama *(I) might* (verb) (Capell 1943:255-8). "Eastward of SEP", Capell (1943:258) notes: "the particle ma forms either a future or a conditional in a series of languages extending from northern Papua through the northern Solomons to the Banks Is. and Fiji". This aspect then of the tenses of Magori and associated languages is not diagnostic of a sister relationship, and the interpretation of m as 'future' in these languages may need adjusting to include irrealis.

But what of the past marker b? This is a different story. So far I have been able to find only one language, Sinagoro, which has a set of particles corresponding in form and function to those in Magori and associated languages. Compare the following forms given by Seligman (1913:189) for Sinagoro Present or Near Past Tense with the Magori forms:

Person/Number	Magori	Sinagoro
1sg.	ba	ba
2sg.	bo	bo
3sg.	bi	be
1pl.incl.	tab	bita
1pl.excl.	ab	boga
2pl.	ob	bogo
3pl.	tibi	bege

Note that Magori is not identical with Sinagoro but differs from it in having the plural forms reversed, i.e. the short pronouns and the b past tense marker are reordered. Magori and its associated languages seem to be unique among languages of SEP in this respect. Unless further contradictory evidence can be found this case is strong evidence not

only for a western sister connection for Magori and associated languages
but also for suggesting Sinagoro as the sister language. Of course it
may be the case that other languages once had the same system but lost
it through time for one reason or another and therefore cannot be seen
to be related. But until that evidence is brought forward the best we
can say is that on present evidence Sinagoro and Magori and associated
languages are the only languages which have or had a similar past tense
system, suggesting that they are closely related.

   (3) Negatives have the following form and structure:

   Ouma: da-VP
   Magori: (da)-VP-ge
   Yoba: daga-VP
   Bina: Past: short pronoun + kada-VP
              Future: ge'e + short pronoun-VP

That is, there is a set of elements da and ka/ga/ge which appear in
various combinations to indicate negation in these languages. On this
evidence Ouma and Magori seem to group together (with Ouma showing a
later development from Magori, notably loss of -ge) and Yoba and Bina
likewise linked, though Bina is more complicated having different forms
for past and future tenses. In this Ouma and Magori are like Gadaisu
(which has tage-VP) and Yoba and Bina like Konemaiava further east near
Suau (which has short pronoun + kada-VP). Languages to the west form
their negatives on the base (I)asi. Thus in negative formation and form
Magori and associated languages pattern more like languages to the east
rather than like those to the west.

   Looking back then at the grammatical features of these four languages
we see that there is very little difference between them except for
minor variations in the form and order of elements in postpositions/
prepositions and verb negatives. However, this evidence is so slight
and cross-cutting that it cannot be used seriously to suggest or support
any one internal subgrouping hypothesis. Externally there is slightly
better evidence but the languages still show a mixture of features common
to languages east and west in different proportions. Some of these
features taken in isolation (especially relativisation and verb struc-
ture) would strongly suggest a western connection for Magori and associ-
ated languages but there are others (e.g. verb negation and possessive
and objective pronouns) which also have to be taken into account and
which show parallels with eastern languages.

4.5.2.6.3. *LEXICAL EVIDENCE*

Thus far we have seen that phonologically and, to a lesser extent, grammatically, these languages form a close-knit subgroup within the Central District languages. There has been, however, little evidence of further subgrouping within this subgroup except for some suggestion in the phonological evidence that Ouma has had a slightly different history from the others. We now turn to the lexical features to see whether anything further can be added to this picture.

Below is a comparative list of 100 items of 'basic' vocabulary in the four languages under discussion together with similar lists from neighbouring AN languages arranged in approximate geographical order from west to east. This list is the same as that used by Capell in chapter 4.5.1. in discussing Maisin except that I have used more recent Proto-Oceanic reconstructions suggested by Pawley (1975) which differ in a few cases - indicated in the list by underlining - from those suggested by Grace (1969) in some (generally minor) respects.

The actual vocabulary items are taken from longer lists collected in these languages by myself and N.P. Thomson, already referred to, between 1969 and 1972. In some places (for example, in the Ouma list particularly) two forms are given where these represent possible significant differences between lists recorded on different occasions or by the different investigators. In recording these I have adopted the simple convention of placing the forms recorded by myself above those recorded by Thomson. The Sinagoro and Keapara lists are reprinted from Dutton 1970 and the Magori list from Dutton 1971b except that in the latter I changed every 's' to 't' wherever they occur. The remaining lists are printed in orthographies corresponding to the list of phonemes given earlier except that 's' and 'f' in Gadaisu are left as possibly phonemic.

Finally the Gadaisu list may be taken as representative of Laimodo and Konemaiava communalects further east in Orangerie Bay and Mullins Harbour except where indicated by footnotes. The list follows.

No. English	Proto-Oceanic	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
1. *all*	--	mabara(1)	mapara(1)	teriada(2)	mama idoi(3)	teriada(2)	daudaula(4)	tabutabu[a](4)
2. *ashes*	*apu, *ndapu	kau(1)	kavu(1)	konunu(3) kau(1)	kau(1)	gurumana(2)	kau(1)	kotu[b](1)
3. *bad*	*(n)saqat, ala *nsiŋkap	rakava(1)	rakava(1)	dava'u, davau(?1)	geragerama(2)	pa'i pa'i(3)	'ore 'ore(4)	heaia(5)
4. *bark*	*kuli(t), *kwapi *(skin)*	kepi(1)	kopi(1)	opina opina(1)	opi(1)	kopi(1)	kopi(1)	bunu(2)
5. *belly*	*tia(n)	tinaɣe(1)	inaɣe(1)	gea gae(2)	beni(3)	beni(3)	gama boga(3)	boga(4)
6. *big*	*moRa	barego(1)	para(1)	navore(2)	vere(3)	okota'e(4)	arabai(?1)	bada(1)
7. *bird*	*manu(k)	manu(1)	manu(1)	adau(2) naɦu(3)	adau(2)	manu(1)	manu(1)	manu(1)
8. *black*	(*ŋkek)	dubara(1)	ruparupa(1)	dubaduba(1) umui(2)	dubaduba(1)	dubaduba(1)	dubaduba(1)	dubaduba(1)
9. *blood*	*daRa(q), *soso(n), *toto	rara(1)	rala-(1)	rara(1)	rara(1)	ko'ia(2)	ko'ia(2)	kotina(2)
10. *bone*	*suRi, *tu(dr)(i)	turiɣa(1)	iliɣa(1)	tu'a tua(2)	tiria(1)	iada(3)	iada(3)	tiada(3)
11. *breast*	*susu	rata(1)	laa(1)	bɔ'u(2)	kuku(3)	'u'u(3)	'u'u vuvu(3)	tutu(3)
12. *burn*	*kampu	gabu(1)	kapu(1)	'ua ua(2)	gabu(1)	--	gabu(1)	gabu(1)
13. *butterfly*	*mpempe	kaubebe(1)	(kau)pepe(1)	bebe(1)	bebe(1)	bebe(1)	bebe(1)	bebe(1)
14. *canoe*	*waŋka(ŋ)	--	--	--	--	--	--	--
15. *cloud*	(PAN *awan)	magube(1)	inova(2)	guba(?1)	nogara(3)	ori(4)	bona(5) gorumini(7)	eada(6)
16. *cold*	*ma(n)di(n)diŋ, *malaso	paraka(1)	milu(2)	nagula(3) utuga(6)	memea(4)	nagura(3)	gurao(3)	gogoma(5)
17. *come*	*mai	iaɣoma(1)	veamai(1)	ha'ama hamu(2)	yama(1)	--	umuio(3)	yomai(1)

[a]Also maudo'ina for Gadaisu and Laimodo, masumasu'i for Laimodo, and mohudi for Konemaiava.　[b]Kone: kahu.

TABLE 2 (cont'd)

No. English	Proto-Oceanic	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
18. *die*	*mate	--	--	--	--	--	--	--
19. *dig*	*kali, *sa(dr)a	kwa(1)	iea(2)	{tae guri tae(3)	--	oravi(4)	keria(5)	tara(hia)(6)
20. *dog*	*ŋkaun	kwaiva(1)	kwaea(1)	{da'ari dahari(2)	o'oi(3)	okoi(3)	koivo(?1)	oiova(?)
21. *drink*	*inu(m)	niu(1)	niu(1)	nu(1)	unu(1)	-inu(1)	'inu(1)	nom(1)
22. *ear*	*taliŋa	teγa(1)	kea(1)	ta'a(1)	epe(2)	taia(1)	taia(1)	taina(1)
23. *earth*	*tana(q)	tano(1)	kwano(?1)	doi(2)	arima(3)	gidagida(4)	gidagida(4)	tanawa[a](1)
24. *eat*	*kani	γani(1)	ani(1)	{'ani ani(1)	ani(1)	'ani(1)	ani(1)	kani[b](1)
25. *egg*	*qatoluR, *mpou	γatoi(1)	aoi(1)	mu'u(2)	ato'i(1)	katino(1)	{katino katuena(1)	katino(1)
26. *eye*	*mata	mata(1)	maa(1)	maha(1)	ini(2)	mata(1)	mata(1)	mata(1)
27. *fat* (n.)	*mona(k)	mona(1)	mona(1)	mona(1)	mona(1)	momona(1)	momona(1)	momona(1)
28. *father*	*tama	tama(1)	ama(1)	baba(2)	tama(1)	tama(1)	tama(1)	tama(1)
29. *fear* < *be afraid*	*mataku(t)	gari(1)	kali(1)	{pe'e pee(2)	(e)veau(3)	--	veao(3)	fiau[c](3)
30. *feather*	*pulu	γui(1)	lamulamu(2)	{lamu(2) pape(3)	rimu(2)	lamu(2)	lamu(2)	fufuia[d](1)
31. *fire*	*api, *kalopa	karava(1)	kalova(1)	{arova aroa(1)	evi(2)	karova(1)	karova(1)	eafi[e](3)
32. *fish*	*ika(n)	maγani kone(1)	mani(1)	orabe(2)	orebe(2)	korebe(2)	kolebe(2)	moia(3)
33. *flesh*	*pinsiko	--	--	--	--	--	--	--
34. *fly* (n.)	*laŋo	nagama(1)	nakama(1)	buri'i(2)	nagama(1)	gogoma(3)	kogama(3)	nawanawa(4)
35. *fly* (v.)	*Ropo	rovo(1)	lovo(1)	revo(1)	revo(1)	--	iro'oai(1)	rofo[f](1)
36. *foot*	*kaki	kwaku(1)	aγe(1)	{a'e(1) ae	ake(1)	gogu(2)	gogu(2)	kae(1)
37. *fruit*	*pua(q)	γuaγua(1)	vuavua(1)	{tu'a(?1) tu'u	vinuva(na)(2)	--	binivo(na)(2)	fua[g](1)

[a]Kone: tano. [b]Kone: ani. [c]Kone: matau. [d]Kone: goina. [e]Kone: koiagi. [f]Kone: loloho. [g]Kone: aniani.

TABLE 2 (cont'd)

No. English	Proto-Oceanic	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
38. *give*	*pani	vini(1)	veni(1)	mini(1)	mine(1)	veni(1)	vini(1)	vete[a](2)
39. *good*	*pia, *lele'	namo(1)	nama(1)	vauvau(2)	ragi(3)	'ae'ae(4)	'ai'ai(4)	magini[b](5)
40. *hair*	*pulu	γui(1)	vui(1)	{'uru(2) maru(4)	rimu(3)	ramu(3)	{ramu(3) rao(5)	fufuia[c](1)
41. *hand*	*lima	γima(1)	γima(1)	ima(1)	ima(1)	ima(1)	nima(1)	nima(1)
42. *head*	{*ŋpatu, *qulu *ndaŋma	deba(1)	repa(1)	demu(2)	uru(3)	kuru(3)	kuru(3)	kuru(3)
43. *hear*	*ndoŋo	teγaγi(1)	kamonaγi(2)	{'ogonai tagani(1)	togoi(1)	--	vataia(3)	yoyono(4)
44. *hot*	*pana(s)	seγuka(1)	iavu(2)	vovona'ahi(3)	vodavoda(3)	voda voda(3)	vodawoda(3)	ginasa(4)
45. *house*	*Ruma	numa(1)	numa(1)	numa(1)	{ruma numa(1)	ruma(1)	numa(1)	ruma(1)
46. *I*	*au	au(1)	au(1)	au(1)	nau(1)	nau(1)	nau(1)	yau(1)
47. *kill*	*punu(q)	vagi(1)	vaγi(1)	{du'u(5) taru bahuba(2)	gori(3)	--	gini(4)	gori(3)
48. *knee*	*turu	tui(1)	kwaukwau(2)	giba(3)	turu(1)	turu(1)	turu(1)	turi(1)
49. *know (= understand)*	{*mataqu, *qilo	riba(1)	riba(1)	vara'i(?2)	togoi(3)	--	kanakoni(4)	tiba(1)
50. *leaf*	*ndaun	--	lau(1)	bege(2)	rugu(3)	rugu(3)	rugu(3)	rugu(3)
51. *lie down*	*eno, *qinep	gena(tari)(1)	mako(ali)(2)	{taru'ui(3) buiui(4)	bui(4)	--	utakoki(5)	kena(dobi)(1)
52. *liver*	*qate	γate(1)	ae(1)	areme(2)	goigoibo(3)	goigoibo(3)	karamena(2)	kate(1)
53. *long*	*lawas	mauka(1)	loki(2)	mae nawore(3)	baibai(4)	ruberube(5)	maiauo(3)	rofarofa[d](6)
54. *louse*	{*kutu *tuma	γutu(1)	γuu(1)	tuma(2)	tuma(2)	--	tuma(2)	tuma(2)
55. *male*	*laki	--	--	--	--	--	--	--
56. *man*	*tau	tau(1)	au(1)	tau(1)	tau(1)	tau(1)	tau(1)	tau(1)
57. *moon*	*pula(n)	γue(1)	vue(1)	dovere(2)	dovere(2)	dovere(2)	dovere(2)	navarai(3)
58. *mountain*	*solo	γoro(1)	olo(1)	oro'u(1)	oro(1)	vorei(1)	oroi(1)	woroi[e](1)

[a]Kone: halele.　[b]Kone: lolona.　[c]Kone: tala.　[d]Kone: lohaloha.　[e]Kone: koea.

TABLE 2 (cont'd)

No. English	Proto-Oceanic	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
59. *mouth*	*ŋusu	boka(1)	poka(1) mupu	ma'a(?1)	oa(?1)	auo(2)	auo(2)	moka(1)
60. *name*	*qansan	ara(1)	ara(1)	ara(1)	aka(1)	--	a'a(1)	eta(1)
61. *neck (nape)*	*Ruqa, *ŋkenju	geru(1)	aigo(2)	goga(3)	gedu(1)	gedu(1)	gedu(1) aiou(2)	yaga[a](4)
62. *new*	*paqoRu, {*mata(q) *ka(dr)aŋpa	variɣu(1)	valiɣu(1)	gadara(2)	gadara(2)	gadara(2)	varivariu(1) varevare(1)	fari fari[b](1)
63. *night*	*mpoŋi	boɣi(1)	poɣi(1)	garu(2)	garu(2)	kikipa(3)	kikipa(3)	matigiri[c](4)
64. *nose*	*isu(ŋ)	iri(1)	iru(1)	rua(2)	kua(2)	'ua(2)	uo(2)	itu(1)
65. *not*	(*ta, *sa)[d]	ati(1)	ai(1)	da(1)	ge(2)	da(1)	ge(2)	tage(1/2)
66. *one*	*-kai	tebona(1)	kopuna(?1)	ohabu(2)	ana(3)	--	kanikoni(4)	emota[e](5)
67. *red*	*maiRa(q)	kakakaka(1)	kalovakalova(2)	rararara kakakaka(1)	morimori(3)	ko'iko'ia(4)	koikoi'a koikoia(4)	tabetabe(5)
68. *road (= path)*	*sala(n)	dabara(1)	raopara(1)	--	rae(2)	ya'oa(3)	yawo'o lauo'o(3)	keda[f](4)
69. *root*	*aka, *Ramu	ɣoka(1)	lamu(2)	tete(3)	ramuramu(2)	taitai(na)(4)	taetae(na)(4)	lamu(2)
70. *sand*	*gone, *malala	porara(1)	kwano kulo(2)	gagau(3) doi(6)	gagau(3)	kone(4)	gere'a(5)	geresa(5)
71. *sea*	*tasi(k), *lau(t)	--	--	--	--	--	--	--
72. *see*	*kita	ɣita(1)	ɣia(1)	ita(1)	onoi(2)	--	ita(1)	kita[g](1)
73. *skin*	*kuli, *kwapi	kepi(1)	kopi(1)	opi(1)	opi(1)	kopi(1)	kopi(1)	bunu(2)
74. *sit*	*nopo	tanutari(1)	aluali(1)	taru'ui(1)	tanuyau/o'(1)	tanugebi(1)	bauakoki(2)	bawa(2)
75. *sky*	*laŋi, *guba	guba(1)	kupa(1)	guba(1)	guba(1)	nogora(2)	nogora(2)	garewa(3)
76. *sleep*	*matudu(R)	gena(1)	mau(2)	bui(3)	bui(3)	--	boio(3)	kena(1)
77. *small*	*(dl)iki	kei(1)	kei(1)	mehi(2)	miti(2)	'oi'oisona(3)	'oi'otona(3) oioitona	keukeu[h](4)
78. *smoke*	*qasu	goɣu(1)	kovu(1)	piomu(2)	bautu(3)	piomo(2)	bautu(3)	gafu[1](1)
79. *stand*	*tuqu(d)	variɣiti(1)	ruɣa(2)	--	--	tavoro(3)	tauore(3)	--

[a]Kone: ivako; Lal: kedukedu.　[b]Kone: harihari.　[c]Laimodo, Kone: kikipa.　[d]Common AN (Capell).　[e]Lal, Kone: esega.　[f]Kone: dobila.　[g]Kone: ita.

