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PROCESSES OF CHANGE IN THE LANGUAGES OF NORTH-WESTERN NEW BRITAIN

by

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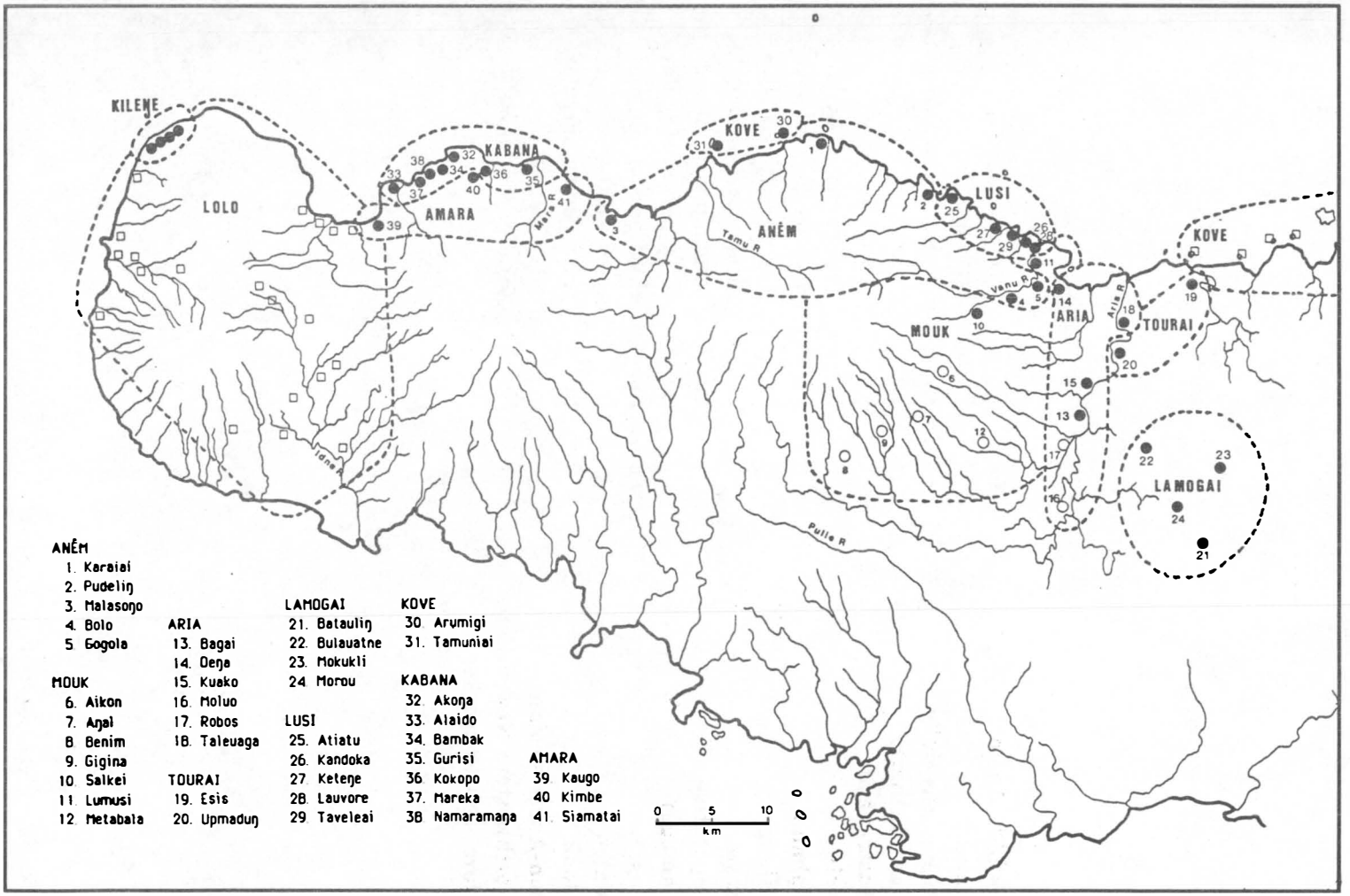
ABBREVIATIONS

Ak	Akiblîk Anêm
Am	Amara
An	Anêm (especially coastal Anêm)
AN	Austronesian
Ar	Aria
Ka	Kabana
Ki	Kilenge
Ko	Kove
I	imperative
La	Lamogai
Lu	Lusi
Ma	Maleu
Mo	Mouk
NAN	non-Austronesian
NWNB	Northwestern New Britain
P	plural subject marker
Q	irrealis
R	realis
sp.	species, variety, or kind
To	Tourai
TP	Tok Pisin
1s	first person singular
1n	first person inclusive
1x	first person exclusive
2s	second person singular
2p	second person plural
3s	third person singular
3m	third person singular masculine
3f	third person singular feminine
3p	third person plural



ANÊM
1. Karaiai
2. Pudeliŋ
3. Malasoŋo
4. Bolo
5. Gogola

MOUK
6. Aikon
7. Anal
8. Benim
9. Gigina
10. Salkei
11. Lumusi
12. Metabala

ARIA
13. Bagai
14. Oeŋa
15. Kuako
16. Moluo
17. Robos
18. Taleuaga

TOURAI
19. Esis
20. Upmaduŋ

LAMOGAI
21. Batauliŋ
22. Bulauatne
23. Mokukli
24. Morou

LUSI
25. Atiatu
26. Kandoka
27. Keteŋe
28. Lauvore
29. Taveleai

KOVE
30. Arumigi
31. Tamuniai

KABANA
32. Akoŋa
33. Alaido
34. Bambak
35. Gurisi
36. Kokopo
37. Mareka
38. Namaramaŋa

AMARA
39. Kaugo
40. Kimbe
41. Siamatai

Map of north-western New Britain

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Chapter 1
INTRODUCTION

1.1 Models of language change and classification

Since writing *A comparative study in Anêm and Lusi* (Thurston 1982), I have conducted two other field trips to north-western New Britain (NWNB) to focus on other languages which are either currently in contact with Anêm, or which may have been in contact with Anêm or one of its extinct relatives. With the assistance of Rick Goulden, an enormous body of data was collected on both trips, data which will fill in some of the lacunae in the knowledge of the languages of this area. In the current work, I have two purposes in mind: (1) to present data that have not been available before on the languages of the area, and (2) to update and elaborate the model of language change presented in the earlier work, which was written without access to the languages that are spoken in the interior of NWNB. Taking only Anêm and Lusi into account was the major weakness of that study. To a small extent, I could predict what would be found in the last two field trips, but I could not have anticipated the scope of what these languages would reveal.