[h]Kone: kiukiu.　[1]Kone: gahu.

TABLE 2 (cont'd)

No. English	Proto-Oceanic	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
80. star	*pituqu	vitiuɣu(1)	ɣivu(2)	{taura(3) rigoru(?4)	vitiriu(1)	kipora(4)	kipora(4)	kipora(4)
81. stone	*patu	pore(1)	vau(2)	baga(3)	doa(4)	{gomana(4) goibo(6)	korara(5)	komaraea[a](4)
82. sugarcane	*topu	komu(1)	komu(1)	'ou(1)	tebo(2)	garu(3)	garu(3)	garu(3)
83. sun	*qanso	ɣaro(1)	aro(1)	budiva(2)	nina(3)	vavana(4)	vavana(4)	oda oda[b](5)
84. swim	*ka(ou)	nau(1)	navu(1)	{gonio(2) rorororo(3)	roro(3)	--	roro(3)	tuba(4)
85. tail	*iku, *siku(n)	ɣiɣu(1)	iɣu(1)	bauhou(2)	doru(3)	kopu(4)	kopu(4)	dere(5)
86. thou	*ko(e)	ɣoi(1)	oi(1)	oni(?1)	oni(?1)	'oni(?1)	moni(?1)	koa[c](1)
87. tongue	*(a)me(a), *maya	mea(1)	mae(1)	goba(2)	goba(2)	goba(2)	mana(3)	mana(3)
88. tooth	*kaia, *mao	doɣa(1)	rua(2)	{ma'a mara(3)	moa(3)	moka(3)	moka(3)	moka(3)
89. tree	*kayu	ɣau(1)	au upu(1)	au(1)	arova(2)	karova(2)	karova(2)	karofa[d](2)
90. two	*dua	rua(rua)(1)	iuaiua(1)	{a'i hairi(2)	buau(3)	buau(3)	buo(3)	iabu'i(4)
91. walk	*lako	raka(1)	iaka(1)	{va'a vao(1)	yau(1)	yau(1)	yao(1)	yao(1)
92. water	{*wai(R) *(n)danu(m)	nanu(1)	nanu(1)	{'a'ama(2) a'ama	voi(3)	uba(4)	{'uba(4) uba	tu'uba[e](4)
93. we(incl.)	*kita	ɣita(1)	ia(1)	ita(1)	ita(1)	ita(1)	ita(1)	ita(1)
94. we(excl.)	*kami	ɣai(1)	ai(1)	ai(1)	nai(1)	nai(1)	nai(1)	ai(1)
95. what?	*nsapa	kara dagara(1)	rakau(1)	rauro'o(?1)	akara(1)	--	aikara(1)	tinaki[f](2)
96. white	*puti, *kurokuro	kurokuro(1)	kuiokuio(1)	goiagoia(2)	goagoa(2)	goiagoia(2)	goiagoia(2)	potipoti(3)
97. who?	*nsai	deikara(1)	rai(1)	{are'i arei(1)	a'ara(?1)	--	aikara(?1)	tai[g](1)
98. woman	*papine	vavine(1)	vavine(1)	aveha(2)	vaini(1)	va'ine(1)	va'ine(1)	'oifini[h](1)
99. yellow	*aŋaoŋo, *deŋa, *siŋa(R)	borabora(1)	polapoia(1)	gobugobura(2)	gobugobura(2)	gobura(2)	{gobugobura(2) eti'etia(4)	tamatamai(3)
100. you(pl.)	*kamu	ɣomi(1)	omi(1)	omi(1)	umui(1)	omui(1)	umui(1)	komi[i](1)

[a]Lai, Kone: ueku.　[b]Lai, Kone: mahana.　[c]Kone: oni.　[d]Kone: koiagi.　[e]Kone: goiia.　[f]Kone: amoii.　[g]Kone: hai.　[h]Kone: waini.　[i]Lai, Kone: omi.

A preliminary lexicostatistical analysis of these languages based on
the decisions of apparent cognation indicated by numbers following each
vernacular item in brackets gives the following maximum and minimum
results:

	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu	Sinagoro	Keapara	Ouma	Magori	Yoba	Bina	Gadaisu
				Maximum							Minimum			
Sinagoro	X	X	52	49	37	38	48	X	X	44	46	36	34	47
Keapara	X	X	40	40	36	38	45	X	X	33	37	35	34	44
Ouma	52	40	X	51	47	43	31	44	33	X	44	43	40	26
Magori	49	40	51	X	58	54	41	46	37	44	X	58	52	39
Yoba	37	36	47	58	X	78	44	35	35	43	58	X	73	40
Bina	38	38	43	54	78	X	52	34	34	40	52	73	X	49
Gadaisu	48	45	31	41	44	52	X	47	44	26	39	40	49	X
Laimodo	X	X	X	X	X	X	92	X	X	X	X	X	X	X
Konemaiava	X	X	X	X	X	X	66	X	X	X	X	X	X	X

These data show that internally the highest agreements are in the order
Ouma-51%-Magori-58%-Yoba-78%-Bina while externally they are of the order
Ouma-52%-Sinagoro, Magori-49%-Sinagoro, Yoba-44%-Gadaisu, and Bina-52%-
Gadaisu.   There is a chain relationship of approximately the same level
of agreement holding between all these languages from west to east in
approximately the geographical order in which they are currently found.
Within this chain Yoba and Bina stand out as the most closely related
while Sinagoro scores significantly higher with Magori and associated
languages than does Keapara, the closer language.   At the eastern end
Gadaisu is obviously very closely related to Laimodo and eventually
links up with Suau via Konemaiava and intermediate villages.
    If we allow that Gadaisu and Laimodo belong to the Suau chain of
dialects (as we have assumed) then Magori and associated languages appear
to be co-ordinate lexically with languages east and west of their present
position.   However, we cannot be sure that this represents the historical
picture since we know from previous studies that Magori shares a large
percentage of its basic vocabulary with Magi nearby, a feature that
tended to lead early investigators to classify it as NAN.   Although I
have not yet investigated Ouma, Yoba and Bina to the same extent it is
clear by inspection that more or less the same things can be said about

their vocabularies as were said about that of Magori in my 1971b paper.
There I made the following points based on a detailed analysis of over
200 items of 'basic' vocabulary:[38]

(i) Magori shares approximately the same number of cognates with
some AN areas as it does with the Mailuan Family. Consider, for example,
the following ranked cognate percentage:

Capell's (1943) AN Areas of SEP		NAN Families
II	59%	
		Mailuan 54%
III	46%	
I	42%	
VII	35%	
VIII	33%	
V	33%	
VI	30%	
X	30%	
IV	29%	
IX	27%	
XI	13%	
		Other 10%

(ii) fewer than half (or 22%) of the correspondences between Magori
and Magi are exclusively Mailuan; the rest are common to at least one
AN and/or at least one NAN language of SEP;

(iii) of 51 items common to Magori, Mailuan languages and at least
one AN language of SEP, 78% are common to Capell's (1943) AN area II;
57% to area III; 53% to area I; 43% to area VIII; 37% to area VII; 35%
to area IV; 33% to area V; 31% to area IX; 31% to area X; 27% to area
VI; and 10% to area XI;

(iv) about 20% of Magi vocabulary is identifiable as AN or probably
AN;[39]

(v) the elicited vocabulary is a mixture of elements from different
sources with about 45% identifiable as AN or probably AN; 34% as NAN or
probably NAN; and the remainder (21%) from some unknown source(s).[40]

Clearly this is a complex picture and one which obviously involves
borrowing of either AN or Mailuan items, principally. But the question
is which way? The same facts can be explained by several different
hypotheses.[41] However, the only one that is compatible with the gram-
matical evidence is that which claims that Magori is basically an AN
language whose sound system and much of its vocabulary have been

influenced by or borrowed from surrounding NAN languages, especially
Magi nearby. The hypothesis is given further strength by the fact that
it fits well the socio-economic condition of the Magori as already out-
lined, though that condition in itself could not be used in choosing
between possible hypotheses. For example, there is no *a priori* social
reason why the Magori could not have been some Magi group which had
somehow become dissociated from the main body, or some other NAN group
for that matter - it is only after the establishment of the hypothesis
on linguistic grounds that the relationship between the Magi and Magori
takes on a particular significance. Not only that but it suggests other
things as well, as good hypotheses should. Take, for example, the O'oku
and Laua situations mentioned in the introduction (Section 4.5.2.3.).

Remember that these, like Magori, contain many vocabulary items
similar to Magi which lead to their being grouped together with Magori
as related to Magi. Consider, for example, the following chart which
shows the approximate percentages of 'basic' vocabulary items that each
shares with the other and with Magori and Mailu wordlists collected by
Strong:

	Magori	O'oku	Laua	Mailu
Magori	---	24%	35%	47%
O'oku	24%	---	37%	28%
Laua	35%	37%	---	55%
Mailu	47%	28%	55%	---

If we re-examine these in the light of the Magori hypothesis now I think
we can expect to find that the early classification of them as related
to Magori and Magi is false or at least very questionable. Hence if
the lists are compared with others from neighbouring areas it is apparent
that common vocabulary is to be explained by borrowing rather than as
retentions from a common ancestor in the same way as the Magori material.

Thus O'oku shares approximately 60% basic vocabulary with languages
of the Yareban Family to the north[42] and must be suspected of belonging
to that family for that reason. If that is correct it complicates the
linguistic prehistory of this area because O'oku must have been well
separated from the other members of that family which are now to be
found mainly on the northern side of the Owen Stanley Range.[43]

Laua is a different situation; Thomson (1975) suggests it is a
Mailuan Family language most closely related to Magi since it shares,
as already noted, about 55% of its vocabulary with Mailu, and has a
similar pronominal system. However, there are other questions to be

answered. For example, about 40% of Laua vocabulary is of unknown
origin. Surprisingly too Laua vocabulary shows more contact with O'oku
to the west than with Daga nearby to the north and east. According to
recent evidence,[44] the Laua have intermarried with the Daga. The few
cases that are evident show connections not with nearby villages (as
far as one can tell from the available evidence) but with those far
removed from Laua, for example, communalects of Ginuman and Sona to the
east and Mapena and Maiwa on the northern side of the family.[45]

Again the hypothesis proposed above might also explain Saville's
report (mentioned in 4.5.2.4.1. above) that "inland from the shores of
Amazon Bay I have found bits of pottery bearing different patterns from
those of the Mailu" as that of the AN ancestors of present-day Magori.
If that is so what is the relationship between that and present-day
Mailu pottery? Could the latter be a development from contact with
those early Magori whom Saville's informant claims to have "finished
off"? These are intriguing questions but ones which unfortunately we
cannot pursue here; they are beyond the linguistic evidence at this
stage.

Thus as an AN language with "mixed" vocabulary, Magori (and by ex-
tension Ouma, Yoba, and Bina) is essentially typical of AN languages of
SEP whose word-store Capell (1943:108-97) found it necessary to discuss
in terms of the categories IN, non-IN and "unplaced",[46] which correspond
roughly to the categories (Probably) Austronesian, (Probably) non-
Austronesian, and Unknown, used in this paper. Where Magori differs
from other AN languages is in the proportion of its basic vocabulary
that is positively identifiable (by phonetic similarity and lack of
cognates elsewhere) as originating in NAN languages of the Mailuan
Family.[47] A small segment has also been derived from other NAN sources.
None of the other AN languages of SEP has this kind of identifiable
source though there were enough regional similarities in the vocabulary
(and grammar) for Capell to establish regional NAN languages with which
they must have been in contact, as already pointed out above. The
reasons for the Magori borrowing in the way they did must now be seen
to be socio-economic but this does not account for all the 'probably
NAN' and 'unknown' items in the list which must have been borrowed at
some time. If we look at the list of borrowed items it appears that
adjectives and verbs seem to have been borrowed a little more freely
(though not necessarily recently) than nouns and pronouns at some time.
Of the more recent borrowings there is little of significance except
for cultural and kinship terms. These pattern pretty much as the

hypothesis and socio-economic conditions might predict, notably that cultural items have almost all been borrowed while few kinship terms have.

One item of particular interest is the Magori word kira(i) for *(village) pig* which is historically significant. This shows connections with similar words in NAN languages (e.g. Elema, Lepu, Uaripi, and Toaripi) of the Gulf of Papua. This rather fantastic connection must be the result of former trading patterns involving the Mailu, Aroma, Keapara, Hula, Motu and Gulf of Papua language groups already mentioned. We know that pigs were one of the most important items in the Aroma-Mailu-Suau trade but apparently they must also have been prominent in the other trading relationships in some way. The word does not seem to be retained in the intervening languages or in the other languages of the trade chain.[48] This is unusual because other vocabulary evidence shows that the Magi had quite an impact on languages with which they were in direct or even indirect contact. Thus fact (iii) above shows that the areas of most direct and intensive contact are precisely those with the highest percentages of common vocabulary. The percentages diminish exactly as the directness of contact does. Thus it looks as if the Mailuans have been instrumental in distributing a certain amount of common vocabulary throughout AN areas of SEP. This is something worth further investigation as is also therefore the relationship of Magi to Capell's regional languages, particularly the Central and North-East Coast ones. The contact between Magi and AN areas has not been without its effect on Magi vocabulary either, as facts (ii) and (iv) will testify. But to return to the *'pig'* - why has this disappeared from the intervening languages when it seems to be one of the most important items of trade for the Mailu? Here again is something for further investigation.

Kinship terms have not been much borrowed, apparently because intermarriage has not been practised to any great extent. The few that have been recorded are abai *father*, ade'i *mother* and vakara *daughter*. The first two were recorded by Strong (1919) and are common words throughout NAN languages of SEP. The other, *'daughter'*, seems to have relatives in some AN languages as well as in some Binanderean Family languages on the north side of the Owen Stanley Range. Capell regarded it as non-IN. Perhaps informant background, knowledge or preference has something to do with this, suggesting a more general feature of bilingualism or pairs of words in common use as already noted.

To recapitulate then, I think it can be fairly claimed that Magori is an AN language which has been heavily influenced by Magi. Given

this the next question to be considered is that of a possible sister
language.

   Let us begin with a set of percentages which show the distribution
of items in AN languages of SEP cognate with Magori (excluding those
for which there is insufficient evidence available from Capell's 1943
areas III-XI). These are, in descending order:

II	51.31%
III	42.76%
I	36.18%
VII	34.21%
V	32.89%
VI	32.23%
VIII	30.26%
X	28.94%
IV	27.63%
IX	25.00%
XI	13.81%

These percentages are very similar to those given in fact (iii) above
except that they do not contain items common to Mailuan languages and
hence are strongly indicative of closeness of genetic relationship.
Remember, however, that they are for areas and not for individual lan-
guages. They show that the areas of greatest agreement are those geo-
graphically closest, viz. Capell's (1943) areas II, III, I and VII and
in that order. These are the ones most suspect of containing a sister
language. Without carrying the analysis any further than necessary it
is apparent from these figures and those given in the Maximum-Minimum
table earlier that Magori has most vocabulary in common with Sinagoro
of Capell's (1943) area II. This again fits well with the grammatical
evidence though the evidence there was not so clear-cut. Actually the
1971 (Dutton 1971b) investigation showed that Magori has the highest
number of agreements with dialects of Sinagoro on the far western and
northern sides. This is an interesting set of correspondences and ones
which I believe support the agreement in vocabulary and grammar between
Sinagoro and Magori as ones of genetic relationship rather than borrowing
from one another or mutual influence by the Magi. This is because these
dialects are farthest from Magori and from Keapara dialects which have
been in direct contact with Magi. The picture is thus contrary to that
which one would expect to find knowing the trading situation already
discussed, viz. a fanning out from Aroma along the coast and inland and
decreasing in intensity with distance. This does not happen. Hence
the correspondences between Magori and Sinagoro must be due to the re-
tention from a common ancestor.

Supposing that this is correct and that Austronesians are indeed
immigrants (as seems fairly clear they are) how did the Magori and by
extension Ouma, Yoba, and Bina get into their present position? Clearly
at some time they must have come by sea to some point on the Papuan
mainland. They must also have originally been in close association
with the Sinagoro, either as members of the same group or as co-travel-
lers from related parent groups, from whom they separated sometime
before or after landfall, leaving one or the other or both to move to
their present positions. Unfortunately there is no real evidence at
the moment for deciding between these possible events. All we can do
is speculate from the general picture of the geographical distribution
and linguistic diversity of languages of SEP and from the recent history
of parts of it as known.

As already noted in Section 4.5.2.4.1. above, oral tradition has it
that the Magori once lived further east around the Origuina River at
the western end of Orangerie Bay, while other sources have it that they
came from the west around the Amina (or Robinson) River on the east side
of Cloudy Bay. These two accounts of the prehistory of the Magori
appear to be contradictory. But more likely they represent different
remembered stages of movement of the Magori between these areas, or
perhaps the migration of different sections which now make up the Magori
and associated groups, or which have disappeared. There is some lin-
guistic and social support for an eastern position at some time. Lin-
guistically this shows up in the vocabulary of Magori as a slightly
higher agreement (by about 3-4%) with Borebo than with any other com-
munalect of Magi for which we have evidence. But because we do not have
evidence from the full range of Magi villages it is not possible to tell
whether this represents the real picture. It certainly agrees with the
social situation already described, viz. that the Magori are most
friendly with the Borebo and associated villages around Mayri Bay and
Millport Harbour known as the Maisi villages, which are separated from
the Magori by an unfriendly group of other Magi villages around Amazon
Bay. This is despite the fact that some Magori have relatives by mar-
riage in Kurere. Thus they have to skirt unfriendly villages to reach
friendly ones. Such a social situation would hardly have developed had
the Magori not once been geographically closer, unless, of course, the
Amazon Bay villages are late arrivals, which is a strong possibility
since at least one, Kurere, is an ex-Mailu Island colony of only about
100-150 years' standing.

There is no comparable linguistic or social evidence yet available
to support a western position except that of the warfare pattern of the

Magori.   It will be remembered from Section 4.5.2.4.1. that the Magori
were constantly harassed by villagers from the west, inland of Cloudy
Bay, known as the Velavelai.   The significant thing about this is that
the Velavelai are/were 20-30 miles away across swamps.   One would wonder
how this warring situation could have arisen unless the Magori were
again at some time geographically closer to this source of harassment.

   At any rate it appears that some time before the last 100 years the
land along the coast between Baramai Point on the western end of Baxter
Bay and Magaubo Point on the eastern end of Table Bay was, contrary to
the present-day situation, unoccupied.   The villages that occupy this
area today are (from west to east) Boru, Magaubo, Labu, and Darava.
Excluding Labu, which as already indicated is AN and originally inland
about seven miles, the others are recent colonies from Mailu and Laluoro
Islands: Boru and Magaubo from the former and Darava from the latter.

   Thus up until about 100 years ago the Magori and associated groups
were free to move between Cloudy Bay and probably the western end of
Orangerie Bay because their now northern and eastern neighbours the Daga
were, by all accounts, further up the southern slopes of the Owen Stanley
Range than they are today.   This area was a kind of no-man's-land con-
sisting mostly of sago swamps between the Mailuans on the west and north-
west and Dagans inland and to the east and the Mailuans again on the
coast to the east.   Gradually this area has been compressed by the move-
ment of Mailuans along the coast and Dagans closer to the coast until
at first contact the situation was frozen and the Magori were able to
descend from their protective hill fortresses.   Thus it seems to me that
the Magori most probably landed somewhere in the Baxter-Table Bay area
where the coast was not occupied, though they could have landed in
Orangerie Bay and travelled overland between the Magi and the Daga.   But
if we can generalise from the fact that where Austronesians are to be
found inland elsewhere in SEP they are to be found inland distributed
around large rivers, notably the Kemp Welch and Ormond in Capell's
(1943) area II and the St Joseph's in area I, then might we not presume
that the Magori and associated groups used the Bailebo-Tavanei and other
largeish rivers in this area likewise as a convenient penetration point?

   In this discussion I have assumed, on the basis of the evidence above,
that the areas inland of and around Cloudy, Amazon, and Orangerie Bays
were already occupied by the Mailuans when the Magori supposedly arrived.
I did not consider the possibility of the Mailuans penetrating an AN
group and splitting it, say, into Sinagoro, Magori, Ouma, etc. sections.
I do not see this as a strict probability because of (a) the fact that
Magori does not seem to show traces of earlier contact of this kind;

(b) the present diversification of the Mailuan languages. While these are (as far as my survey materials show) grammatically very similar, lexically they share only around 50% basic vocabulary with each other. And if this is relative to their time of independent development they must have been separated for many centuries. Furthermore there is no evidence yet to indicate how these languages spread though there has been a suggestion that they moved south from some area north of their present locations. But as I have argued elsewhere (Dutton 1969:12-13) I see no support for this yet, apart from equating culture diffusion with population movements.

Finally there is one other linguistic problem which I think the Magori evidence can elucidate. I refer to the question of the original status of the Maisin language on the north coast directly north of Magori. This, like Magori, is a mixture of elements from different sources except that the mixture is such that it is impossible to tell what the original language was. Also like Magori the Maisin were until about 200 years ago all to be found in the swamps inland of Dyke Ackland Bay just west of the Musa River. These were the people referred to by Monckton (1914?:197) as the "webfooted" Agaiambo swamp dwellers. Here they were surrounded by member languages of the NAN Binanderean Family. Thus they are remarkably similar to Magori in sociolinguistic history. My guess is that they were, like the Magori, originally Austronesians, who pene- trated inland up the Musa River and were gradually forced into the empty undesirable swamps by the more aggressive Papuans. Thus I think it is most probable that Strong (1911b) was originally correct in his analysis of the Maisin material and Ray (1911) wrong. But obviously we cannot raise this to the level of fact - much more work is needed in the area. However, there is one point remaining. Irrespective of whether Maisin turns out to be AN like Magori the fact is that there must have been Austronesians in that area at some time in the past to come into contact with NAN speakers in that area. Taken together with the Magori evidence then it is clear that Austronesians were once more widely distributed throughout SEP than hitherto realised.

4.5.2.7. CONCLUSION

In the foregoing I have discussed various aspects of the linguistic structure of Magori and associated languages Ouma, Yoba, and Bina using various assumptions and methods of analysis to guide the formation of explanatory hypotheses of present-day form and distribution of these "mixed" languages. The conclusion reached was that these languages were

originally Austronesian most closely related to languages west of their
present position. Through time they have come to superficially resemble
non-Austronesian languages, particularly Mailuan, because of the number
of lexical items that have been borrowed from these languages. Not only
that but these languages form a close-knit cluster or subgroup within
Pawley's Central District languages to the west. As a subgroup there is
little evidence for deciding between various further possible subgroup-
ing possibilities except that Ouma seems to be more distant from the
remaining three. Ouma and Magori show lexically closest association
with Sinagoro within Pawley's Central District languages while Bina and
Yoba show closer relationships with Gadaisu. However, judging by some
of the phonological evidence these languages have in turn become more
alike as a result of mutual loaning and borrowing so that lexically
Magori and associated languages appear to be co-ordinate between eastern
and western groups of Austronesian languages along the south coast of
Papua. This hypothesis not only accounts for the linguistic facts but
is in accord with and fits most naturally the known sociolinguistic
conditions of the speakers of these languages. Some historical obser-
vations arising out of this and some of the vocabulary data were also
discussed. In general it seems that Austronesian populations were once
more widely distributed throughout South-East Papua than has hitherto
been realised.

N O T E S

1. The numbers in brackets indicate population figures as at 1969.

2. Dutton (1971a) has given a preliminary survey of non-Austronesian languages in this area. Abbi (1964), Malinowski (1915), and Saville (1926) also give historical and ethnographic details of the Magi (or Mailu).

3. See Capell (1943:7 and map on p.8).

4. It remains to be seen, however, whether, or how well, these postulated regional languages correspond with present-day NAN languages and language families of SEP.

5. Though Saville, the well-known London Missionary Society missionary of Mailu Island, had apparently visited the area several years before (Saville 1926:208). Bell was an early Government officer who patrolled the area inland of Table Bay investigating murders reported to him by Saville (Bell 1908:136).

6. This is probably the same list as that published by Strong (1911a) though this needs checking from the original patrol report.

7. cf. Teasdale (1967:14): "the Bonua (Oveta) River".

8. One of the few remaining Ouma speakers (Bedila Bobosi (m) 55 (?) yrs.) gave me the following list of old Ouma villages in what he said was chronological order. Note in these that *mari* is the Magi word for *'village'*, 'oro means *'mountain'* and guina is *'river'*:

   Widamari'au (in swamp), Goilemari (in swamp), Omou'oro, Baga'oro,
   Siri'oro, Saviaguina, Ovia, and Labu (on beach).
There were three sections in Ouma - Goile, Damana, and Waroa.

9.   For example, he missed Bell's and Malinowski's observations and
did not comment on the possible Ouma-Labu connection.

10.   Bell (1908:138).

11.   They were not cannibals, however. Cannibalism is said to be
practised only east of about Farm Bay on the south coast near Milne Bay.

12.   Kurere is a Magi village on Amazon Bay.

13.   This I take it is the Amina or Robinson River inland of Baxter Bay.

14.   Note the correspondence between this form and Goile of Ouma tradi-
tion (cf. Section 4.5.2.3. above).

15.   Note again the similarity between this name and Ouma (or Oma) which
suggests possible unity of origin.

16.   As already noted some have intermarried with Magi and Daga but as
far as is known this is a small percentage. Furthermore Magori is not
spoken by many non-Magori people - an indication of the order of things.

17.   These activities are well documented by Abbi (1964), Malinowski
(1915), and Saville (1926).

18.   These are well documented. See for example Oram (1968:248-9),
Seligman (1910), and Williams (1932).

19.   Earlier linguistic materials have already been mentioned above in
Section 4.5.2.3. except for comparative vocabularies of Mailu, Dimuga,
and Laua in Saville's (1935a) paper. The basic vocabulary in these
early materials was extracted and presented in Appendix 4.4 to my 1971
paper (Dutton 1971b) together with the corresponding Magori items
collected by me in 1969.

20.   See discussion in Dutton 1969:5-8.

21.   Dutton (1969, 1970, 1971a).

22.   For sketches of AN and NAN phonologies of SEP see Capell (1969: 26-35).   The following table will give some indication, however, of the phonological similarities between the languages being discussed here and some neighbouring languages (listed in approximate order from west to east):

```
Motu (AN):      p, t, k,      b, d, g,      h, m, n, l, r, v,        kw, gw, γ
Sinagoro (AN):  p, t, k,      b, d, g,         m, n, l, r? v,        kw, gw, γ
Keapara (AN):   p, t, k,                       m, n, l, r, v, w,     kw,     γ
Daga (NAN):     p, t, k,                       m, n,    r,    w, y
Magi (NAN):     p, t, k, ',  b, d, g,          m, n,    r, v
Suau (AN):      p, t, k, ',  b, d, g, s, h, m, n, l, r,       w, y
```

All these languages have the vowels i, e, a, o, u.   Note that Magori and associated languages do not have the kw, gw, and γ phonemes characteristic of Motu, Sinagoro and Keapara.

23.   Examples are given in Dutton (1971b) and Pawley (1975).

24.   These numbers refer to items in the comparative vocabulary list published below.

25.   Pawley's other innovations 4 and 8 (though 4 is more complex) also support these remarks.   There is insufficient evidence for the remaining innovation, number 7.

26.   See Section 4.5.2.2. above.

27.   Some of these (e.g. a, e, g, h) are also common to NAN languages of SEP.

28.   For others see Subsection 4.5.2.6.2.1.1. below.

29.   The 'oni/koni parts of these forms probably mean *only*.

30.   Note that both Magi and Daga have postpositions but that complex ones like *on top of, beside, inside* are formed, as in Magori, in the following way: Noun + Noun (: *top, side, inside*) + Suffix (: form for *at*), e.g.:

English	Magi	Daga
to	N-la	N-ira
from	N-ma	?
with (instr.)	N-ma	N-den
at	N-de	N-gapan/gan/gam
on top of	N-N-de	N-N-gap
beside	N-N-de	N-N-gap
inside	N-N-de	N-N-gap

31.   Compare the following Magi and Daga sets:

Person/Number	Magi	Daga
1sg.	ia	ne
2sg.	ga	ge
3sg.	noa	me
1pl.	gea	nu
2pl.	aea	e
3pl.	omoa	mu
1du.	guadai	?
2du.	aeadai	?
3du.	omadai	?

Note that these are completely different both in number of items and
form of each. There are no inclusive/exclusive sets. Basically each
is a six pronoun set though Magi has a subset of dual forms related to
the plural forms in a singular way.

32.   In Magi emphatic pronouns are expressed by the possessive form of
the person pronouns + woibu'a (e.g. ina woibu'a *you yourself*, etc.).
Note that these are all different from Daga also where the emphatic
forms are expressed by the subject pronoun forms + k (e.g. nek *I myself*,
gek *you yourself*, etc.).

33.   Compare these with the unbound possessive forms:

	1sg.	2sg.	3sg.	1pl.incl.	1pl.excl.	2pl.	3pl.
Ouma	au egu	oni emu	ia ena	iteda	ai amai	omi em	ida edi
Magori	nau egu	oni eu	ia 'ena	ita eda	nai emai	umui emu	idi edi
Yoba	nau egu	'oni emu	no ena	ita eda	nai emai	omui emui	idi edi
Bina	nau egu	moni em	ia ena	ita eda	nai emai	umui emi	idi edi

and with the following Magi and Daga sets where N shows the position of
the possessed noun and V and TAS the position of the verb stem and Tense-
Aspect-Subject suffixes respectively. Note that in the possessive set
the Magi forms are not bound while those of Daga are, and in the objec-
tive set it is not clear from Saville's writings just where the objective
pronouns are placed relative to other sets of verb suffixes.

Person/ Number	Possessive		Object	
	Magi	Daga	Magi	Daga
1sg.	ina N	N-na	-esela,-ela,-la (and -auta/-uta in certain cases)	V-nege-TAS
2sg.	gana N	N-ga		-ge-
3sg.	ena N	N-e/Ø		-Ø-
1pl.	gena N	N-nu	-agua, -gua	-ne-
2pl.	ana N	N-ya		-ae-
3pl.	omana N	N-mu/e		
1du.	guna N	?	-agia, -gia	?
2du.	aeadai ana N	?		?
3du.	nadai ana N	?		?

34. Compare this with Magi and Daga in which sentences are relativised
in the following way:

Magi	Daga
Sentence + relator suffix on verb (-na) before the noun qualified, e.g. *I ate the taro he planted* = *he planted-na taro I ate (it)*.	Sentence with relator suffix on verb (-i) before the noun or just sentence before noun *'man'* for *'the one who...'*, e.g. nugusen-i otua *the one who they cut-rel. man was cut...* (Murane, J. and E. 1967:39).

35. In 1971 I thought that the a- prefix in Magori may have been a
relative of what Ray (1907:228) calls "true prepositions" found only in
Kiriwina, Tavara, Wedau, Kubiri, Roro and Pokau. For example, Ray (1907:
228) noted that:

> ...in Kiriwina ō or wa is a locative meaning "at" or "in"
> as in gwegwuia wa Tuma, chiefs' families (are) at Tuma,
> ta losi wa Tuma, we go (at) to Tuma. A- prefixed to the
> adverb "where?" is perhaps another form of wa-; a-baisa i ma?
> where is he come to? at where he comes? ... In Tavara ou,
> used as a locative, is probably the same as Kiriwina ō or wa ...
> In Wedau au is used as a locative, "to, at, in, from". The
> difference of signification depends on the points of view.

However, now I think that it is merely a degenerate form of kae found nearby.

36. In this general way it is like Magi and Daga which have very complex verb structures with suffixes for object referent, subject referent (person/number), tense/aspect and with adverb insertion. They do not have short pronouns however. Verbs are negated by prefixes in both cases: d(a)-V in Magi; ya-V in Daga, which is different from Magori as will be seen later in the discussion.

37. The full set of forms is as follows:

	Future				Past			
	Ouma	Magori	Yoba	Bina	Ouma	Magori	Yoba	Bina
1sg.	ma-	ma-	ma-	ma-	a- (?)	ba-	ba-	ba-
2sg.	mu-	mo-	mo-	mo-	bo-	bo-	bo-	bo-
3sg.	me-	mi-	mi-	mi-	e- (?)	bi-	bi-	be-
1pl.incl.	tama-	tama-	tama-	tama-	ta- (?)	tab-	taba-	taba-
1pl.excl.	ama-	ama-	ama-	ama-	a (?)	ab-	aba-	aba-
2pl.	omu-	omo-	oma-	oma-	obo	ob-	obo-	obo-
3pl.	im-	timi-	timi-	timi-	i (?)	tibi-	tibi-	tibi-

38. Although I have since changed my mind about some of the decisions of cognation used therein this does not significantly affect the relative values of the comparisons made there.

39. This is an approximate figure based on Saville's materials.

40. Thomson (1975) found 22% of Ouma vocabulary was of unknown origin.

41. For example, that Magori was originally AN which borrowed heavily from other (incompletely specifiable) languages; or that Magori was a NAN language of some sort which has borrowed heavily from some AN language(s); or that Magori was an 'unknown' language of some sort which has borrowed from both AN and NAN languages.

42. See Dutton 1971b.

43. See Dutton 1971a for a description of the distribution of Yareban languages.

44.   Teasdale (1967:14).

45.   Compare, for example, heni *arm* with Ginuman yeinap *arm*; amo *foot,
leg* with Mapena wama *leg* and Maiwa amon *leg*; tai *string, rope* with
Ginuman tei *string, rope* and Sona tai *string, rope*. (See Dutton 1971a
for locations of these languages.)

46.   Capell (1943:164) defines "unplaced" as "though they are fairly
common no IN original has yet been found for them".

47.   Of course there is no proof just how many other items of the common
54% discussed above were borrowed from Magi - some could be re-borrowings.
This needs further investigation through Magori sound laws.

48.   Presumably the movement was west to east judging by the Aroma-
Mailu-Suau trade pattern.

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4.5.3. THE REEF ISLANDS-SANTA CRUZ FAMILY

S.A. Wurm

4.5.3.1. INTRODUCTORY REMARKS

A brief discussion of the Reef Islands-Santa Cruz Family, which has been classified as a sub-pnylic member of the East Papuan Phylum by the present writer, was presented in (I)2.13.1.4. Its establishment, composition and special nature were discussed in that section, and brief remarks on its typological and structural characteristics were given there.