In gross outline, the hypothesis presented here is that languages change in numerous ways which can be classified as functions of two basic patterns, one gradual, the other rapid. Each kind of change is associated with a set of sociological conditions that motivate language change in the first place; and each kind of change leaves traces in the modern form of the language that reveal the sociolinguistic functions of the language in the most recent few generations. In the path leading to modern vernaculars, all languages have been moulded by alternating periods of gradual and rapid change. The most recent period in the prehistory of any language is that most evident in the structure of the language, particularly in communities with no tradition of literacy.

With remarkably few exceptions, gradualist models of language change continue to be the major conceptual framework within which diachronic linguistics is conducted. The wave model sees minor changes radiating out from influential centres and being adopted by the people who speak neighbouring dialects; while the strictest form of the family tree model sees groups of people undergoing fission with the result that the language of each daughter society slowly changes, without reference to other groups, into a separate language. The wave model is supported by dialectology—languages tend to share the highest number of features with those languages that are immediately adjacent, but tend to share fewer features with more distant languages. Moreover, changes in one district are often copied (borrowed) across boundaries between languages and language families. Language contact phenomena are the essence of the wave model, but produce anomalies for the family tree model—copies (borrowings) that must be identified and

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cleansed from the data lest they contaminate the analysis. The family tree model is supported by systematic sound correspondences that are found among words with the same or similar meanings in languages that are said to have descended from a common ancestral language which is no longer spoken. Both models share the underlying assumption of gradualism, the conviction that tiny changes, accumulated gradually over a vast period of time, are responsible for the great diversity of languages attested today.

Convictions about how languages change underlie all language taxonomies. The strictest wave model classification makes no presumptions about the descent of the languages it maps out; it just organises languages so that those sharing the greatest number of features appear closest together on the diagram, while those that differ most from one another are separated by the greatest number of isoglosses. The information that goes into the construction of a wave model taxonomy, however, can also be used as an aid in constructing a family tree in which the designation of common linguistic ancestry is crucial. In drawing the dendrogram for a group of languages, the analyst makes decisions about the relative importance of some isoglosses over others; if a different set were chosen, the resulting taxonomy might be different, because the family tree model allows for no ambiguity in classification. For example, a language cannot be classified as 20% AN and 80% NAN; instead, a decision must be made: the language is either AN or NAN, another way of saying that the language has descended from either an AN or a NAN protolanguage. Although it might reflect the data more accurately to say that a particular language is 20% AN and 80% NAN, this would violate one of the most important assumptions underlying the family tree model—namely, that each language has one, and only one, parent language which is no longer spoken. As long as there is confirmation that a particular language is descended from an AN language, it must be classified as AN, even if its AN content be only 0.05%, and even though this, in itself, would be impossible to prove on such scant evidence.

In its strictest form, the family tree model is a reflection of Judeo-Christian mythology masquerading as objective science. By reconstructing a small number of protolanguages from which a large number of modern languages have descended, the model logically implies an ultimate monogenesis. That is, before the fiasco at Babel, humans spoke only one language which was confounded into many, most of which were wiped out at the time of Noah. All human languages, then, are ultimately descended from the language of Noah, Shem, Ham and Japheth. Although twentieth century linguistics no longer speaks in such terms, the model is only a slight transformation from the original and has most of these underlying principles intact. With a few exceptions, no linguist now attempts to reconstruct Proto-Human; instead, most merely bemoan the lack of data which prevents such a reconstruction on solid evidence. Nevertheless, there is still an underlying conviction, implicit in the model itself, that the reconstruction of Proto-Human should be possible in principle if not in practice. I suggest here that it is not possible even in principle.

One of the more unfortunate side effects of the family tree model is that it contaminates the results of other disciplines (such as archaeology) which are heavily dependent on language taxonomies to inform research. The most virulent extension of the family tree model is glottochronology, which purports to be able to measure the time it has taken for a particular language to differentiate into descendent languages. Implicit in this model is the connection between a particular language and a particular group of people. This connection, in turn, encourages the theoretically unjustifiable extrapolation from a language taxonomy to the migrations of actual people who are bearers of specific cultures.

The result is a confusion of race, language and culture, variables which are in principle and, I believe, in practice, quite independent. At the same time, such confusion discourages entertaining the possibility that culture, including language, can be copied by neighbours and can travel great distances without the people from its source escorting it to its modern location.

Despite a wealth of glaring anomalies that, according to the ideology of science, should force linguists (screaming if necessary) into a new scientific paradigm, the family tree model as it is currently construed persists as one of our major achievements, a monument to hardening of the categories. Traditional comparative-historical linguists have produced no convincing explanations for the mechanisms of language change; most of their efforts have been directed toward plotting the changes that have allegedly happened, and providing a system of formulae for conceptually undoing them. The transformationalist paradigm has added little of substance to the discussion of language change, since it is based on the same underlying gradualist assumptions, and because, like earlier models, it also catalogues the change without addressing the cause.

While comparative-historical linguists have continued to construct dendrograms for the languages of the world, sociolinguists have cornered the discussion on the very mechanisms of language change, focussing in particular on (1) sociolinguistic variation and (2) pidginisation and creolisation. Underlying the family tree model is the assumption of linguistic homogeneity within the community. Nowhere, not even in the tiny speech communities of NWNB, is a homogeneous language spoken. Sociolinguists have finally convinced other linguists that all languages are spoken with variation that correlates generally with the socioeconomic status, gender and age of the speaker, and also with the formality of the situation. Each variant can potentially become a marker for a particular social category as well as for the prestige, stigma, or mere identity associated with the people of that category. As the members of a group manage to use the favoured forms more frequently than the disdained forms, language change is accomplished without disrupting the communicative tradition of the group. In the instance of an individual utterance, change may be abrupt, but in terms of the society, this kind of linguistic change is still statistically gradual. Thus, this aspect of the sociolinguistic explanation of language change is still congruent with the general family tree model, which has resorted to concepts like 'drift' to accomplish the same explanation.

The discussion of pidginisation and creolisation has much more serious implications for gradualist models of language change, particularly if it is taken out of the realm of sociolinguistics and brought seriously into diachronic linguistics, where, I believe, it belongs. The general literature on diachronic linguistics has paid only brief lipservice to pidginisation and creolisation as aberrant processes of language change—curiosities rather than a central cause, safely defined beyond the limits of the discipline. Pidgins and creoles are treated as an *a priori* class of unnatural or marginal languages, when there is no justification for such treatment. In the early 1970's, when I first revealed an interest in pidgins and creoles, one of my professors reprimanded me saying that, if I were truly serious about linguistics, I should confine my interests to 'real' languages. The languages of powerless miners and plantation workers were presented as mere bastardised muddles of true European languages; these spoiled languages of equally-spoiled cultures were of little interest, because they were the result of 'unnatural' processes. The same concept persists among some social anthropologists who would prefer to conduct research among a 'pristine' group of people untarnished by European

contact, ignoring the fact that each human society has a history of contact with other societies, European or otherwise. Such linguists and anthropologists are missing an important area of investigation, namely that contact itself plays an important rôle in the dynamics of culture. In all societies, there are individuals who know the language of another group. Furthermore, all peoples seem to copy items of culture from their neighbours with the result that every language owes its current form, at least in part, to influences from contiguous cultures.

According to glottochronology, all languages are subject to the same uniform rate of change through time. This is clearly false. At one extreme of the known range is Icelandic, which has changed little in 1000 years. At the other are the known pidgins and creoles.

> It may be objected that Neo-Melanesian [=Tok Pisin], being a pidgin (and an incipient creole) is not to be considered on the same plane as 'normal' languages, since its formation took place under special conditions more similar to those attending to construction of artificial languages than to those of gradual linguistic change. However, for most language families of the earth, we do not know their previous history, and have no way of knowing whether or not (especially in the case of apparently distantly related languages) a stage of pidginization and creolization may have entered into the process of differentiation.
>
> (Hall 1959:266)

In Thurston (1982), I suggest that Lusi, a coastal AN language of NWNB, is the product of a Siasi language pidginised by speakers of an earlier form of Anêm, a NAN language. Here, I would like to suggest that ultimately, all languages owe their earliest forms to processes such as pidginisation, and that after generations of use among intimates, these languages acquire the complexity that obscures their former origins.

In simple form, there is a sociolinguistic dichotomy between language used to communicate with intimates of one's social group, on one hand, and language used to communicate with outsiders on the other. Here, 'outsiders' is intended to include a whole range of people from children (who are still being socialised into the group) to members of other socioeconomic classes, to speakers of other languages. In this model, the ingroup-outgroup opposition is construed as a context-sensitive continuum, rather than an either-or situation. At the one polar extreme, the language used between people who know each other well becomes more complex and opaque the more intimately they know one another; while, at the other extreme, the language used between strangers is simplified to a degree corresponding to the shallowness of their shared knowledge. For example, close friends or members of a closely-knit family can often have conversations that are opaque to even those outsiders who speak the same language, because background information known to friends must be filled in for the benefit of outsiders. Part of one's communicative competence is knowing how much background information the hearer in any particular situation requires to decode the message. Switching from one interlocutor to another requires a type of code-switching.

By some reckoning, speakers of Ontario basilect English and speakers of one of the British basilects belong to the same culture and speak the same language—English. In practice, however, the informal registers of the two basilects are just about mutually incomprehensible. By switching from the informal basilect to their respective formal

standards, however, members of these two subcultures can usually bridge the gap in a sort of dual-lingualism (Lincoln 1975, 1979). In this case, the Liverpudlian converges in speech with something like BBC English, while the speaker from Penetanguishene Ontario emulates what is heard on the CBC. Each speaks more slowly and loudly, and greater care is taken to enunciate each word more distinctly than would be the case when speaking with a sibling or a close friend. As also noted by Ferguson (1971), such speech has many of the same features as baby-talk, foreign-talk, broken-English, and pidginised English. All these versions of English are simplified in comparison with the standard (and certainly with respect to the basilects); and they are all used primarily with outsiders. They are registers of speech appropriate to use as languages of wider communication. English uttered in anger also shares most of these features—the implication being that the interlocutor, at least for the duration of the utterance, is not part of the ingroup.

Similarly, I have observed Niuginians speaking to expatriates in Papua New Guinea in simplified Tok Pisin. When I first arrived in 1975, my ability to understand fluent Tok Pisin was minimal. In order to help me communicate, my Anêm hosts spoke in painfully slow Tok Pisin in which they used mostly content words—a type of telegraphic Tok Pisin. Over time, they gradually adjusted their speech until it was no different from the way they speak Tok Pisin with one another. Meanwhile, however, I was also collecting the preliminary data in Anêm. It was not until well into the second field trip, in 1978, that I discovered I had been collecting data on simplified Anêm—special Anêm for foreigners, as it were. In Anêm, *nêuai pîtîk* 'speak short', is an instruction to simplify one's speech and to speak in short unelaborated clauses without determiners; whereas *nêuai sêgêl* 'speak long', is an instruction to speak normally. With only some 350 speakers, Anêm exhibits several parameters of variation: there are two major regional dialects, women speak differently from men, old people speak differently from young people, literate people speak differently from those with no formal education, and different types of Anêm are spoken to children and to the few foreigners who attempt to learn the language.