The composition of the Reef Islands-Santa Cruz Family (7150 speakers) may be repeated here:

Reefs Sub-Family		3600
Reefs	3600	
Santa Cruz Sub-Family		3550
Löndäi (or Nambakaengö)	2200	
Nea dialects	1100	
Western dialect (e.g. Nemboi)	800	
Eastern dialect (Nooli)	300	
Nanggu		250

It was pointed out in that section, and also in (I)2.13.1.1. that the languages of this family had been subject to extremely strong Austronesian influence which has deeply affected the composition of their vocabularies and also their structures. On the basis of many of their features, they could, and have been (Codrington 1885, Lincoln 1975), classified as, albeit highly aberrant, Austronesian languages containing some most unusual traits. However, they constitute the easternmost extent of languages with unmistakably Papuan characteristics

LANGUAGES, REEF AND SANTA CRUZ ISLANDS
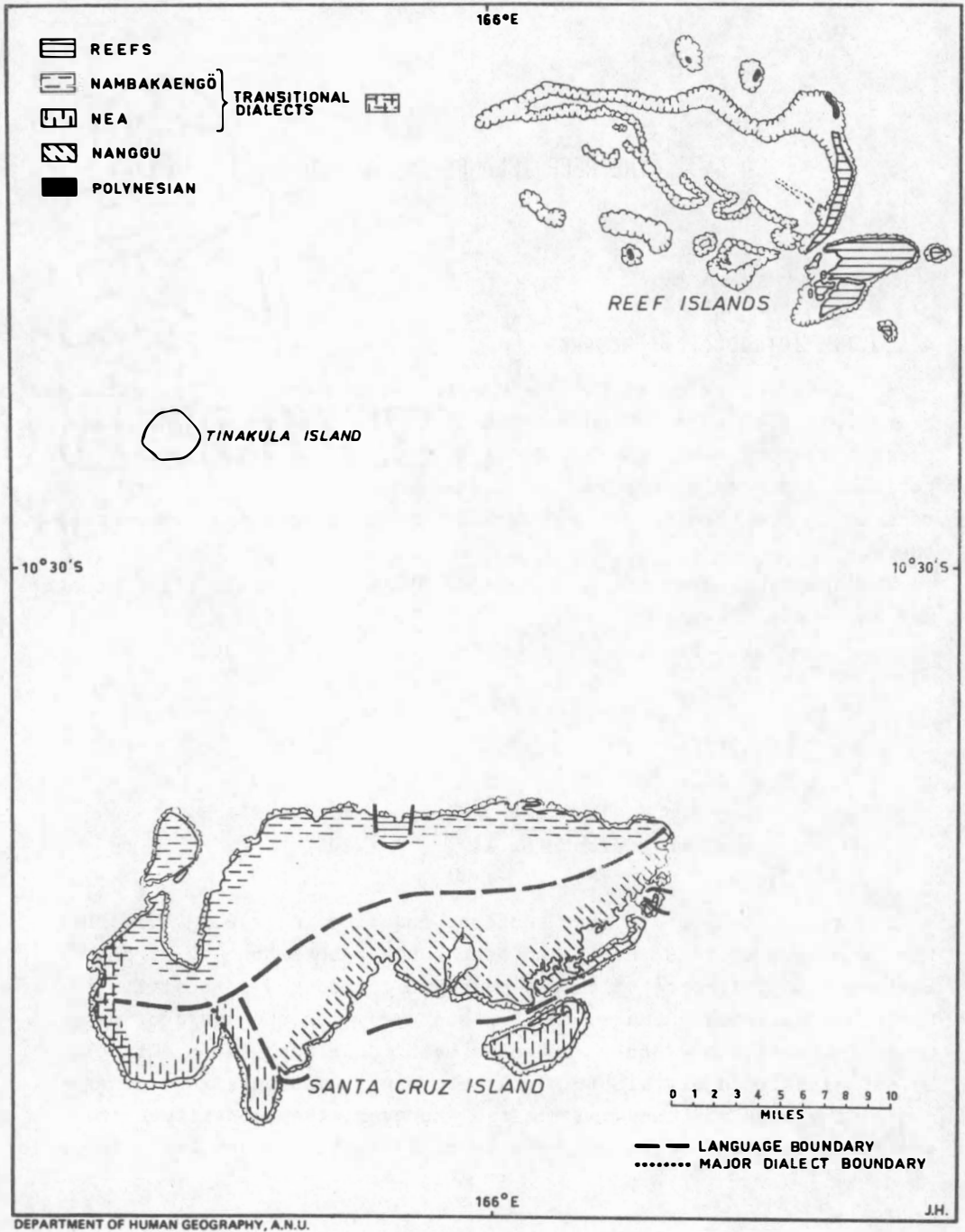
MAP 1

LANGUAGES, REEF ISLANDS

166°E

166°15'E

SAND I.

PILENI I.

NIFILOLI

NIFILOLI I.

Great Reef

TAKWAIARO SCHOOL

MALAPU

10°15'S

TENGE

FENUALOA

10°15'S

MALOMBU

LOMLOM

GNIMBANGA
TEMOO

TUWO

NOPALI

GNIMOA

NGAEA SCHOOL

LIPE

UNU DIST. SCH.

OTELO

NGANIVO SCH.

TEMOO

NGAWAWE

VERENA

NOLA

NGAMANIE

LARO

GNIVALE

MANUOPO

OTAMBE

NANANIMBULI
NANDELI

VERENA SCHOOL

GNIELI

NENUMBO

NGAMUMBULOU

MATEMA I.

Mohawk Bay

NENDE

GNIMBANGA
NENDE

REEFS

POLYNESIAN

• , □ VILLAGE, VILLAGE & SCHOOL

0   1   2   3   4   5
MILES

166°E

166°15 E

MAP 2

LANGUAGES, SANTA CRUZ ISLAND

NEO

Trevanion I.
or
Tömotu Neo

MALO

LWOWA

VENGÖ

MBAENGÖ

NEMBA

MANOPUTI

MBANYÖ

Cape Boscawen

MENJEMBELO

LUESALEMBA

LUEMÜMÜ

MALUE

NEODANG

MBO

GRACIOSA BAY
(Mali Bay)

-10°45'S

MBONEMBO

NEA
NEMBOI

Teita

NOOLI

MALA (NAMBALUE)

Cape Mendaña

NÖLUĀ

TAEPE

NGGUA

MBOMALU

NOKA

NAMBA (PANGGO)
NOVI Cape
Byron

NGGAITO

AKAMBOI

AKAMBOI
(R.H.)

Tömotu
Niambona

FORESTRY
CAMP

MASOKO

UTONGO

NANGGU

MBANOIMBA   MWETNGEMI
MBIMBA

Tömotu Noi

1	UTA
2	NÖU
3	MÖNAÖ
4	MÖNEU
5	MBANUA
6	NÖÖLE
7	LWEPE
8	NAPÖ
9	NEPÜ
10	MATEONE
11	MBALO
12	NEPĀ
13	PALÖ

– – – LANGUAGE BOUNDARY
.... MAJOR DIALECT BOUNDARY
• □ VILLAGE (VILLAGE & SCHOOLE

REEFS

NAMBAKAENGÖ (MALO, NELUA)

NEA (NEMBOI, MENJEMBELO, NOOLI)

NANGGU

MBAENGÖ DIALECTS

0 1 2 3 4
MILES

166° E

MAP 3

which at the same time are clearly identifiable as features and forms
encountered in some East Papuan Phylum languages. They relate largely
to the verb structure of the languages and may therefore be regarded as
rather basic. The situation presented by the Reef Islands-Santa Cruz
Family languages is comparable to that provided by the Papuan Abaga
language in the highlands of Papua New Guinea (see (I)2.8.1.3.10.)
which could well be classified as an aberrant member of the East-Central
Family in the East New Guinea Highlands Stock to which the Kamano lan-
guage belongs (see (I)2.7.2.2.3.), while at the same time it is very
close to Kamano in some respects, though containing some quite un-Kamano
features in its verb structure. However, it is identifiably of
Finisterre Stock origin, its special features reflect identifiable
Finisterre characteristics. Abaga may therefore more correctly be
classified as really belonging to the Finisterre Stock though having
been subject to pervading Kamano influence.

There are of course, many languages such as member languages of sub-
phyla in the Trans-New Guinea Phylum which contain quite aberrant
features and are in all probability not original members of the Trans-New
Guinea Phylum (see (I)2.5.2.). However, the provenance of these fea-
tures, and the origin of these languages themselves, are not identifiable
at least at the present stage of our knowledge, and their classification
as aberrant members of the Trans-New Guinea Phylum seems therefore
justifiable at this point in time.

The languages of the Reef Islands-Santa Cruz Family seem to belong
to the contentious category of "mixed" languages. A discussion of the
notion of "mixed" languages and their importance in Papuan linguistics
has been given in (I)2.2.2. and need not be repeated here, except that
it may be pointed out that the attacks upon the notion of "mixed" lan-
guages by many linguists are largely based on an apparent lack of un-
derstanding of what exactly is meant by the term "mixed" languages by
those who use this term.

The Reef Islands-Santa Cruz Family languages have complex phonologies
and extensive phoneme inventories, especially of vowels, but simple
supra-segmental systems. Studies in their phonologies are only pre-
liminary (Wurm 1970a), and what is presented below is tentative and
subject to revision in the light of further study.

A listing of the phonemes of the languages is given below. They
will be given in sequential order, not in tabular form. Doubtful
phonemes are followed by ? :

NOTE: In the discussions in this chapter, only data in the languages and
dialects mentioned in the table given below will be presented, and the
language and dialect names Reefs, Malo, Nemboi, Nooli and Nanggu used.

Reefs

p   t   k   (kʰ)?   pʷ   kʷ   pʸ?   b   d   g   bʷ   gʷ?
dʸ?   m   nʸ?   n   ŋ   mʷ   ŋʷ   v   s   l   w   y
ɪ   e   ä   a   ɒ   o   u   ə
e̯ɪ   o̯ʉ

Löndäi (Nambakaengö): Malo dialect

p   t   k   pʰ   tʰ   kʰ   pʷ   tʷ   kʷ
pʸ   kʸ   b   d   g   bʷ   dʷ   gʷ   bʷ
m   nʸ   n   ŋ   mʷ   nʷ   ŋʷ   v   s͂tʸ
l   w   y
ɪ   e   ä   a   ɒ   o   u   ü   ö   ə   ʌ?   ɪ̃   ä̃   ã
e̯ɪ   ɒ̃   õ   ũ   ə̃

Nea: Nemboi dialect

p   t   k   pʰ   tʰ   kʰ   pʷ   tʷ   kʷ?
pʸ   b   dʸ͂dʒ   d   g   bʷ   dʷ?   gʷ
m   nʸ   n   ŋ   mʷ   nʷ   ŋʷ?   v   s
l   w   y
ɪ   e   ɛ   a   ɔ   o   u   ü   ö   ə   ã   ũ
ṹ   ö̃   ə̃
a̯ɪ   e̯ɪ   ɛ̯ɪ   ə̯ʉ   a̯ǫ

Nea: Nooli dialect

p   t   k   pʰ   tʰ   kʰ   pʷ   tʷ   kʷ   pʸ   tʸ͂s
b   dʸ͂dʒ   d   g   bʷ   dʷ   gʷ   m   nʸ   n   ŋ
mʷ   nʷ   ŋʷ   v   l   w   y
ɪ   e   ɛ   ä   a   ɔ   o   u   ü   ö   ə   ẽ   ã
ɔ̃   ũ   ü̃   ö̃   ə̃
a̯ɪ   e̯ɪ   ɛ̯ɪ   ə̯ʉ   o̯ʉ   a̯ǫ

Nanggu

p   t   k   pʰ   tʰ   kʰ   pʷ   tʷ   kʷ   pʸ   tʸ
b   d   g   bʷ   dʷ   gʷ   bʸ   dʸ   m   n   ŋ
mʷ   ŋʷ   mʸ   nʸ   lʸ   l   w   y
ɪ   e   ä   a   ɔ   o   u   ü   ö   ə   ẽ   ã   ũ   ə̃
a̯ɪ   e̯ɪ   o̯ʉ   a̯ʉ   ɔ̯ʉ

NOTES:

1.   Voiced stops are prenasalised in Reefs and Malo. In Nemboi, Nooli
and Nanggu they are prenasalised in the majority of their observed in-
stances of occurrence. The conditioning factors responsible for the
presence or absence of prenasalisation with them are still under study.

2.   Retroflexed consonants have been observed in Malo (ṇ, ḷ) and Nanggu
(ṭ, ḍ, ṇ, ḷ), but in most recorded instances they are clearly conditioned
variants of non-retroflexed consonants and therefore presumably not
phonemic.

3.   In all the languages it seems possible to interpret the labialised
and palatalised consonants as consonant + unstressed u and i. This
approach would eliminate the problem of the doubtful consonants marked
with ?, but produce additional problems on the supra-segmental level.

4.   In Malo, both e and ɛ appear, but the latter has been observed in
free variation with ä and is probably not phonemic. There seem to be
somewhat better grounds to postulate phonemic status for ʌ, though the
possibility that it may be a variant of ə is still open. Both a and ɒ
are present, but they seem to be variants of a single phoneme.

5.   Vowel length seems to be phonemic in all five communalects, but
long vowels are rare in Malo, Nemboi and Nooli. In Reefs and Nanggu
they are frequent. In all the languages and dialects treated here,
with the exception of Nanggu, they manifest themselves phonetically as
repeated articulations of their short equivalents, and will be written
as double vowels. In Nanggu, they appear phonetically as lengthened
versions of the short vowels, and will be written as V:.

6.   Stress may prove to be phonemic, though some of the features of
the stress pattern are predictable.

7.   To indicate the phonetic values of the monophthongal vowel symbols
used, a maximal vowel diagram will be given below. ˜ indicates nasality
which is phonemic.

i		ü	u		ĩ		ü̃	ũ
e			ɔ		ẽ			õ
ɛ	ö		ɔ			ö̃	ə̃	ɔ̃
ä	ə	ʌ	ɒ		ä̃	ə̃		ɒ̃
		a					ã	

4.5.3.2. LEXICAL COMPOSITION OF THE REEF ISLANDS-SANTA CRUZ FAMILY LANGUAGES AND DIALECTS

4.5.3.2.1. *GENERAL REMARKS*

A summary of some of the results of the present writer's preliminary comparative historical study (Wurm 1970b) will be given here.

In that study, generally only Reefs, Malo, Nemboi, and Nanggu were taken into account, because the author's extensive Nooli material was only collected after the completion of the manuscript.

The main result of that study was the discovery that about half of the approximately 300 vocabulary items assessed in most of the languages and dialects appeared to be of Austronesian origin, though in many instances extensive sound changes, whose regularity was often in doubt, had to be taken into account in attempting to derive them from Proto-Oceanic and Proto-Austronesian forms, and their Austronesian origins were not obvious or easily recognisable.

In the reflexes of Proto-Oceanic (POC) and Proto-Austronesian (PAN) forms, different traditions were to some extent observable in the various languages, with the main contrasts appearing between Reefs and the Santa Cruz languages and dialects on the one hand, and between Nanggu and the remaining Santa Cruz languages on the other. In particular, Austronesian vocabulary elements in Nanggu reflect POC and PAN forms more closely than is the case in other languages.

Examples:

'grass' Nanggu 'lä:pm, PAN *lumput; Reefs ne-'mbo, Malo, Nemboi 'na-mbö
'ground' Nanggu kɔ-'tɔnɔ, POC *tana(q); Malo ndö'thɒ̃, Nemboi 'mei̯thə
'morning' Nanggu mʷa'(n)dɣi(n)dɣi, POC *ma(n)di(n)diŋ = *cold*, Malo 'mai
'sore' Nanggu na-'(m)bʷaka, PAN *baɣəh; Reefs to-'palu
'sugarcane' Nanggu 'tɛpɣa, PAN *təbuʻ, POC *topu; Reefs 'na-(v)u

In quite a few instances, semantically equivalent vocabulary items in the various languages reflect different proto-forms.

Examples:

'house' Reefs nu-'(v?)opʷä < POC *panua; Malo mʷa, Nemboi 'mbəma, Nanggu 'ma:thu < POC *ʀuŋma(q)
'morning' Nanggu mʷa'(n)dɣi(n)dɣi, Malo 'mai < POC *ma(n)di(n)diŋ = *cold*; Nemboi 'mbɔlə < POC *malaso = *cold*
'pandanus' Malo 'tö-kiö, Nemboi mɔ-'tö-kiö < POC *kiekie; Reefs nɣ-a'wande < POC *pada, PAN *paɳdan
'seven' Nemboi i-'thu-mütü, Malo 'thu-mutu, Nanggu thũ-'thü: < POC *pitu; Malo ö-li-ma < POC *dua + *lima = *two + five* (Malo li = *two*)

'take' Reefs a'lo-kä (or lu'a-kä) < POC *alap; Malo, Nemboi 'tuə,
     Nanggu 'təya < POC *taqaki
'thunder' Reefs mb'le [mbᵘ'le], Malo mb'lömei̯ < POC *pila(k); Nanggu
     tö-'kila < PAN *kilat = *lightning*

In all the languages and dialects, considerably more than half of
the items which could be shown to be reflexes of, in the wider sense,
Austronesian non-regional proto-forms, could be derived from Proto-
Oceanic as listed by Grace (1969). However, the number of items which
are reflexes of PAN, mainly as established by Dempwolff (1934-8) and
Dyen (1953), and show no connections with Grace's POC forms, is quite
large, e.g. *'burn'* (intr.)': Reefs 'pulo, Nemboi plo < PAN *[']uḷub,
but POC *ŋmaʀi; *'break* (tr.)': Malo ö-'plamei̯, Nemboi 'plaŋglo < PAN
*[ḷ]apuh, but POC *motu; *'sore, wound'*: Nanggu na-'(m)bʷaka < PAN
*baɣəh, but POC *manuka.

4.5.3.2.2.   *CLOSE FORMAL SIMILARITIES BETWEEN REEF ISLANDS-SANTA CRUZ VOCABULARY ITEMS AND THEIR EQUIVALENTS IN SOUTH-WESTERN PACIFIC AUSTRONESIAN LANGUAGES*

In all the Reef Islands-Santa Cruz (RSC) languages, about 20% of the
total vocabulary assessed shows closer formal similarity (amounting in
cases to formal identity) with equivalents in individual Austronesian
languages of the south-western Pacific, than with POC or PAN forms,
though in about two-thirds of these cases, the lexical items can be
recognised as constituting reflexes of established POC and/or PAN forms.
Such similarities with languages of central New Britain (including some
islands to the south of it, especially Fergusson Island, D'Entrecasteaux
Islands) and with languages of the New Caledonia area (including the
Loyalty Islands) amount to approximately half of this 20%. The only
other similarities of some numerical significance within this 20% are
with languages of the south-eastern Solomons - the balance consist of
scattered and sporadic similarities with languages of various areas, such
as parts of the New Hebrides and the Banks and Torres Islands, Fiji,
Polynesia and also Micronesia. Many of the probable Polynesian loan-
words have been included in the percentage figure referring to the POC
reflexes, and therefore do not constitute a prominent part of this 20%.
At the same time, the great majority of the quite numerous Polynesian
loanwords, which are especially frequent in Reefs, denote cultural
objects, many of them associated with the sea and with dwellings, as
well as animals, mostly from the sea or flying. A few of them indicate
natural phenomena associated with the sea, and some very few refer to

body parts. In view of their semantic range, Polynesian loanwords do
not figure nearly as extensively in the basic vocabulary-type lists
assessed in Wurm 1970b as in the overall vocabulary of the Reef Islands-
Santa Cruz Family languages. It has been indicated above that in ap-
proximately one-third of the cases making up this 20% of the vocab-
ularies of the Reef Islands-Santa Cruz Family languages, no POC and/or
PAN forms underlying the lexical items in the languages involved are
listed in the sources as brought together in Wurm and Wilson 1975.
They have nevertheless been tentatively regarded as potentially Austro-
nesian, because their formal equivalents occur in several Austronesian
languages, and work in progress, especially by R.A. Blust, is expected
to establish a large number of additional POC and PAN forms (e.g. Blust
forthcoming).

     It must be mentioned that in the Reef Islands-Santa Cruz Family
languages, the reflexes of POC and PAN forms have often changed from
the proto-forms beyond easy recognition, and only the presence of regu-
lar sound correspondences betrays their origin. At the same time, there
is a very considerable number of instances amounting to almost another
20% of the total assessed vocabularies in the Santa Cruz languages, and
to rather less in Reefs, in which regular sound correspondences with
POC and PAN forms cannot be established, but a slight formal similarity
to such forms exists. Such lexical items may perhaps prove to be of
Austronesian origin when more extensive diachronic studies have been
carried out - at this stage, they can only be regarded, with very con-
siderable doubt, as being perhaps of Austronesian origin, and will be
referred to by POC? and PAN?. Similarly, there are quite a few lexical
items which show only some slight formal resemblance to their equivalents
in Austronesian languages of the Melanesian area while at the same time,
they and their other-language equivalents do not seem to constitute
reflexes of any POC and/or PAN forms listed in the sources consulted.
Such lexical items may also ultimately prove to be of Austronesian
origin - but this is even more doubtful than it is the case with the
POC? and PAN? items mentioned above.

     The table given below demonstrates the distribution of the percen-
tages of those vocabulary elements in the Reef Islands-Santa Cruz
Family languages which show considerable formal similarity with their
equivalents in Austronesian languages of Melanesia, irrespective of
whether the words involved can be regarded as POC or PAN reflexes or
not.

Abbreviations:

Ind   RSC lexical items showing formal similarity with their equiva-
        lents in some SW Pacific Austronesian languages, but no under-
        lying POC or PAN forms seem to have yet been established for
        them

Ind?   Same as Ind, but the formal similarities are only slight

NB   (Central) New Britain

F   Fergusson Island (D'Entrecasteaux Islands)

NC   New Caledonia

L   Loyalty Islands

Sol   South-eastern Solomon Islands

NH   New Hebrides

	Reefs	Malo	Nemboi	Nanggu
Total	19.5	23.2	19.9	21.5
Ind?	2.4	1.6	2.3	4.7
NB (+F)	6.5	6.6	5.7	5.1
NC (+L)	3.4	5.0	4.1	6.5
Sol	3.8	3.7	4.7	2.8
NH	1.7	3.3	2.1	3.3
Other	4.1	4.6	3.3	3.8

Before proceeding, it may be mentioned that the distribution of the
three petrified article forms nV-, tV- and lV- in the languages which
can be loosely associated with different semantic areas, may be of in-
terest to diachronic studies in perhaps reflecting regional and chrono-
logical diversities in a part of the Austronesian lexical element present
in the Reef Islands-Santa Cruz Family languages: nouns with tV- (gen-
erally of Polynesian origin - see above) denote predominantly cultural
objects, many of them associated with the sea and dwellings, as well as
animals, mostly from the sea or flying. A few of them indicate natural
phenomena associated with the sea, and some body parts. Nouns with lV-
refer predominantly to natural objects found on land, including some
plants and parts of them, and to some land animals. The semantic range
of nouns with nV- is not so clearly definable, except that most nouns
referring to body parts take nV-.

A few examples of close similarities between vocabulary items of the
Reef Islands-Santa Cruz Family languages, and other individual languages
of Melanesia may be given for illustration (proto-forms will be added
for comparison; the PAN forms generally as given in Dempwolff 1934-8).

1) Central New Britain and islands to the south of it, especially
Fergusson Island (D'Entrecasteaux Islands) (Chowning 1969, and personal
communication):

'*hear*' Nemboi vɛ-'lɛlə, Malo 'ö-lä, Nanggu wö-'lɛ; Lakalai (New
          Britain) lolo; POC *doŋo, PAN *dəŋəɣ

'*morning*' Malo 'mai, Lakalai (New Britain) maigi = *cold*; POC
          *ma(n)di(n)diŋ = *cold*, PAN *ɖiŋin = *cold*

'*mouth*' Malo, Nemboi 'na-(w)o; Sengseng (New Britain) wo; POC *maŋa,
          PAN *babah

'*salt*' Malo i'piə; Kove (New Britain) piapia = *brackish*; POC *ma-asi,
          *maliŋ, PAN *'at'in

'*tail*' Nanggu 'nu-ŋgütlu; Sengseng (New Britain) küt; POC *iku, PAN
          *ikuɣ

'*tooth*' Malo 'ni-ŋi, Nemboi 'ni-ŋu, Nanggu 'nũ-ŋũ; Sengseng (New
          Britain) ŋi (compare also Iai, Loyalty Islands: nᵞu); POC
          *nipon, PAN *gigi

'*different*' Malo 'mulö, Molima (Fergusson Island) mali; POC?, PAN
          *'ibah

'*taro*' Reefs nu-'mbole; Molima (Fergusson Island) bolo (in spells
          only); POC *ntalo, PAN *talət'

   2) New Caledonia and the Loyalty Islands (Haudricourt 1971, Tryon
1967a,b,c, 1968a,b, Tryon and Dubois 1969, 1971)
   The similarities with New Caledonian and Loyalty Islands languages
are particularly interesting, and a larger number of them will be given:

'*bone*' Nanggu 'andu; Far North, North and Central Group New Caledonian
          languages ⁿdu(u); Proto-New Caledonian *ⁿɟuwl, POC *to(dr)i,
          *tu(dr)i, PAN *ulaŋ

'*(female) breast*' Nanggu 'nö-tʰi; Far North Group and North Group New
          Caledonian languages thi; Proto-New Caledonian *cucu, POC
          *susu, PAN *t'ut'u'

'*coconut*' Reefs 'nä-nu; New Caledonian generally nu; Proto-New
          Caledonian *niu, POC *niu(ʀ), PAN *nijuɣ

'*die*' Reefs 'numbo, Malo mbə, Nemboi, Nanggu mbʷə; Ponérihouen (New
          Caledonia) -ᵐbʌ; Proto-New Caledonian *maṱe, POC *mate, PAN
          *pataj

'*fish*' Malo nɒ, Nemboi nɔ, Nanggu 'nəta; Niélaiou (New Caledonia) no,
          Houailou (Poya Plain dialect) (New Caledonia) nɔ, in other New
          Caledonian languages nõ, nok, etc.; Proto-New Caledonian *lauq,
          POC *tuʀi(a), *ikan, *nsansa, PAN *la'uk = *fish as a side-dish*

'*forehead*' Nanggu 'pʷeleunɔ; some Southern Group New Caledonian lan-
          guages ᵐbʷara-; Proto-New Caledonian *ⁿɗaqe, POC *nta(dr)a,
          PAN *[dḍ]ahaj

'head'   Malo 'na-(v)ö, Nemboi 'na-wö, Nanggu 'na(w)ɔ; Iai (Loyalty
           Islands) hawo (Tryon 1968b), bʷa- (Haudricourt 1971); most Far
           North Group and North Group New Caledonian languages ᵐbʷaa,
           some Southern Group New Caledonian languages ᵐbʷa; Proto-New
           Caledonian *ᵐbua, POC *qulu, PAN *'ulu

'house'   Malo mʷa; Far North, North, Central and Southern Group New
           Caledonian languages mʷa, mʷã, Nengone (Loyalty Islands) ʔma
           (Haudricourt 1971), mma (Tryon 1967a, Tryon and Dubois 1969);
           Proto-New Caledonian *umua, POC *ʀuŋma(q), PAN *ɣumah

'leaf'   Malo 'leu, Nemboi 'lɛŋu, Nanggu 'lɛpu, 'lɛu; Iai (Loyalty
           Islands) lə; Proto-New Caledonian *ⁿɖau, POC *ndau(n), PAN
           *[dɖ]avən

'left'   Reefs 'mou, Malo mo; Youanga (New Caledonia) mɔ, Hyenghène
           (New Caledonia) moo-; Proto-New Caledonian *maui/mamaui, POC
           *mauʀi (ma-wiʀi), PAN *viɣi'

'long'   Reefs eombu'lou, Malo 'mboi, Nemboi i-'(m)bɔi, Nanggu i-'mbuki,
           Touho and Wagap (New Caledonia) -ᵐbʷali, Dialect of Noumea (New
           Caledonia) -ᵐbʷaa; Proto-New Caledonian *ᵐbualu (compare Fijian
           mbalavu), POC *lowas, PAN *pan'd'aŋ

'mouth'   Reefs 'nu-pa, Malo, Nemboi 'na-(w)o, Nanggu 'na-mbʷa; Iai
           (Loyalty Islands) ᶇä, Far North Group New Caledonian languages
           pʰʷa, pʰʷɛɛ, North Group New Caledonian languages hwa, fwa,
           Houailou (New Caledonia) -wã; Proto-New Caledonian *papua, POC
           *maŋa, PAN *babah

'night'   Reefs mbu, Malo mbü, Nemboi 'no-mbu, Nanggu 'nɔ:-mbu; Houailou
           (New Caledonia) ᵐboe; Proto-New Caledonian *ᵐbueŋi, POC *ŋpoŋi,
           PAN *bəŋ[i']

'ray (fish)'   Reefs to-'poe, Malo tö-'pae, Nanggu tö-'pʷae; Proto-New
           Caledonian *pai, POC *paʀi, PAN *paɣi'

'small'   Malo 'tʰopʷe, Nemboi, Menjembelo 'i-tʰɔ, Nanggu 'u:-tʰa; Dehu
           (Loyalty Islands) cʸo (Tryon 1967b,c); POC *(dl)iki, PAN
           *[']iʈik, *t'ə(m)pit = *narrow*

'star'   Reefs 'nʸi-(v)u, Malo 'vei, Nemboi 'vəi, Nanggu 'pipi; Far North
           Group and North Group New Caledonian languages piiɔ, piiju, piiu,
           piiuk, Noumea dialect (New Caledonia) veoo; Proto-New Caledonian
           *piʈuqu, POC *pituqu, PAN *bintaŋ

   Another important similarity between the Reef Islands-Santa Cruz
Family languages, and Loyalty Islands languages can be observed in the
form of the adjective introducer which is mi- in Reefs and me- in Nengone
(Loyalty Islands), and kä- in Malo, kɛ- in Nemboi, and ka- in Nanggu
which compares well with Dehu (Loyalty Islands) ka-.

3) South-eastern Solomon Islands (Proto-Malaitan - PM - Levy and
Smith 1969)

'fire'   Reefs nᵞ-e: (ni-e:), Malo, Nemboi nᵞ-ö; Wango (San Cristobal)
eu (similar forms also in the Banks and Torres Islands); POC
*api, PAN **'apui*

'put down' Malo 'yölü-o-, Nemboi 'ölu-, Nanggu 'eluä-; PM **'alu*;
?POC,PAN **tanəm* (Dyen **taʀuq*)

'sea'   Nanggu (n)da'kawü; PM **ma-takwa* (compare Roro, south coast of
Papua aku); POC **tansi(k)* = *salt water*, PAN **[t]at'ik* = *salt
water*

'thigh'   Reefs nu-(v)oto'wau; PM **tʰafa*; POC **paqa*, PAN **paha*

4) New Hebrides (Codrington 1885 and other vocabulary sources)

'head'   Reefs nu-(v)o'tau; Magam (Ambrym) botu (compare also (Papuan)
Savo bota); POC **qulu*, PAN **'ulu*

'sun'   Reefs 'na-le; widespread forms in the New Hebrides, Banks and
Torres Islands elo, lo and similar; POC **siŋa(ʀ)*, PAN **vaɣi'*

5) Micronesia (Bender 1971, Capell 1969)

'tooth'   Malo 'ni-ŋi, Nemboi 'ni-ŋu, Nanggu 'nŭ-ŋŭ; General Micronesian
ŋii (see also *'tooth'* in 1); POC **nipon*, PAN **gigi*

'see'   Reefs ä'moli-kä, Malo 'mɒlä-, Nemboi, Nanggu 'mɔla; Sonsorol
meali = *look at*; POC **kita* = *see*, **tidɔ* = *look at*, PAN **kita* =
see, **tilik* = *look at*

4.5.3.2.3.   *PERCENTAGES SHOWING THE LEXICAL COMPOSITION OF REEF ISLANDS-
SANTA CRUZ LANGUAGES AND DIALECTS*

(For the abbreviations see 4.5.3.2.2.; NAN = non-Austronesian.)

	Reefs	Malo	Nemboi	Nanggu
POC	34.1	33.7	26.4	28.5
POC?	8.2	11.3	13.2	13.6
PAN	9.9	14.6	17.5	15.4
PAN?	4.4	6.3	7.1	6.0
Ind	7.2	7.3	6.8	5.6
Ind?	2.4	1.6	2.3	4.7
NAN	33.8	25.2	26.7	26.2

Note: In all Reef Islands-Santa Cruz Family languages, the POC and Ind
element is very considerably higher in nouns and adjectives than in
verbs and the remaining word-classes.

The information contained in the table given above can be interpreted,
presented and summarised in various ways. This has been discussed in

detail in Wurm 1970b, and it may be sufficient to give the following
summarising table here:

	Reefs	Malo	Nemboi	Nanggu
probably Austronesian	51.2	55.6	50.7	49.5
of doubtful status	15.0	19.2	22.6	24.3
probably not Austronesian	33.8	25.2	26.7	26.2

One basic fact emerges from the tables given above: the Austronesian
lexical content of the Reef Islands-Santa Cruz Family languages is very
large. It amounts to at least half of their vocabulary, and probably
more.

The situation can be summed up as follows (Wurm 1970b):

As far as the Austronesian lexical element is concerned, much of it
does not appear to be closely linked with Eastern Oceanic (Pawley 1969,
1972), but to show connections with aberrant Oceanic Austronesian
elements present in the New Britain and the New Caledonia areas. At
the same time, a strong element linking more directly with western
Austronesian than with Oceanic Austronesian seems to be present in the
Reef Islands-Santa Cruz Family languages, and the Eastern Oceanic lex-
ical element manifests itself predominantly in the forms in which it is
encountered in areas neighbouring the Reef Islands-Santa Cruz Family
language area - it may therefore be attributable to language contacts
and loans of a comparatively recent date, in the area itself.

A small Micronesian lexical element can be observed in the Reef
Islands-Santa Cruz Family area, and a strong Polynesian lexical element,
in forms reminiscent of those met with in Polynesian languages located
immediately to the north of the Reef Islands-Santa Cruz Family area,
completes the picture. It is obviously due to rather recent language
contacts in the area itself.

4.5.3.2.4.   FURTHER EXAMPLES OF AUSTRONESIAN LEXICAL ITEMS IN REEF
             ISLANDS-SANTA CRUZ FAMILY LANGUAGES WHICH APPEAR TO
             CONSTITUTE POC AND/OR PAN REFLEXES

A few further examples of POC and PAN reflexes in Reef Islands-Santa
Cruz Family languages may be given:

In reflexes in Reef Islands-Santa Cruz Family languages, initial and
final syllables of POC or PAN forms are very frequently absent, and
medial syllables less commonly so, e.g.:

   a) Initial syllable lost:
'arm'   POC *lima; Malo mü, Reefs 'nʸi-me, Nemboi, Nanggu 'nü-mü
'ashes' POC *apu, or *ndapu; Malo mbü, Nemboi 'nü-mbü, Nanggu 'nü-mbu
'day'   PAN *təlaŋ = *be bright*; Malo 'nö-lɒ, Nemboi nö-lɔ; PAN *dʼəmu[ḷ]
           = *put in sun*, Reefs 'nu-mbla
'hair'   POC *pulu; Reefs nʸi-'luu
'hear'   POC *doŋo; Reefs ŋo-

   b) Final syllable lost:
'back'   POC *ŋpoto; Malo, Nemboi 'ni-mbö
'eye'   POC *mata; Reefs 'nʸi-mbe, Malo mə, Nemboi 'nü-mʷə
'hot'   POC *pana(s); Reefs 'vepe, Malo pü, Nemboi 'i-pü
'navel' POC *mputo; Reefs 'nʸi-mbu
'shoulder' POC *paʀa; Malo 'na-mbä, Nemboi 'na-mbʷɛ, Nanggu 'na-mbʷe

   In Reef Islands-Santa Cruz reflexes of POC and PAN forms, metathesis
phenomena play an important part.
Examples:
'break (tr.)' PAN *[ḷ]apuh; Malo ö-p'lamei̯, Nemboi 'plaŋlo
'burn (intr.)' PAN *[ʻ]uḷub; Reefs 'pulo, Nemboi plo
'fly (v.)' POC *ʀopo; Nemboi vlo (but Malo l'vɒ [lᵘ'vɒ])
'six'   POC *onom; Nanggu 'tʰe-mü:
'woman' PAN *binaj; Malo 'olva (-j > l) (medial syllable lost)

   It may be pointed out that in comparing Reef Islands-Santa Cruz
Family languages with each other, metathesis is frequently observable.
Examples:
'fly (v.)' Malo l'vɒ, Reefs 'luo, Nemboi vlo, Nelua volö < POC *ʀopo
'tie (rope)' Nemboi vlɛ, Nanggu 'lawi < POC *pusi (PAN *dʼalin);
        compare Proto-Malaitan *firi
'woman' Malo 'olva, Nelua (a Löndäi dialect documented in Codrington
        1885) 'ovla, Nanggu 'ɔ:pla < PAN *binaj (l < j)

   c) Medial syllable lost:
'crocodile' POC *puqaya; Reefs kako-'pili, Malo kʰa'kʰo-pli, Nemboi
        Nanggu kʰa'kʰ-ɔpli (y > l)

   Some other immediately apparent phenomena in Reef Islands-Santa Cruz
Family languages are: PAN *j (POC *y) > l, complex sound correspondences
of POC *labial consonants in Reef Islands-Santa Cruz Family languages,
POC *open vowels > closed vowels, POC *VnV > ṽ.
   The question of POC and PAN reflexes in Reef Islands-Santa Cruz
Family languages has been discussed in some detail in Wurm 1970b in a
preliminary form.