In addition to this language-internal complexity, all people in NWNB are multilingual, since all languages are in contact with Tok Pisin and with contiguous vernaculars. It is not uncommon for a person to be able to communicate effectively in four or five languages. The number of languages a person is likely to know depends on several sociological variables, some of which are outlined in the linguistic survey of the area presented in Chapter 2. Knowing so many languages is not as difficult for the people of the area as it might, at first, seem to people who have grown up in largely monoglot societies, because all the vernaculars of NWNB have basically the same syntactic and semantic structure. Some of the reasons for this are outlined in Chapters 3 and 4. How languages emerge as entities autonomous enough to be named, and some of the factors influencing how they change during their period of use is the focus of Chapter 3. Chapter 4 draws attention to the mechanisms favouring linguistic convergence in the context of multilingualism, while Chapter 5 discusses how languages become and remain lexically distinct from one another in the context of other types of convergence. Chapter 5 also discusses the relationship between linguistic taxonomy and the model of language change proposed here, and concludes with the use of language classifications in the reconstruction of prehistory.

An annotated comparative wordlist of over 400 items for ten languages spoken in NWNB is provided as an appendix for the benefit of those readers who might want to

check the relevant data or to use it for their own comparative work. In addition, since I introduce several new terms in the body of this work and use others in an unconventional manner, a brief glossary is provided for reference.

1.2 Data collection

Except where noted, all data presented here have been collected during four research trips to Papua New Guinea. In 1975, I was a research assistant to Dr. David Counts, who sent me to Karaiai village for six months to begin a description of Anêm. During this period, I found the working conditions less than ideal, primarily because of the over-concern of my hosts to make sure that I was never left alone. This meant that, in order to get a few hours of privacy to peruse the data I had already collected, I had to sneak a flashlight into bed and work under the covers at night while everyone else slept. Later, it became clear that my hosts were keeping a 24-hour watch on me to protect me from a list of dangers, some of which English-speaking people would classify as supernatural. No one ever complained that I was a burden, but I felt that, in a small community, the maintenance of a full-time linguist-sitting service was surely taxing the resources of my hosts. Consequently, I resolved that I would take a companion with me on any future trips, both to relieve my hosts of the responsibility of providing me with constant company, and to allow for the possibility of quiet time alone with my notes.

In 1978, Rick Goulden, who had just finished a B.A. in linguistics, accompanied me when I returned to Karaiai to collect additional information on both Anêm and Lusi for my doctoral research. During this fieldtrip, Goulden gradually took over the collection and analysis of the Lusi data, allowing me to focus more on Anêm. By the end of that six-month stay, we had begun to develop a method in which we both participated in the actual elicitation sessions, but divided the labour of the initial analysis when we were alone. In all, this second research period was much more productive than the first.

Since we had learned to work so well together, I asked Goulden to return with me in 1981 for an expanded postdoctoral project that would involve patrols into the interior of New Britain to collect a standardised set of data in all the languages spoken in the vicinity of Anêm and Lusi. Now that both of us were experienced fieldworkers, we were able to refine our field methods to the requirements of working in small Melanesian villages. Since it is impossible, without creating suspicion and resentment, to hire a single informant, our elicitation sessions usually involved from three to thirty informants at any time. Our hosts were free to come and go according to their own schedules, rather than ours; and our sessions sometimes continued for as long as sixteen hours in a single day with only short breaks. Goulden and I took turns—while one elicited and made the notes, the other simply monitored what was being said and written. When the writer tired, we switched rôles. Also, since Goulden and I were concentrating separately on the analyses of several different languages, we each brought different resources to the data collection. In this way, the number of errors that actually made their way to paper was greatly reduced and more information was captured than would have been possible with a single person. Meanwhile, with several informants participating at a single time, the responses were checked as they were elicited. Misunderstandings were caught and multiple responses to the same stimulus could be recorded. Having a selection of people from a single community participate in the recording sessions also meant that we had access to a range of talents among our hosts. Typically, younger

people were more likely to be literate in Tok Pisin. They could empathise more easily with the problem created by the difference in speed between speaking and writing. Some of their suggestions about how they thought their own language should be written were extremely valuable, particularly during the initial stages in recording a language. Older people, on the other hand, tended to have a more detailed knowledge of their language and could, consequently, rattle off lists of names for different kinds of trees, vines, fish, insects, songs, etc. and make observations about the archaic forms of their language where these differ from current usage. Older people also tended to know the adjacent vernaculars more thoroughly than younger people, so they could help us conduct cross-language checks for equivalences. Though unconventional, our field methods allowed us to collect and double-check so much data in four months, that, on our return, it took six months and two computer systems for Goulden and me to catalogue the information. Goulden took on total responsibility for the coastal languages (the Siasi group), while I focussed on the interior languages.

In 1982, we returned to New Britain for a short trip during which we took up where we had left off in 1981. All the data for Lamogai were collected in 1982, because, in 1981, the rains had turned the footpath to the Lamogai area into a leech-filled swamp. We also made trips to a different set of villages to be able to compare the data from two different sources for each language. This was not possible for Lamogai.

All elicitation was conducted in Tok Pisin. At times, when it was appropriate, we used Anêm, Lusi or Kabana, but primarily to test for equivalence of terms among languages. Of the data presented here, Lamogai is the least reliable, because it was collected from only a small group of informants and has not been checked with a second source. The size of the database for each language ranges from 1400 records in Lamogai to over 7000 in Anêm.