4.5.3.2.5. *THE PAPUAN LEXICAL ELEMENT IN REEF ISLANDS-SANTA CRUZ FAMILY LANGUAGES*

In Wurm 1970b, the author mentioned that a comparison of the apparently non-Austronesian vocabulary element in Reef Islands-Santa Cruz Family languages with that in other Papuan languages in the Solomon Islands had yielded very meagre results. He also pointed out that the relatively numerous obvious lexical correspondences between all these languages were the result of the presence of the same Austronesian loanwords in them, be it definitely or potentially POC or PAN reflexes, or items similar in form to vocabulary items occurring in non-adjacent Austronesian languages, i.e. in New Britain or the New Hebrides. He pointed out that of the 21 comparison sets listed by Greenberg (1971) in support of his assumption of a relationship between the Reef Islands-Santa Cruz languages and Solomon Islands Papuan languages, 19 were definitely or possibly Austronesian loanwords.

However, the great increase in information, since 1970-71, on the languages involved has made it possible to establish the existence of a sizable number of possible lexical correspondences between the apparently non-Austronesian lexical element in the Reef Islands-Santa Cruz languages and languages of the East Papuan Phylum. A few examples will be given below:

'blood' Malo mä-pʸö, Nemboi, Nanggu mö-pʸö, Nooli me-pʸö; Yele wö, Baniata vo (but compare Proto-Malaitan *'abu; Savosavo gabu, Lavukaleve ravu)

'child' Nemboi 'ombʷɛ, Nanggu 'ɔ(m)bʷa; Savo ñu-mba (m.), zu-mba (f.), Lavukaleve vovou, Baniata uve = *fruit (tree's child)* (? < POC *pua, *mpou = *fruit* ?)

'ear' Malo 'ndötʰü, Nemboi 'lötu, Nanggu lɔ-'ndɔtɔ; Baniata oŋgoto (? < POC *doŋo = *hear* ?)

'eye' Nanggu pnɔ; Baniata bero

'fire' Nooli ⁿdʒə; Yele ndö, Nasioi nta, Savo kenda

'fish' Reefs si; Yele te (? < PAN *(n')t'əda = *fish*, Dempwolff 1929, *si(ŋ)pu(nN) = *small fish*, Blust 1973; POC *nsansa = *small fish* ?) (Malo nɒ, Nemboi nɔ, Nooli nɔ̃, Bilua niuniu (ñuñu): see 4.5.3.2.2., 2))

'many' Malo 'külu, Nanggu 'i-klu; Baniata kulio, kubo

'mosquito' Reefs mʷaŋe, Nanggu mʷaläla; Lavukaleve mulukuita, Baniata iimusu (? < PAN *n'amuk, *lamuk ?)

'rain' Nemboi i-pʷũ̃, Nooli pũ; Yele poi, Nasioi apo

'sky'   Reefs to-pʷa-, Malo mbo-, Nemboi, Nooli, Nanggu ᵐbɔ-; Yele mbe,
          Nasioi pa-, Savo pa-, kuma (? < PAN *ʻavaŋ = *sky* ?)

'small'   Malo 'tʰopʷə, Nooli -tʰapʷə (? < PAN *t'ə(m)pit = *narrow* ?);
          Yele ndoŋgobari

etc.

Some examples of strongly changed possible reflexes of POC and PAN
forms appearing in different languages of the East Papuan Phylum:

'father' Malo töte; Sulka ti:t, Taulil tia (? < POC *tama ?) (similar
          forms appear in New Britain and New Hebridean Austronesian
          languages)

'eat'   Malo mu, Nemboi mʷə, Nooli mʷä; Yele ma, Nasioi maa, Sulka em;
          (< PAN *k'amuk = *eat carefully*, POC *samu(k) = *eat fruit*) (com-
          pare Proto-Philippine *ma-kan, Zorc and Charles 1971)

'sleep'   Reefs mei̯, Malo, Nemboi, Nooli mᵘi, Nanggu mu; Yele mad, Bilua
          maroŋa (< POC *matudu(ʀ))

In addition to what has been shown above, there are formal similar-
ities between some of the non-Austronesian pronoun forms in the Reef
Islands-Santa Cruz languages and other languages of the East Papuan
Phylum, e.g.:

'I'   Malo (ni-)ŋä, Nooli (ni-)ŋa; Lavukaleve ŋai, Bilua aŋa, Baining
          ŋoa, Taulil ga, Konua aga

'he'   all Santa Cruz languages (ni-)de; Rotokas iřa, Savo lo, Baniata
          zo

'we (excl.)*'* Nanggu (ni-)gɔ, Savo ko; Reefs (i̯u-)ŋo, Bilua eŋe

'we (du.)*'*   Malo, Nemboi, Nooli (ni-)(ŋ)gi, Wasi negi (excl.), neŋe
          (incl.)

'you (pl.)*'*   Reefs (iu-)mi, Nemboi (ni-)mʷi, Nanggu (ni-)mʷe, Malo,
          Nooli (ni-)mu; Baniata, Savosavo me, Lavukaleve imi, Sulka muk
          This may be an Austronesian form, but the pronominal picture
          presented by the East Papuan Phylum languages outside the Reef
          Islands-Santa Cruz Family makes this seem somewhat unlikely
          (e.g. Sulka 1st pl. mur, 2nd pl. muk)

'they'   Nooli (ni-)ne, Baniata nɔ (plural neuter).

Such similarities, lexical agreements, and the similarities between
some subject markers with verbs in Santa Cruz languages and languages
of the East Bougainville Stock (see below 4.5.3.4.2.) show up the formal
side of the Papuan element in the Reef Islands-Santa Cruz Family lan-
guages, and its links with languages of the East Papuan Phylum on this
level.

4.5.3.3. STRUCTURAL AND TYPOLOGICAL FEATURES OF THE REEF ISLANDS-SANTA CRUZ FAMILY LANGUAGES

An abstract discussion of the main typological and structural features of the Reef Islands-Santa Cruz Family has been given in (I)2.13.1. A more detailed discussion with some examples will be given here.

All Reef Islands-Santa Cruz Family languages and dialects have basically similar structures, with Reefs standing somewhat apart from the Santa Cruz languages, but there are considerable differences in detail.

4.5.3.3.1. *MORPHOPHONEMIC FEATURES*

All the languages and dialects show morphophonemic features of varying complexity, Reefs being the least elaborate.

4.5.3.3.2. *ARTICLE-LIKE PREFIXES TO NOUNS*

The languages and dialects have in the noun phrase, prefixed article-like elements in the form of nV-, tV- and lV-, of which the nV- forms function in the formation of verbal nouns. With other nouns, they constitute mostly inseparable parts of the words. Only an extremely limited number of nouns can, mainly in Reefs, appear with or without these prefixes without a change of their lexical meaning. In such cases, their absence marks general denotation, and their presence particularisation. In different phonological shapes, especially as n- + different vowels, a number of these article-like prefixes constitute markers of a range of semantic classes. In other cases, their different forms seem to be phonologically conditioned by the phonemic structure of the nouns to which they appear prefixed, though diachronic factors may also play a part in the appearance of a particular form. Different forms of these prefixes as well as the absence versus presence of such a prefix serve to distinguish homophones, e.g. Reefs ni-opᵂä (nʸi-opᵂä) = *earth oven*, nu-opᵂä = *house*, vili = *parrot*, na-vili = *eel*. Semantic class markers which have other forms than nV- (or tV-, lV-) can appear prefixed to these article-like prefixes (see below).

4.5.3.3.3. *PERSONAL PRONOUNS AND POSSESSION MARKING*

The personal pronouns are formed by the addition of possessive suffixes to invariable pronominal bases, i̯u- (∿i-) in Reefs, and ni- in the other languages and dialects. All the languages and dialects have an inclusive-exclusive contrast in the first person non-singular, and

all distinguish one extra number in the first person non-singular in-
clusive.

	Reefs	Malo	Nemboi	Nooli	Nanggu
1sg.	i̥u	ni-ŋä	ni	ni-ŋa	ni
2sg.	i̥u-mu	ni-m	ni-m	ni-m	ni-m
3sg.	i-na	ni-de	ni-de	ni-de	ni-de
1du.incl.	i̥u-dʸi	ni-gi	ni-gi	ni-gi	ni-da
1du.excl.	i̥u-ŋole	-	-	-	-
2du.	i̥u-mile	-	-	-	-
3du.	i̥u-dʸile	-	-	-	-
1tr.incl.	i̥u-dele	\			
1tr.excl.	-	\ absent from the Santa Cruz			
2tr.	-	/ languages and dialects			
3tr.	-	/			
1pl.incl.	i̥u-de	ni-gu	ni-gɔ	ni-gɔ	ni-damʷe
1pl.excl.	i̥u-ŋo	ni-gö	ni-gɔmu	ni-gö	ni-gɔ
2pl.	i̥u-mi	ni-mu	ni-mʷi	ni-mu	ni-mʷe
3pl.	i̥u-dʸi	ni-dö	ni-gö	ni-ne	ni-ŋö

NOTE:

a) The possessive suffix of 1sg. appearing in Reefs with nouns and
possession markers is Ø∼-u and 3sg. is -V > -ä∼Ø, e.g. tumʷo = *my father*,
tumʷä = *his father*; nuotau = *my head*, nuotä = *his head*.

b) The possessive suffix of 3sg. appearing in Nooli with nouns and
possession markers is in some cases -dʒe, and 3pl. in some -nʸe.

c) The possessive suffix of 1sg. in Nemboi is -nu. In Nanggu, it is
Ø with nouns to which the possessive suffixes are directly added and
Ø∼-nu with possessive markers.

The indication of possession with nouns takes place through the ad-
dition of possessive suffixes to the nouns themselves in the case of most
terms of relationship, most external parts of the body, and a few other
nouns. Two sets of these suffixes exist in Malo, Nemboi and Nooli.
This makes it possible to assign the nouns which, in these communalects,
take possessive suffixes directly, to two distinct classes. In Nooli,
this phenomenon is only weakly in evidence, and nouns appearing with
the second type of possessive suffixes rarely display full ranges of
them.

Generally speaking, the second set of possessive suffixes differs
from the first in having mostly voiceless initials in place of the voiced
ones of the first set, but there are other differences as well. It

seems that with words which are probably Austronesian, the second set
of possessive suffixes appears if their underlying POC or PAN forms
have a final or near-final *-t or *-k which is not present in the
reflexes.

The second set is as follows:

	Malo	Nemboi	Nooli
1sg.	-kä	-luᵛ-tu	-daᵛ-ta
2sg.	-p	-pʷi	-p
3sg.	-te	-te	-te
1du.incl.	-ki	-ki	-ki
1pl.incl.	-ku	-kɔ	-kɔ
1pl.excl.	-kö	-kɔmu	-kö
2pl.	-pu	-pʷiᵛ-ŋəmʷi	-pu
3pl.	-tö	-kö	-de

Examples: Malo: *intestines* = bə, *my* = bə-kä, *your* (sg.) = bə-p, *his* =
bə-te, *our two's* (incl.) = bə-ki, etc. (PAN *bi[t]uka['], *pəɣut);
Nemboi: *eye* = numʷə, *my* = numʷə-lu, *your* (sg.) = numʷəpʷi, *his* =
numʷə-te, *our two's* (incl.) = nümʷə-ki, *our* (incl.) = nümʷə-kɔ, etc.;
Nooli: *my eye* = mʷã-da, *your* (sg.) *eye* = mʷã-p (PAN, POC *mata); *our*
(excl.) *forehead* = pulemʷa-kö, etc.

With all other nouns, possession is indicated by separate possessive
markers which follow the noun, and to which possessive suffixes are
added. In all the languages, the number of distinct possessive markers
is quite considerable (Wurm 1972).

For comparative purposes, the forms appearing in conjunction with
possessive suffixes of the third person singular, or, as in Reefs,
denoting possession by the third person singular by themselves, seem to
be most suitable.

The following possession class markers occur in at least three of the
languages and dialects under discussion:

Class	Reefs	Malo	Nemboi	Nooli	Nanggu
General Possession	no	nä	nɛ	ne	nei̯
Food	na	na	na	na	na
Drink	numʷä	pü	mu	mu	gɔ
Betel	da	ma	–	ma	–
Utensils	nogo	kö	gö	gö	tɛlɔ
Location	tä (to)	nʸə	–	–	nʸɔ
Dependent Contents	–	ŋö	ŋö	lö	lö ∿ nö (ᵛŋö?)
Independent Contents	–	ö	ö	ö	ka:lö?
Fire	–	mnö	mʷilö	ədʸeögö	nɔlɔ

As can be seen from the table above, there is considerable formal similarity between related markers in the individual languages and dialects. Only Malo pü and Nanggu gɔ in the drink class, Nanggu tɛlɔ in the utensils class and Nooli ədᵞeögö in the fire class are quite aberrant.

In addition to the possession class markers listed, a varied number of other such markers are met with in the individual languages and dialects, i.e.:

    Reefs: deno flower and fruit class
             nika ∿ nako toe class

    Malo: tǎ general food class
             sɒ holding class
             nɒ garden utensils class
             nö purpose class
             lö dependent liquid contents class

    Nemboi: nəlö spouse class

    Nanggu: kɔ water class
             nau louse class
             aŋu canoe class

In addition to these class markers, some nouns and prepositions function as possession class markers, e.g.:

    Reefs: ŋago wound class: this is the preposition ŋag(u)- sig-
             nalling the indirect object with verbs.
             nisa ∿ nisi skin and bone class: this is one of the words
             for 'body'.

    Malo: nᵞɒ parts of lower leg class: this class marker is de-
             rived from nanᵞɒ = *leg* through the omission of the other-
             wise obligatory article-like prefix na-.

The largest number of class markers is met with in Malo (14), with Nanggu having 11 and Reefs 10, whereas Nemboi and Nooli both have eight. A striking feature is the absence of the location class from the last two, whereas Reefs lacks the dependent and independent contents classes. The betel class is absent from Nemboi and Nanggu, and the fire class from Reefs.

The possessive markers discussed above also serve to denote posses-sive relation between nouns, in Reefs with the possessive suffix of the third person singular added to them, and in the other languages and dialects without such suffixes.

4.5.3.3.4. *SEMANTIC CLASSES*

In all the languages and dialects, a varying number of semantic
classes is observable with a portion of the nouns. Some of these classes
are marked by article-like prefixes, mainly in the shape of nV- (see
above). For instance, a class of objects capable of inflicting wounds
is marked with ni- in Malo, e.g. ni-pna = *arrow*; nö- marks, in Malo, a
class of objects which are part of a larger unit and depend on it for
their existence, e.g. nö-wö = *bone*, etc. Other such classes are denoted
by prefixes of different shapes which can precede article-like prefixes
to nouns. These semantic classes are largely different from, additional
to, and cross-cutting with, the classes to which individual nouns can
be assigned on the basis of the nature of the possessive marker or
possessive suffix appearing with them. These special class prefixes
are most extensively used in Nanggu, e.g. mö:-mbö = *butterfly* (Malo,
Nemboi, Nooli mbö), ŋö-kʰätʰü: = *betel nut* (Nemboi kɛtü). Class markers
also appear prefixed to numerals (e.g. Reefs sime pʷä-lilu = *two men*,
nʸiivä ndä-lilu = *two stones*; poi la-lilu = *two pigs*) and some demon-
stratives referring to given nouns. They also appear to play some
limited role in connection with subject and object marking in verbs.

4.5.3.3.5. *ADJUNCT INTRODUCER*

An adjunct introducer denoting qualitative noun adjuncts is uni-
versally present in the form mi- in Reefs and ka-, kä-, kɛ- in the
other languages and dialects. The adjuncts follow the noun which they
determine. In addition to, and following the adjunct introducer, such
adjuncts carry the obligatory prefix i- (~u-) in Nea and Nanggu. Only
in Nemboi, this prefix appears also with numerals.

4.5.3.3.6. *VERB STRUCTURE AND SUBJECT MARKING ON VERBS*

The verb morphology of the Santa Cruz languages and dialects is of
considerable complexity. In Reefs it is somewhat simpler, and in some
respects quite different from that met with in the Santa Cruz languages
and dialects.

In the verb, a number of aspects are distinguished and indicated by
prefixes, suffixes and discontinuous morphemes. Tenses are very few,
and denoted predominantly by suffixes. The general direction of the
action, and (in Reefs) separately from this, its direction in relation
to the speaker, the person addressed and a third person, as well as (in
Santa Cruz languages) its location in relation to the speaker as opposed
to its direction, are frequently marked by suffixes and prefixes.

Negation, prohibition and other features are indicated by discontinuous
morphemes consisting of prefix and suffix systems. The form and ar-
rangement of the negative morphemes is different in the various lan-
guages and dialects:

Reefs: ba-... ordinary subject suffixes ± object suffixes + -gu

Malo: tö- ... -w + ordinary subject suffixes.

Nemboi: tɛ- ... special subject suffixes differing in part from those
          appearing in the affirmative + -lü.

Nooli: te- ... -lu + special subject suffixes differing from those
          appearing in the affirmative, in some cases through the omis-
          sion of the initial consonant of the suffixes.