Chapter 2

A LINGUISTIC SURVEY OF NORTH-WESTERN NEW BRITAIN

2.1 The languages of north-western New Britain

The languages of NWNB belong to four separate groups. Anêm is a NAN isolate with two major dialects—coastal Anêm and Akiblîk Anêm. Unless stated otherwise, the form of Anêm used here is that of the coastal villages. All the other languages are AN. Mouk (Mok) , Aria, Tourai and Lamogai, together with Rauto and Ivanga (Pulie) spoken on the south coast, constitute what I call the Bibling group, essentially the same as Chowning's Lamogai family (1969, 1976b). I recommend Bibling as a name for the group to avoid the confusion resulting from using a single name (Lamogai) for two taxonomic levels. Lusi (Kaliai), Kove (Kombe), Kabana (Bariai) and Maleu (Kilenge, Lolo and Idne) are members of the Siasi group which extends across the Vitiaz Straits and along the north-eastern coast of New Guinea (Chowning 1973, 1976b; Hooley 1976). Finally, Amara appears to be the most westerly member of the Whiteman group, which includes languages spoken on the south coast and north toward Kimbe (Chowning 1969, 1976b). The names used for languages here are, in some cases, different from those current in the literature, because we have deliberately chosen to use the names that speakers of each language apply to themselves, rather than those given to them by their neighbours.

The languages can also be grouped according to other than purely linguistic criteria. For instance, languages of the Siasi group are typically spoken in communities with a focus on maritime technology, while all the other languages are spoken by people who, until recently, have lived distant from the beach in small fortified hamlets high on the mountain ridges. The languages can also be grouped according to cultural and ecological subregions into: (1) those of the Aria basin—Aria, Tourai and Lamogai; (2) those on the slopes of mount Andeua—Anêm, Mouk and Lusi; (3) those on the slopes of Mount Sakaili (Schrader)—Amara and Kabana; and (4) those on the extreme western tip of New Britain—Kilenge, Lolo and Idne. The members within these cultural and ecological subregions interact most frequently with one another.

Table 2.1a lists the languages along with the villages in which they are traditionally spoken, even though, as in the case of Bolo, the actual language in which the village operates today may be different. The population figures given here are taken from the 1980 National Census; where marked with an asterisk, the figure represents either a combination of figures that are given separately in the census or estimates of the populations of separate communities which are counted together in the census. Figures under each language name represent an estimate of the actual number of speakers for

each language calculated by correcting for the numbers of people speaking the language in other linguistically mixed villages. Because speakers of these languages also reside in towns and on plantations outside the area, population figures should be considered approximate in all cases. The figures for Kove do not include the majority of Kove who live in the Kombe Census Division. No figures are given for Maleu, because we have not conducted research in the area itself.

2.1a The languages of Kaliai and Bariai Census Divisions

TAXON	LANGUAGE	VILLAGE	POPULATION	OTHER LANGUAGES
ISOLATE	**Anêm**	Karaiai	75	
(NAN)	(300)	Pudeling	160	
		Malasongo	49	Amara, Mouk
	Akiblĩk	Bolo	133	Aria
	(50)	Gogola	46	Aria
BIBLING	**Mouk**	Aikon	115	
(AN)	(800)	Angal	139	
		Benim	124	
		Gigina	150	
		Salkei	170	
	Aria	Bagai	91	Tourai
	(750)	Denga	80	Kove
		Kuako	74	
		Moluo	206	Mouk
		Robos	219	Mouk
		Taleuaga	109	Tourai
	Tourai	Esis (Gelei)	47	Kove
	(180)	Upmadung	80	
	Lamogai	Batauling	116	
	(340)	Bulauatne	66	
		Mokukli	62	
		Morou	97	
SIASI	**Lusi**	Atiatu (Gilau)	126	Anêm
(AN)	(1100)	Kandoka (Kaini-aoa)	317	
		Ketenge	239	
		Lauvore	237	
		Taveleai (Kaliai)	*174	
	Kove	Arumigi	115	
	(280)	Tamuniai	146	

	Kabana	Akonga	161	
	(750)	Alaido	96	
		Bambak	80	
		Gurisi	97	
		Kokopo	*171	
		Mareka	41	
		Namaramanga	46	
WHITEMAN	**Amara**	Kaugo (Natamou)	89	Kabana
(AN)	(100)	Kimbe	*30	Kabana
		Siamatai	49	Kabana

2.2 Anêm

Anêm is the only NAN Language in the area. The name is used as a cover term for the two major dialects—Akiblîk Anêm, spoken in Bolo and Gogola; and coastal Anêm, spoken in the three other Anêm villages (Pudeling, Karaiai, and Malasongo). Anêm is also spoken by almost half the adults in Atiatu, the Lusi village immediately to the east of Pudeling. Akiblîk Anêm is nearing functional extinction, being replaced by Aria; while coastal Anêm continues to thrive.

The Anêm claim that theirs is the original language of the area, a claim that is undisputed among the Mouk and Lusi, many of whom have Anêm-speaking parents or grandparents. The available data seem to substantiate this claim. It is also probable that Anêm is the sole surviving member of a language group that once extended perhaps as far as the Kandrian area; this is suggested by a few words in the Whiteman languages that look like Anêm cognates. In 1982, however, the Lamogai we interviewed were totally unaware of a language called Anêm. For the Kabana and the Amara, Amara is seen as the original language of the area from which all others are derived.

Anêm is first noted by Counts (1969) who collected a standard wordlist which established that Anêm is the only NAN language spoken in the area. Except for my own work, (Thurston 1976, 1982), all contemporary discussion of Anêm is based on Counts' original wordlist which was circulated among a few interested scholars. Chowning (1969:20-21) says it is unlikely that Anêm can be related to the Papuan languages of East New Britain. Greenberg (1971), however, has classified Anêm as a member of the New Britain branch of his hypothetical Indo-Pacific Language Family; while Wurm (1975:25, 1982:235-236) places Anêm in the New Britain stock of the East Papuan Phylum. Since Counts' wordlist is too brief to allow anything but the most rudimentary identification of morphemes, I consider both Greenberg's and Wurm's classifications of Anêm to be premature. Having compared Anêm with the available material on Baining (Parkinson 1907; Futscher 1959; Lindrud 1980), Taulil (Laufer 1950; Futscher 1959; Moore and Moore 1980), and Sulka (Parkinson 1907; Schneider 1962; Lindrud 1980), I think it most unlikely that anything but chance similarities will be found to connect Anêm with the NAN languages of East New Britain. I have also compared Anêm with the data available on Yeletnye (Henderson and Henderson 1974), another proposed member of the East Papuan Phylum, but have found nothing to support the inclusion of Anêm and Yeletnye in the same taxon. Given the scant data published in Johnston (1980), however, there is a very remote possibility that there may be a distant relationship between Anêm and Pele-Ata (Wasi), but much more research needs to be conducted before this can be firmly

established. At least until demonstrated otherwise, Anêm should be considered an isolate, related lexically to no other language.