Nanggu: tö- ... pʷ + special subject suffixes differing in part from
          those appearing in the affirmative.

   The causative is indicated by prefixes and several different prefixes
appear with different verbs. A number of suffixes which are reminiscent
of transitivisers, but are not obligatory, appear with some verbs. Most
of them have specific functions such as denoting aggressivity, or des-
truction of an object, through the action indicated by the verb etc.,
and could perhaps be analysed as constituting a special category of the
suffixes indicating the direction of an action (see above).

   A prefix denoting transitivity appears with a number of verbs to
refer the action to a specific object. Singularity versus non-singu-
larity, and indefiniteness, of a following noun object is marked by
suffixes in several of the Santa Cruz languages. In Reefs, suffixes
mark the person of the object. The use of several types of verbal nouns
is common in each of the languages, especially in Santa Cruz, and sen-
tence-medial verbal forms, i.e. special verb forms characterising
dependent verbs, have been observed, especially in Malo. Quotative
forms occur, and the conditional is usually marked by a prefix. Special
forms such as forms denoting interrogative of cause or reason are often
marked by discontinuous morphemes. With many verbs, the benefactive is
obligatorily marked by special suffixes and the suffixes denoting the
reflexive are similar to them. The subject is indicated by suffixes,
except that with intransitive verbs in Reefs it is denoted by preposed
particles, though its number is shown by suffixes. In the Santa Cruz
languages, especially in Nea and Nanggu, several sets of verbal subject
markers occur in the singular number in particular according to the
class and the aspects of the verb to which they are added, and to whether
the verb is in the affirmative or negative. In the list below, the most
common verbal subject suffixes will be given.

	Reefs	Malo	Nemboi	Nooli	Nanggu
1sg.	-nɔ	-ä⌇-o	-ŋəᴧ-a	-a	-i⌇-ɛᴧ-u
2sg.	-mu	-ü,⌇-eᴧ-ə	-ŋüᴧ-e	-m⌇-əᴧ-ü	-əᴧ-i
3sg.	-gu	∅⌇-leᴧ(-uᴧ-ü)	-∅ᴧ-le	-∅ᴧ-leᴧ-ŋ	-∅ᴧ-ə
1du.incl.	-dʸi	-ki	-kiᴧ-gi	-kiᴧ-i	-da
1du.excl.	-ŋole	-	-	-	-
2du.	-mile	-	-	-	-
3du.	-guile	-	-	-	-
1tr.incl.	-dele	-	-	-	-
1pl.incl.	-de	-ku	-kɔᴧ-gɔ	-kɔᴧ-ɔ	-damʷe
1pl.excl.	-ŋo	-kö	-kɔmuᴧ-gɔmu	-köᴧ-ö	-gɔ
2pl.	-mi	-am	-ŋəmʷiᴧ-amʷi	-am	-am
3pl.	-gui	(nə-) + -ŋ(ü)ᴧ-lö	la- + -ŋü	la- + -leᴧ-(ŋ)ü	la- + -(ŋ)ö

NOTE:

a) In verbal nouns appearing in the Santa Cruz languages the subject
is usually marked by the ordinary possessive suffixes.

b) It will be noticed that there is considerable formal similarity
between some of the non-singular subject suffixes and the second set of
possessive suffixes given above for Malo and Nea.

c) Most of the non-singular subject markers in Reefs and Nanggu (and
the second person singular subject marker in Reefs) are identical with
the first set possessive suffixes as appearing in personal pronouns.

d) Intransitive verbs in Reefs, and some very few intransitive verb
forms in Nemboi and Nooli, do not appear with the subject suffixes listed
above. With the exception of the first person singular and the third
person in all numbers, person is indicated with such verbs in Reefs
through the preposing of the subject (or possessive) suffixes in particle
or prefix function before the aspect prefixes. However, in the dual
and trial, the number of the subject is indicated through the suffixing
of -le to the verb. In the first person singular, and the third person
in all numbers, the preposed particle i appears instead of the usual
person markers.

In those instances in Nemboi and Nooli in which the subject suffixes
do not appear, the person and number of the subject are indicated by the
personal pronouns preposed to the verbs.

A few examples will be given to demonstrate the structure of verbs
in the Reef Islands-Santa Cruz Family languages and dialects.

Reefs: la-ba-i-ämo-li-wa-ne-mi-le-gu-ŋaa = *as* (or: *when*) *I did not see you two* : progression of dependent action (la- + -ŋaa) - negation (ba- + -gu) - completed action (i-) - see a non-first person (ämo-li) - benefactive second person (-wa) - subject first person singular (-ne < -no) - object second person (-mi) - dual (-le).

Malo: nike-tö-kö-ö-taŋə-w-ö-n-am-u = *why do you not find (some)?* : interrogative of cause or reason (nike- + -ö) - negation (tö- + -w) - negative narrative form of progressive aspect (kö-) - transitivity (ö-) - find (taŋə) - second person subject introducer (-n) - second person plural subject (-am) - emphasis (-u). kä-tö-kö-ö-ka-pe-pwə-lö = *when they did not give them* : condition (kä-) - negation (tö- + -w in pwə) - negative form of progressive aspect (kö-) - transitivity (ö-) - give (ka) - completed action (-pe) - benefactive non-first person subject to non-first person beneficiary (-bə), combined with negation suffix -w > -pwə - third person plural subject independent verb form (-lö).

Nooli: dʒɔ-na-miɔ-tni-mbʷ-a-lə = *I shall pay you back* : progressive aspect (dʒɔ-) - unreal aspect (na-) - pay (miɔ) - reversed direction of action (-tni) - benefactive first person subject to non-first person beneficiary (-mbʷ(ə)) - first person singular subject (-a) - definite future (-lə).

Nanggu: i-ŋi-tö-i-piyaki-pʷ-ɛ-di = *I cannot cut it* : completed aspect (i-) - definitive aspect (ŋi-) - negation (tö- + -pʷ) - completed aspect (i-) - cut (piyaki) - first person singular subject (-ɛ) - singularity of object (-di).

4.5.3.3.7. *WORD-ORDER*

   The word-order is frequently O-V-S in Reefs, though S-V-O is also often in evidence. In the Santa Cruz languages and dialects, the order S-V-O is more common than in Reefs, though O-V-S also occurs. V-S-O is sometimes found, more frequently in Reefs than in the Santa Cruz languages.

4.5.3.4. AUSTRONESIAN AND NON-AUSTRONESIAN FEATURES OF THE REEF ISLANDS-SANTA CRUZ LANGUAGES AND DIALECTS

4.5.3.4.1. *INTRODUCTORY REMARKS*

   When assessing the typological and structural features of the Reef Islands-Santa Cruz Family languages from the point of view of their nature in comparison with those of other Oceanic languages, it becomes immediately apparent that a large number of them are, at least in

principle, similar to those met with in many, or at least a few aberrant,
Austronesian languages of the south-western Pacific, whereas others are
apparently non-Austronesian in nature: they are features very rarely
met with in Austronesian languages, but are typical of Papuan ones.
Some features are reminiscent of Austronesian features in form, though
not in function.

4.5.3.4.2. *NON-AUSTRONESIAN (OR PAPUAN) FEATURES*

A typical non-Austronesian feature, though not completely absent
from Austronesian languages (see 4.4.9.5.3.), is the appearance of sub-
ject suffixes with verbs. Some of these suffixes are Austronesian and
others non-Austronesian in form. The following table referring to the
eight relevant subject suffixes (1sg., 2sg., 3sg., 1du.incl., 1pl.incl.,
1pl.excl., 2pl., 3pl.), in the Reef Islands-Santa Cruz Family languages
will illustrate this:

	Austronesian	non-Austronesian
Reefs	5	3
Malo	Ø	8
Nemboi	Ø	8
Nooli	1	7
Nanggu	2	6

In this table of numbers, the second person plural suffix: Reefs
-mi, Malo, Nooli, Nanggu -am, Nemboi -ŋəmʷi ∿ -amʷi has been assigned
to the non-Austronesian column, in the light of what has been said in
4.5.3.2.5. about the possessive suffixes of the second person plural.
If it is Austronesian, the table would look as follows:

	Austronesian	non-Austronesian
Reefs	6	2
Malo	1	7
Nemboi	1	7
Nooli	2	6
Nanggu	3	5

The position of the first person plural exclusive suffix: Nemboi
-kɔmu ∿ -gɔmu, Malo, Nooli -kö, Nanggu -gɔ, Reefs -ŋo is not quite clear
either. If it reflects POC *kami, the table would again change to:

	Austronesian	non-Austronesian
Reefs	7	1
Malo	2	6
Nemboi	2	6
Nooli	3	5
Nanggu	4	4

A comparison with the situation concerning the possessive suffixes may be of interest here:

	Austronesian	non-Austronesian
Reefs	6	2
Malo	2	6
Nemboi	1	7
Nooli	1	7
Nanggu	3	5

The assignment of the second person plural suffix: Reefs -mi, Malo, Nooli -mu, Nemboi -mʷi, Nanggu -mʷe to Austronesian or non-Austronesian is not clear (see above 4.5.3.2.5.). In the table of numbers given above, it has been assigned to the non-Austronesian column. If it is Austronesian, the table would look as follows:

	Austronesian	non-Austronesian
Reefs	7	1
Malo	3	5
Nemboi	2	6
Nooli	2	6
Nanggu	4	4

Again, if the possessive suffix of first person plural exclusive is regarded as a reflex of POC *kaml, the table would change to the following:

	Austronesian	non-Austronesian
Reefs	8	Ø
Malo	4	4
Nemboi	3	5
Nooli	3	5
Nanggu	5	3

It is interesting to see that there are formal similarities between some of the Santa Cruz subject suffixes with those of the Buin language of south-eastern Bougainville Island whose Papuan status seems to be well established (Laycock 1977, see also (I)2.13.1.3.1.).

	Buin	Reefs	Malo	Nemboi	Nooli	Nanggu
1sg.	-o	-no	-o	-a	-a	-u
2sg.	-e~-i		-ə~-e	-e	-ə	-i
3sg.	-u	-gu	(-u~-ü)			-ə
1du.	-(o)ge		-ki	-gi	-ki	
1pl.incl.			-ku	-gɔ	-kɔ	
1pl.excl.	-(o)gi	-ŋo	-kö		-kö	-gɔ
2pl.	-(e)ŋ			-ŋə-mʷi		
3pl.	-(a)ŋ		-ŋ(ü)	-ŋü	-(ŋ)ü	-(ŋ)ö

The complexity of the verb forms (see 4.5.3.3.6.) is another non-Austronesian characteristic, though some of the features of the verb forms are Austronesian in nature. The use of suffixes denoting aspects and tense is not a usual Austronesian feature, and the extensive use of discontinuous morphemes is characteristic of many Papuan languages, though not entirely lacking from Austronesian languages, especially some spoken on the New Guinea mainland in the neighbourhood of Papuan languages - perhaps the result of Papuan influence in them.

The indication of the number of a following noun object, i.e. its singularity versus non-singularity, and its indefiniteness, through suffixes to the verb is also non-Austronesian. So too is the appearance of a prefix to the verb in the Santa Cruz languages to indicate transitivity.

The marking of the benefactive with verbs is a feature widespread in Papuan languages, but is not absent from Austronesian. The same applies to the indication of the direction of an action through special affixes, but the denotation of the location, not the direction, of an action in relation to the speaker is not common in Austronesian languages, but is met with in Papuan languages.

The use of sentence-medial and dependent verb forms is largely a non-Austronesian characteristic. Verbal nouns are met with in Austronesian languages, but are also common in Papuan languages. The type and usage of the verbal nouns in Reef Islands-Santa Cruz languages closely parallels those observed in the Buin language on Bougainville which belongs to the East Papuan Phylum (Laycock 1977).

Apart from the verb, the formation of the personal pronouns through the ordinary possessive suffixes being added to an unchangeable base is unusual. It is not a feature observed in Papuan languages, or usually met with in Austronesian ones in this form. The Austronesian Sud-Est (or Tagula) language on Piron and Sud-Est Islands in the Louisiade Archipelago (see 4.4.10.1.3., 8.) shows a similar feature in

its first person singular, first person plural inclusive and first
person plural exclusive personal pronouns (see 4.4.10., Chart 2) which
are formed by the addition of the object suffixes to the base i-, i.e.
i-ŋo = *I*, i-nda = *we*(incl.), i-ŋa = *we*(excl.). The similarity of the
suffixes employed in these forms, to the possessive suffixes appearing
in Reef Islands-Santa Cruz languages in the same function is immediately
obvious: compare Malo ni-ŋä, Nooli ni-ŋa = *I*; Reefs i̯u-de [i̯u-nde],
Nanggu ni-damʷe [ni-ndamʷe] = *we*(incl.); Reefs i̯u-ŋo, Malo, Nooli ni-gö,
Nanggu ni-gɔ = *we*(excl.). Seeing that the suffixes first person singu-
lar -ŋo and first person plural exclusive -ŋa in Sud-Est are not usual
in Austronesian languages (first person plural inclusive -nda is Austro-
nesian) and at the same time correspond to the respective pronoun forms
in East Papuan Phylum languages (see 4.5.3.2.5.), it seems plausible
to suggest that these suffixes in Sud-Est are of East Papuan Phylum,
i.e. Papuan, origin. Sud-Est is adjacent to the Yele language of the
East Papuan Phylum whose object suffixes show some similarity to the
Sud-Est object suffixes in question. It may however be mentioned that
forms reminiscent of -ŋa constitute the first person singular pronoun
in Vanikoro, to the south-east of Santa Cruz, in Gedaged in north-
eastern Papua New Guinea, and in Micronesian languages.

Semantic noun class systems which are marked by prefixed class
markers, and are cross-cutting with the possessive class system, are
not a common Austronesian feature, though such systems, marked by
affixed class markers, occur in Micronesian languages. At the same
time, semantic class systems marked by affixed class markers are a
typical feature of East Papuan Phylum languages (see (I)2.13.1.1.).
The Sud-Est language mentioned above and the languages of the Austro-
nesian Kilivila Family to the north-east of the eastern end of the New
Guinea mainland have this feature, but they are located geographically
close to East Papuan Phylum languages.

4.5.3.4.3. *AUSTRONESIAN FEATURES*

4.5.3.4.3.1. General Austronesian Features and Features Reminiscent of Those of Austronesian Languages of Melanesia

The possessive class system is typically south-western Pacific
Austronesian in its basic nature and in the forms of the minority of
the possessive suffixes, but the multiplicity of distinct classes is
not common in the languages of Melanesia, though met with in some of
the aberrant languages there. It is a feature of Micronesian languages.

The article-like prefixes in the Reef Islands-Santa Cruz Family
languages are Austronesian in form. Their inseparability from many
nouns and their absence from many others is an interesting feature.
The function of a number of them as semantic class markers is not a
usual Austronesian characteristic.

Most of the numerals are of Austronesian origin, and much of their
formation compares well with what can be observed in Austronesian lan-
guages in Melanesia, especially in those spoken in the neighbourhood
of Papuan languages.

The numerals 1-10 may be given here for illustration:

	Reefs	Malo	Nemboi	Nooli	Nanggu
one	'nɤigi	'ə'esa	(tü)'ötʰe	'patʰe	'tötʰi:
two	'lilu	li	'(l)ali	'ali	'tʰüli:
three	'eve	tü	'atü	'atü	tʰü'tü:
four	'uve	pʷä	'apʷɛ	'apʷe	tʰu'pʷɔ:
five	'vili	nəl'vün	nəy'lün	'nɔlü	'mö:p(u)m
six	po'legi	e'səmə	pö'tʰɛŋimə	'tʰima	'tʰemũ:
seven	po'lälu	ö'limə	i'tʰumütü	tʰu'mətü	tʰü'tʰü:
eight	po'le:	ö'tümə	i'tʰumüli	tʰu'məli	'tʰumuli:
nine	pɔ'louve	ö'pwəmə	itʰu'matʰe	tʰu'matʰe	'tʰumat e:
ten	nu'golu	'nəpnu	'nəpnũ	'nɔpnu	'nɔ:d(u)n

NOTES:

Reefs: 1, 3, 6, 10 appear to be non-Austronesian. 6 = base + 1, 7 =
base + 2, 8 = base + 3, 9 = base + 4.

Malo: 5 is probably Papuan. 10 may reflect PAN *puluh, but -n- < -*l-
is not a usual sound correspondence in PAN reflexes in Malo. 6 = base
+ 1 + Austronesian 5; 7 = 2 + Austronesian 5; 8 = 3 + Austronesian 5;
9 = 4 + Austronesian 5.

Nemboi: 5 is probably Papuan. 10 offers the same problem as Malo 10.
6 = base + 1 + ŋi? + Austronesian 5, but the form 'pötʰe = 1 in the
Menjembelo dialect of Nea suggests that Nemboi 6 may be 1 + ŋi? +
Austronesian 5. 7 = base + Austronesian 5, + 3; 8 = base + Austronesian
5, + 2; 9 = base + Austronesian 5, + 1: in other words, the numeral
system above 5 in Nemboi operates by subtraction.

Nooli: 5 is probably Papuan. 10 offers the same difficulties as Malo
and Nemboi 10. 6 is base + Austronesian 5; 7 = base + Austronesian 5,
+ 3; 8 = base + Austronesian 5, + 2; 9 = base + Austronesian 5, + 1.
As in Nemboi, the system operates by subtraction for numerals above 6.

Nanggu: 5 and 10 are Papuan. 6 = base + Austronesian 5 + ? influence
from POC *onom?; 7 = base + Austronesian 5, + 3; 8 = base + Austronesian
5, + 2; 9 = base + Austronesian 5, + 1. Here again, the system for
numerals above 6 operates by subtraction, as in Nemboi and Nooli.

The presence of an adjunct introducer is not common in Melanesia,
but the feature is Austronesian.

The indication of aspects through prefixes to verbs in the Reef Islands-
Santa Cruz Family compares well with the appearance of preposed particles
and prefixes in this function in Austronesian languages of Melanesia,
and some of the Reef Islands-Santa Cruz Family prefixes show formal
similarity to such particles and prefixes in Austronesian languages.
The same applies to the indication of the causative, though some of
the various causative prefixes differ formally from the usual Austro-
nesian causative prefix.

The preposing of the subject (or possessive) suffixes, in particle
or prefix function, before the tense and aspect prefixes as observed
with intransitive verbs in Reefs and a similar phenomenon met with in
connection with a few intransitive verb forms in Nemboi and Nooli (see
4.5.3.3.6.), are strongly reminiscent of a feature of Austronesian
languages of Melanesia, though in them, the preposed subject markers
usually differ from the possessive suffixes occurring in them. At the
same time, the indication of the number of the subject with such verbs
through suffixes in Reefs is not a feature very commonly encountered in
Austronesian languages. Though it is for instance met with in the
languages of the Kilivila Family mentioned above (see 4.4.10.1.5., 61),
and also in the Micronesian Yapese (Bender 1971), the indication of
the direction of an action in relation to the speaker, the person
addressed and a third person as found in Reefs (see 4.5.3.3.6.) is an
Austronesian characteristic, and the Reefs suffixes indicating direction
of the action towards the speaker and the person addressed show con-
siderable formal similarity to those encountered in Muyuw of the Kilivila
Family (see 4.4.10.2.3., 87) in the same function.

The word-order in the Reef Islands-Santa Cruz Family languages and
dialects is Austronesian, both in the placing of qualitative and quan-
titative adjuncts after the noun which they determine, and in the pre-
ferred order S-V-O. It is less so in the order O-V-S observed in them.

4.5.3.4.3.2. Polynesian Features

A word order V-S-O which is sometimes found in Reefs, and is oc-
casionally also met with in Santa Cruz languages and dialects, is a
Polynesian characteristic.

Also, the frequent appearance of the petrified article tV-, espec-
ially in Reefs, is a Polynesian feature.

4.5.3.4.3.3. Micronesian Features

The multiplicity of possessive classes in Reef Islands–Santa Cruz
Family languages and dialects is reminiscent of Micronesian languages,
as is the indication of semantic classes with nouns and numerals, though
there are differences in principle and detail. The similarity of the
first person singular possessive suffix to the first person singular
pronoun in Micronesian languages has already been mentioned above in
4.5.3.4.2.

It may be mentioned that the first person singular (i) and first
person plural inclusive (di) preposed subject particles in the Micro-
nesian Sonsorol (Capell 1969) are formally almost identical with the
first person singular (i) and first person dual inclusive (dʸi) preposed
subject markers in Reefs, and that the third person plural preposed
subject marker lɛ, la in Sonsorol is almost the same in form as the
prefix part (la-) of the discontinuous morpheme indicating the third
person plural subject in Nemboi, Nooli and Nanggu.

4.5.3.4.4. *CONCLUSION*

It has been demonstrated above in 4.5.3.4.2.-3. that the Reef Islands–
Santa Cruz Family languages and dialects show a number of typological
characteristics commonly met with in Austronesian languages, and at the
same time contain several non-Austronesian features which seem rather
basic in nature and unlikely to be subject to easy borrowing. Features
of the verb structure are good examples of this, and the formal simi-
larities between pronouns and certain suffixes in Reef Islands–Santa
Cruz Family languages with equivalent forms in other East Papuan Phylum
languages also constitute strong evidence in this direction. It also
seems that several of the Austronesian features in Reef Islands–Santa
Cruz Family languages and dialects, while typologically Austronesian in
principle, show some peculiarities in detail which are at variance with
what is generally characteristic of Austronesian languages of Melanesia.
It may therefore be justifiable to suggest that of the two different
sets of typological characteristics of the Reef Islands–Santa Cruz
Family languages and dialects, the non-Austronesian ones, though fewer
in number than the Austronesian features, may be more basic and original,
and the Austronesian ones may constitute a secondary and borrowed,
though overwhelming, element. Most of the Austronesian features in the

Reef Islands-Santa Cruz Family languages and dialects are surface
features which may be subject to relatively easy borrowing.

These observations, together with the fact that approximately half
of the vocabulary of individual Reef Islands-Santa Cruz Family languages
has been found to be of Austronesian origin (see above 4.5.3.2.) makes
it apparent that the Reef Islands-Santa Cruz Family languages and
dialects belong to a particular category of hybrid or mixed New Guinea
area languages of which there are several in the New Guinea area such
as Maisin (Ray 1911, Strong 1911, see also 4.5.2. in this volume) and
to some extent Mailu (or Magi) (Saville 1912, see also 4.5.2.). In
such languages, some or many of the basic or deep features of their
structures and some of their surface features show characteristics
typical of Papuan languages, and atypical of Austronesian ones. The
majority of their surface features may show a varied number of typically
Austronesian characteristics, in addition to traits which are atypical
of Austronesian, while their vocabulary is strongly or even predomin-
antly of Austronesian origin.

There is a comparable category of languages in the New Guinea area
for which the reverse is true, i.e. they are originally Austronesian
languages which have adopted an overwhelming number of Papuan elements
- largely in their lexicon. Magori (Dutton 1971, see also 4.5.2. in
this volume) is an example.

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BIOGRAPHICAL NOTES

CLIVE H. BEAUMONT was born in Wellington, New Zealand, in 1940. He studied at Auckland University where he graduated in 1962 with an M.A. (Hons.) in French and Latin. After training at Auckland Teachers' College he taught languages in New Zealand secondary schools for three years. He was later a member of the Summer Institute of Linguistics in New Guinea for two years. Following this in 1969 he and his wife went to New Ireland as independent missionaries to do Bible translation work. From October 1970 until March 1974 he was a Research Scholar in the Department of Linguistics, Research School of Pacific Studies, at the Australian National University where he obtained a Ph.D. A revised version of his thesis is being published in the series *Pacific Linguistics* under the title *The Tigak Language of New Ireland*. He has produced several publications on New Ireland languages, and also published the Gospel of Mark in Tigak through the Bible Society in 1972. He is at present a Tutor at the Pacific Islanders' Educational Resource Centre in Auckland.

ARTHUR CAPELL was educated at North Sydney Boys' High School and took his first degree at Sydney University in 1922 and his M.A. in 1931. He had meanwhile taken up the study of Oceanic linguistics and received his Ph.D. in this subject in London in 1938. He then began fieldwork in Australia and in 1944 took up a position in the Department of Anthropology at the University of Sydney. He has carried out extensive fieldwork in Australia, New Guinea, the British Solomon Islands, the New Hebrides, and was the only non-American member of the Coordinated Investigation of Micronesian Anthropology expedition, working in Palau in 1947. He became the first Reader in Oceanic Linguistics at the University of Sydney in 1949. He retired from the University of Sydney in 1967 and worked as Visiting Fellow at the Australian National University in 1967 and 1973-74, and is now working privately in writing

up the results of his research and fieldwork. He has produced a number
of books and articles on various aspects of Pacific and general lin-
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ANN CHOWNING was born in Arkansas, and received a B.A. in Spanish from
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University of Pennsylvania. She taught at Columbia University from
1958 to 1965, was then Senior Research Fellow in Social Anthropology
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Professor of Anthropology at the University of Papua New Guinea. Most
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anthropological fieldwork, which began in 1954, among the Lakalai,
Sengseng, and Kove of West New Britain and the Molima of Fergusson
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Austronesian languages of Melanesia on which she produced several pub-
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THOMAS E. DUTTON was born and educated in southern Queensland and spent
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Papua New Guinea before returning to complete a Certificate in Education
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sixties, and obtaining his Ph.D. in linguistics at the Australian
National University in 1969. He has held appointments in the Department
of Linguistics in the School of Pacific Studies of the Australian
National University, and is at present Professor of Language at the
University of Papua New Guinea, Port Moresby. He is particularly
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Pisin and Hiri Motu, the two major lingue franche in Papua New Guinea.

GEORGE W. GRACE was born in 1921. He obtained a licence from the
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versities and has been Professor of Linguistics at the University of
Hawaii since 1964. His principal interests are language in its socio-
cultural context, and historical reconstruction, particularly within
Austronesian. He has carried out linguistic fieldwork in southern
California and in New Caledonia and other parts of Melanesia. Most of
his publications are in the Austronesian field. He is Editor of the
journal *Oceanic Linguistics*.

ALAN HEALEY graduated from the University of Melbourne in science and worked for a time as a physicist, and then as a mathematician. In 1950 he attended the first summer course conducted by the Summer Institute of Linguistics in Australia and since then he has been on the teaching staff of about half of the subsequent summer courses. With his wife Phyllis, he joined the field staff of the Summer Institute of Linguistics in 1955 and spent the next two and a half years learning and analysing the Agta language of the Philippines. Moving to New Guinea in 1959, they then studied the Telefol language for ten years, publishing a series of papers and monographs describing the language and materials translated into Telefol. During that time they both completed Ph.D.s in linguistics at the Australian National University. As the Technical Studies Adviser from 1969 to 1974, Alan was the senior linguistic consultant for about two hundred Summer Institute of Linguistics staff in Papua New Guinea as they researched some one hundred different languages. At present he and his wife are working with the Summer Institute of Linguistics in Australia. His interests and publications include field methods, structural linguistics, semantics, discourse analysis, comparative linguistics, and lexicostatistics.

BRUCE A. HOOLEY graduated in engineering from the University of Melbourne. In 1958 he joined the Summer Institute of Linguistics and began fieldwork in Papua New Guinea. He went on to complete his M.A. and Ph.D. at the University of Pennsylvania. As well as carrying out extensive field studies in the Morobe Province of Papua New Guinea, especially among the Buang, which resulted in a number of publications, he has held several positions of responsibility with the Summer Institute of Linguistics. He is currently Area Director for the Pacific, and Principal of the Australian Summer Institute of Linguistics School.

DONALD C. LAYCOCK is an Australian scholar who came to the study of Australian and Oceanic languages after an initial interest, and degree, in English and Germanic philology. After a year spent as a research assistant in Australian Aboriginal languages at the University of Adelaide, he joined the Australian National University for postgraduate work, and obtained his doctorate there for a description of a family of Papuan languages in New Guinea. Following an academic year of lecturing in linguistics and anthropology in the United States, at Indiana and Northwestern Universities, he returned to a permanent staff position in the Department of Linguistics in the School of Pacific

Studies of the Australian National University in 1964. In 1969 he was appointed Senior Fellow. He has undertaken extensive fieldwork in Australia and New Guinea, and is currently interested both in New Guinea Pidgin and in the taxonomy of, and socio-linguistic questions concerning, the Papuan languages of New Guinea, especially those of the Sepik area. He has published widely on these subjects.

PETER C. LINCOLN was born in 1942 and grew up on Cape Cod and then went to Stanford to obtain a B.S. in math. Then he travelled in Europe and East Asia, in part with the U.S. Navy, learning German and some Japanese. After obtaining an M.A. in linguistics at the University of Hawaii, he did doctoral fieldwork on Bougainville with support from the National Science Foundation. He returned to the University of Hawaii where he obtained his Ph.D. in linguistics. He is at present engaged in a study of Austronesian languages of the Rai Coast, north-eastern Papua New Guinea, with support from the National Science Foundation.

DAVID LITHGOW was born in Jandowae in Queensland. He graduated as a Bachelor of Medicine and Surgery at the University of Queensland in 1956, and practised medicine in Fiji and Brisbane until 1963, publishing the results of his research on birth-control among Indian people in Fiji. He studied Hindustani while in Fiji, and Greek at the University of Queensland in 1962. He and his wife Daphne attended Summer Institute of Linguistics courses in Australia, and began work in the Muyuw language of Woodlark Island in 1964, producing literacy and linguistic materials, including a published dictionary and data on changes which are taking place in Muyuw vocabulary and grammar. In 1972 they began work in the Dobu language, and have produced linguistic, literacy, and language learning materials. He has worked on detailed language surveys of the Milne Bay and New Ireland Provinces, and is a translation consultant of the Papua New Guinea Branch of the Summer Institute of Linguistics and regional translations adviser for the United Bible Societies. At present he is Director of the East Papua Region of the Papua New Guinea Branch of the Summer Institute of Linguistics.

ANDREW PAWLEY, born in Australia in 1941, received his linguistic and anthropological training at the University of Auckland, New Zealand. He has taught linguistics at the Universities of Auckland (1965-72), Papua New Guinea (1969) and Hawaii (1973-75). Beginning in Polynesian, his Pacific research interests have steadily expanded westwards to

include the Austronesian and Papuan languages of New Guinea and Island Melanesia, with spells of fieldwork in Samoa, Fiji and the New Guinea Highlands. Apart from descriptive studies of Samoan, Fijian and Kalam, his writings have dealt chiefly with the subgrouping and grammatical development of Oceanic Austronesian languages.

ANDREW J. TAYLOR received a B.A. and Diploma in Education from the University of Sydney and a B.D. from the Melbourne College of Divinity. After two years as a high school teacher in Papua New Guinea he joined the Translations Department of the Bible Society in Australia and later obtained his Ph.D. in linguistics at the Australian National University in 1971. For five years he worked as a Translations Consultant with the Bible Society in Papua New Guinea. At present he is a lecturer in the Department of Language and Social Science at the Papua New Guinea University of Technology. He is continuing a study of the Motu language of the Central Province of Papua New Guinea.

STEPHEN A. WURM obtained his doctorate in linguistics and anthropology at Vienna University, and after holding university appointments in Altaic and Turkic linguistics at Vienna University and the Central Asian Research Centre (associated with St Antony's College, Oxford University), he joined Sydney University in 1954 and the Australian National University in 1957 where he is now Professor of Linguistics in the School of Pacific Studies and in charge of the University's extensive research program in Pacific linguistics. His research interests have for many years been focussed on Papuan linguistics as well as on Austronesian, Australian and Pidgin linguistics, and he has published widely in these subjects and on interdisciplinary approaches involving them.

JOHN A. Z'GRAGGEN was born in Schattdorf (URI) Switzerland. He was educated at the Missionsgymnasium Marienburg and Stiftsschule Einsiedeln. In 1955 he joined the Society of the Divine Word Missionaries (SVD) and in 1961 he completed his philosophical and theological studies and was ordained priest of the Roman Catholic Church. During that period of study he also received a basic introduction into ethnology and linguistics. In 1962 he was awarded an M.A. degree in Thomistic Philosophy at the Catholic University of America, Washington D.C. From 1963 to 1967 he was engaged in missionary work and linguistic research in the highlands and coastal areas of New Guinea. In 1969 he

completed his doctoral studies in linguistics at the Australian National University, paying special attention to the classification and typology of the Madang Province languages. In 1970 he became a member of the Anthropos Institute with its headquarters in St Augustin, Western Germany. He resumed his fieldwork in 1971 with a view to obtaining an overall view of the languages of the Madang Province and has published some of his findings. Other publications are in press. He is planning to undertake further studies in the mythology, legends and traditional beliefs of the peoples on the north-east coast of New Guinea.

INDEX

The index to this volume is in four sections:

1) Index of LANGUAGE names and tribal names
2) Index of GEOGRAPHICAL names
3) Index of AUTHORS and PERSONAL names used in the text
4) Index of INSTITUTIONS, etc., used in the text

1) INDEX OF LANGUAGE NAMES AND TRIBAL NAMES

This index contains the names of languages, language groups and groups of people found in this volume.

Cross-referencing between alternative names mentioned in the book is extensively used, e.g. **Tolai /Kuanua** is listed, as well as **Kuanua /Tolai**, followed by the appropriate page references. Explanatory words, such as *now, see, see also* are occasionally used. Alternative names which are alphabetically very close, e.g. **Siasi, Siassi** are indexed only once.

Readers looking for a particular language or dialect name should also consult the Geographical Index, because tribal, river, village, etc., and dialect or language names frequently coincide. In some instances, such names are included in both lists.

To reduce the size of the index, complementary entries have been compressed into single entries, for instance: **Gawa /lang, langs, family, group**. If appropriate **lang** is always the first of the designations given, followed by the others alphabetically. In such a case as: **Eastern /subgroup /of Central Province langs**, the additional clarification has always been included.

Generally speaking, a name preceded by such words as **Eastern, Western**, etc. has been treated as follows: if the adjunct constitutes a part of a recognised name (e.g. **East Cape dialect**), it is found under **East**. If not, it is found as a sub-entry (e.g. **East Mekeo** is found under **Mekeo**). Names of proto-languages have all been entered under P for 'proto'.

NOTE: the symbol / indicates an alternative name or an explanatory gloss.

2) INDEX OF GEOGRAPHICAL NAMES

As with the Index of Language Names, cross-referencing has been used extensively in this index; former names of places are often qualified *see* or *now* before the current name of that place. Again, should the place name being sought not appear in this index, readers are advised to check also in the Index of Language Names. The same principle as applied in the Index of Language Names also applies here to alternative names closely alike in spelling, to the compression of entries such as: Lae /town, area, and to the use of such adjuncts as Eastern, Upper, etc. Although the chapters in this volume were written prior to Independence in September 1975, at which time the former Districts became known as Provinces, appropriate amendments have been made in the text, where the usage is contemporary, and these have been noted in this index as, e.g. Madang Province /*formerly* District; Madang District /*formerly* Sub-District; Madang Sub-District /*formerly* Patrol Post Area. NOTE: the symbol / indicates an alternative name or an explanatory gloss.

3) INDEX OF AUTHORS AND PERSONAL NAMES

As far as possible, the authors and other persons mentioned in the text are identified in this index by at least one first-name; in a few instances, where no initials or first-names could be ascertained, people are identified simply as Fr, or Mr. The names of Papua New Guineans, unless there is clear indication that the person uses a European style of name, have been entered as generally used in Papua New Guinea, e.g. Tabi Koakoa (NOT Koakoa, Tabi).

4) INDEX OF INSTITUTIONS, ETC.

Rather than include such names in the Index of Geographical Names, it seemed more appropriate to include them in this miscellaneous index.