The oral history of the Anêm is typical of all the interior peoples of the area. According to older Anêm informants, their current territory was once more densely populated. Before German annexation of the Bismarcks, the Anêm did not consider themselves a single social unit, but were divided into over a dozen named, exogamous, politically-independent social groups which, for the sake of convenience, I call patriclans. Ideologically, membership in a patriclan is supposed to be strictly patrilineal, but in practice, membership is loosely cognatic with a single individual claiming membership in several groups at once. At the same time, individuals exercise their rights and obligations in the group that is most important to them, often (but not necessarily) the father's. This is accomplished through long term participation in the activities associated with the men's lodge of that group.

Each patriclan used to occupy a zone, usually a strip of land following a mountain ridge from the ocean to the peak of Mount Andeua and bounded on either side by rivers. Below the first set of rapids, the rivers were once infested with saltwater crocodiles; consequently, fording a river close to the coast was considered suicidal. Traditional paths connected small fortified hamlets that dotted the zenith of each mountain ridge and formed the backbone of the patriclan territory. From the high vantage, sentinels kept watch for movements of people in the area. Sidepaths ran down the steep slope from the hamlets of one patriclan territory to a river ford and up the facing slope of the adjacent territory forming a web of well-travelled concentric paths to connect all the hamlets of the region. The higher altitudes, while too damp for habitation, were rich in game. Meanwhile, the coast was considered too exposed to dangerous maritime travellers and crocodiles for habitation, but was exploited for shellfish and salt water. There was no tradition of canoe-building or off-shore fishing. When a canoe was spotted, an attempt was made to kill the passengers and destroy the canoe which was left as a warning sign to other travellers. When salt water or shellfish were wanted, armed men accompanied an expedition to the beach at dawn and back to the safety of the hamlet before dusk. Anêm hamlets closer to the coast traded salt water in bamboo containers and *lêsiŋ* 'saltash' (made by burning driftwood) to Anêm and Mouk hamlets further inland. From the point of view of passengers in a canoe, the beachlands of the area must have seemed uninhabited, but the coast formed an ecological zone claimed by the patriclan whose hamlets were situated upland; and it was defended, successfully in most places, against maritime peoples who tried to settle there.

Until European contact, these patriclans engaged in chronic petty hostility with one another and with all other outsiders. The Anêm patriclans prided themselves on their unrestrained ferocity—one bears the name *Gêxên Buligî Uau* 'Gêxên Spines of Cycad', another, *Gêxên Mîxmîx* 'Gêxên Wasps'. These names are meant to suggest, in the words of one informant: "No one gets too close to us". The name *Anêm*, itself, originally the name of a single patriclan, has come to apply to all people who speak the language.

Cross-cutting the patriclan system was an exogamous matrimoiety system which regulated the creation of affinal ties among patriclans. The relationships between affines and between trading friends were involved in maintaining flexible alliances among patriclans. These alliances made possible temporary acephalous confederations of patriclans for the purpose of conducting raids against other groups, particularly the Kove and Kabana whose ancestors established settlements along the north coast. Within

living memory, the last such raid involved a temporary alliance among several Anêm- and Mouk-speaking patriclans against a specific Kabana group.

Contrary to the rather ghoulish picture the Anêm sometimes paint of their ancestors, however, warfare was always aimed at the accomplishment of a specific task, typically revenge for a wrong that had not been resolved non-violently by the payment of compensation. Since everyone had kin and friends in other groups, it was impossible to organise everyone in a raiding party against everyone in a neighbouring group. There were always people to act as go-betweens to avert a raid; and even as a raid was being staged, an institutionalised system of informers would go into action to warn their kin and friends of the impending attack. Part of establishing normal relationships with incoming settlers, such as the Siasi-speaking peoples, was the exchange of women to initiate the creation of a social web that would solidly interlock the two groups within a single generation. Consequently, although there was intergroup hostility, members of each group always included members of any potential enemy group. The Anêm and others say that, 'men fought about women'. In a sense, exchange of women functioned as an exchange of hostages to provide an avenue for keeping the peace. So important was this exchange that women who ran away from their husbands were dealt with severely when they got home; and, in balance, a man who mistreated his wife risked the avenging wrath of her brothers. Since patriclans involved in such exchanges often spoke different languages, the system insured that children would grow up exposed to the different languages spoken by their matrilateral kin; and since visits were frequent, reciprocal and of long duration (sometimes years), the social system also insured that exposure to other languages would not be superficial.

As stated above, the present Anêm territory used to be more densely populated. Probably in the latter part of the nineteenth century, the whole area experienced an extended period of drought which dried up all but the largest rivers, destroying gardens and planting stock, and encouraging widespread forest fire damage. The subsequent famine resulted in a bloody competition for the remaining wild food resources. Soon afterward, social chaos accelerated as a result of a severe epidemic that left so many dead that they could not be buried properly by the survivors. Then hamlets near the coast were washed away by a tidal wave that penetrated quite a way inland. When the Germans arrived early in this century, they found the few remaining Anêm living in loosely-congregated family groups. With a rather heavy hand, the Germans enforced an end to warfare, persuaded the Anêm to further centralise into villages, and organised them into such activities as building and maintaining a trail along the coast. For the first time, the Anêm recognised their language as a factor distinguishing them from adjacent linguistic groups. Remnants of the earlier, more complex patriclan system still survive—generally, people know where they should be living according to the patriclan land rights system, and particular dialect features are often ascribed to members of a particular patriclan.

As late as the mid-1950s, the Anêm were still living in villages up on the mountain crests. These villages, with their spectacular views, appear on old maps identified by their old names. At that time, wanting to facilitate administration, Australian patrol officers insisted that the Anêm move into permanent villages on the coast. While the Anêm resented being moved to the coast, for which they had a traditional disdain, the move provided them with easier access to the ocean's abundant protein-rich foods and laid the way for Anêm entry into the copra market which depends on sea transportation.

Like most of the peoples of Papua New Guinea, the Anêm have experienced profound changes within the memories of living elders.

Anêm is at present the nominal language of four villages. Three of these, Malasongo, Karaiai and Pudeling are now on the coast, and, for all practical purposes, physically and socially separated by the intervening Lusi territory from the interior Akiblîk Anêm villages called Bolo and Gogola. Akiblîk Anêm is now functionally extinct (see section 2.3). In the tiny village of Malasongo, Anêm is spoken alongside Amara, Mouk, Kabana and Tok Pisin. My own brief, somewhat impressionistic observations in Malasongo reveal a remarkable amount of code-switching, but the sociolinguistic factors regulating this have not been studied. Anêm is unquestionably the primary language of Karaiai and Pudeling. Although children in these two villages also learn Lusi and Tok Pisin, Anêm is still the usual language of mundane discourse.

2.3 Akiblîk Anêm

Akiblîk is the Anêm patriclan associated with a distinct dialect of Anêm which is nominally spoken in Bolo, Gogola and some smaller settlements near the Vanu river. According to both Anêm and Mouk mythology, Akiblîk has the status of being the original patriclan from which all other patriclans in the world have been derived. Ideologically, this patriclan is Anêm, but in oral histories given by the coastal Anêm, Akiblîk is usually passed over or added as an afterthought, as though these people were not really Anêm. There are several reasons for this.

First, the Akiblîk are located on a mountain ridge universally known as Avelalu, clearly a Lusi rendition of the Anêm *abêl alu* 'the main mountain ridge'. Particularly now that all the other Anêm live on the coast, the Akiblîk are geographically and socially isolated from mainstream Anêm by the Lusi and the intervening mountain ridges. Consequently, the coastal Anêm interact more frequently with the Lusi, Kove, Mouk and Amara than they do with the Akiblîk. Furthermore, several Mouk patriclans were forced by the Australian colonial administration to abandon their own more interior lands and establish villages along the path that follows the crest of Avelalu up into the interior. Lower on Avelalu, along the banks of the Vanu and Bîl rivers, both Aria and Mouk villages have been established. This has placed Bolo, the main Akiblîk village, at the intersection of Mouk, Aria and Lusi domains.

Since Akiblîk represents a single exogamous patriclan isolated from other Anêm-speaking patriclans, the Akiblîk have married Mouk, Aria and Lusi. At the same time, many speakers of Akiblîk now live scattered among the surrounding villages where the ability to speak Anêm is thought to be a quaint oddity. The Aria, Mouk and Lusi resist learning Anêm because, they say, it is too difficult. Consequently, interactions between the Akiblîk and their non-Anêm spouses occur in languages other than Akiblîk Anêm. The regular vernacular of Bolo has become an incipient dialect of Aria. Even here, those who know Anêm do not speak it to their children because, 'they would not understand'. The few occasions on which I observed Anêm being spoken to children in Bolo reminded me of the immigrant syndrome in North American cities—the adult spoke Anêm and the child responded in Aria. Thus, despite protests to the contrary from some of the elders of Bolo, Anêm here is on the verge of extinction.

In a last desperate attempt to retain the language, male children are given formal instruction in Anêm starting in early adolescence. Some actually manage to become fluent, but their Anêm phonology retains a noticible Lusi/Aria substratum. For example, the back unrounded vowels of Anêm, *ê [ɤ]* and *î [ɯ]*, are interpreted as front vowels, *e [e]* and *i [i]*, respectively; and the voiced stops *b d* and g are pronounced as voiced fricatives *[βɾ ɣ]*.

In Bolo, even middle-aged people experience grave difficulty in recalling basic lexical items in Akiblîk Anêm; each word we asked for elicited an often lengthy debate in Aria which lasted until a consensus was reached on the 'true' Akiblîk Anêm word. At one point, as we were collecting what data we could, Malcolm[1], a middle-aged man who claimed Anêm as his first language, was acting as primary informant. Behind him sat Ethel, a woman over 80 years of age, inconspicuously whispering instant translations of what I was eliciting before the male 'authorities' even began their debate on the correct Anêm. Finally, Malcolm became aware of Ethel's expertise. Shortly thereafter, I took down the following interaction *verbatim* :

Me to Malcolm:	TP/*kokonas* 'coconut'
Malcolm to Ethel:	Ar/*oŋgup* 'coconut'
Ethel to Malcolm:	Ak/*êdîŋ* 'coconut'
Malcolm to Ethel:	*a?* 'what?'
Ethel to Malcolm:	*êdîŋ [ɤdɯŋ]* (Anêm phonology)
Malcolm to me:	*eziŋ [eɹiŋ* (Lusi phonology)

Malcolm could neither remember common words nor reproduce them accurately with the Anêm phonology used by very old people like Ethel. If, by some miracle, Akiblîk Anêm is revived in Bolo, one of the dialect features that will distinguish it from coastal Anêm will be its Lusi-like phonology.

In only one area does Akiblîk Anêm persist—in the realm of esoteric knowledge. Along with mythology and magic, men of renown also know their language in detail, right down to the little-known names for economically-unimportant life forms in the rainforest. Having such esoteric knowledge is like having other more tangible forms of wealth; and giving it away in small portions is the kind of generosity expected of important people. Once given away, it is gone, but the donor retains the status of having been the source of the knowledge in the first place. In the context of Akiblîk's death, it is interesting to note who in the Avelalu area still speaks it. Since Akiblîk Anêm is granted the status of the original language by Anêm, Mouk and Lusi, knowledge of Anêm appears to be an expression of land rights and power. Since Anêm was the original language, many people feel that the most powerful magic is performed in it. Thus, despite derisive comments such as, 'Anêm is a language suited to people with short tongues', the non-Anêm people in the area who speak Anêm are the most powerful men of renown. Of these, the most feared, Zagrod, speaks Akiblîk Anêm well. Whenever possible, Zagrod engaged me in conversations in Anêm. While there was a certain amount of hilarity involved in these scenes—the most powerful man in the area joking in Anêm with a foreigner—, all witnesses were forced to acknowledge Zagrod's achievement. In this sense, knowledge of Anêm has taken sanctuary, along with other men's secrets, in the men's lodge. In such restricted circumstances, it is doubtful that Akiblîk Anêm can survive another generation.

The information on Akiblîk Anêm is terribly incomplete, but what we do have supports our informants' claim that it is a distinct regional dialect of Anêm. Lexically, the two

dialects seem to be quite similar, with only a few differences, such as Ak/*êgîm* for An/*êudêl* 'canoe' and Ak/*ekein* for An/*tabu* 'cassowary' . Phonologically, the Akiblîk of elders has k in some places where coastal Anêm has *x*, but it is otherwise identical. The following example shows a pronominal difference as well.

Ak.	*le*	*u-k*	*a-k-î*	*nan.*
An.	*lêxa*	*u-k*	*a-x-î*	*nan.*
	he	3s-go	to-it	garden

'He went to the garden'.

Consistent morphological information was impossible to gather for Akiblîk Anêm because the language has fallen into such disuse, even among elders, that no one seems to have complete control over the complex inflectional systems. For instance, where coastal Anêm has consistently *gîm-ga* 'my jaw', the Akiblîk Anêm were unsure of the paradigm and vacillated among the forms *gim-gi, gîm-gi, gîm-i* and *gîm-ga.* Particularly among younger Akiblîk, who are more at home in Lusi or Aria, the distinction between realis and irrealis has been lost. Since Anêm is the only vernacular in the area with this contrast, the levelling of this mood distinction is evidence that the younger speakers of Akiblîk Anêm are using the grammar of languages other than Anêm when they attempt to speak Anêm.

2.4 Mouk

Mouk is first noted in the literature by Counts (1969:4) who calls it Mok. Using Counts' wordlist, Chowning (1969) classifies Mouk as part of her Lamogai Language Family, essentially the same as my Bibling group. It is most closely related to Aria, but the two should be considered separate languages, rather than dialects of a single language, as suggested by Chowning (1976b:370), who has only Counts' short wordlist to work with. Like the Anêm, the Mouk are organised into exogamous patriclans with a cross-cutting system of exogamous matrimoieties. Despite the linguistic classification, the Mouk and Anêm appear to be very much alike in social structure and, in the past, have formed alliances with one another against outside groups. Many Mouk, especially older men, are likely to know a reasonable amount of Anêm, and among the Anêm, Mouk is surpassed only by Lusi as a secondary vernacular.

The traditional Mouk-speaking patriclans are: Salkei, Aikon, Angal, Gigina, and Benim. Salkei, the name of the mountain ridge on which the patriclan by the same name was traditionally located, is parallel to Avelalu to the south-east. Australian patrol officers required Salkei, Aikon and Angal to establish permanent villages on Avelalu, the territory of the Akiblîk Anêm, in order to facilitate administration—the officers wanted to be able to follow a single path up a single mountain ridge without having to climb up and down mountain ridges from one patriclan territory to the next in the course of a single patrol. Now these Mouk groups are in the awkward position of having planted coconuts and other trees on land to which they have no traditional rights. Their only source of cash is tied to foreign land, while their traditional territories lie vacant. Fearing a change in the law making it mandatory for groups to actually occupy the land to which they lay a claim, some Mouk groups have moved back upland into their traditional areas, renouncing participation in the cash economy in which they are already severely disadvantaged by their distance from the coast. Thus, Aikon has shifted to the south-east over several mountain ridges leaving the village site as only a

meaningless spot on maps. Angal has split, with some people moving back to Mouk land and others moving closer to the north coast. The latter faction, eager to gain access to the copra market to earn cash, has aligned itself with a Lusi group in Lauvore and is in the process of building a new village, Lumusi, near the mouth of the Vanu river. Having moved several times in the last decade, part of Benim is now apparently on the south side of Mount Andeua in Kandrian district. While Metabala and Palpalu are mentioned by informants as Mouk villages, their compositions in terms of patriclans and their locations on the map are unclear to me.

Trying to pinpoint Mouk-speaking villages is highly problematic. In the period immediately preceding the German annexation of the Bismarcks, the Mouk appear to have been in social turmoil resulting from the drought and epidemic that affected the whole region and, possibly, from the ramifications of the establishment of maritime settlements on both south and north coasts. With Siasi-speaking groups on the north and others, possibly Arove, on the south, the Mouk were squeezed in the middle bearing the brunt of refugees from both sides. For whatever reasons, when the Germans arrived, the Mouk did not live in even semi-permanent hamlets, but in loosely-defined, kinship-based groups camping for only short periods of time in one place before fleeing to another site. Although it is probably a much magnified claim, the Mouk state that they used to lived in chronic fear of raids from other groups; and, consequently, they spaced their children six or more years apart so that a small group would not be hampered in flight by too many small children. At the peak of Australian-imposed order, the Mouk still maintained villages as a façade, but did not actually live in them. A shell trumpet was used as a signal that people should rush back to the official village site to assemble for an arriving patrol officer to give the appearance of obeying orders. When the patrol was safely gone, the Mouk would return to where they really lived—in tiny hamlets near their gardens.

Except for a tiny disputed strip of land to the west of Malasongo, the Mouk are landlocked. With no direct access to the ocean, they acquired saltash and shellfish through contacts with Anêm speakers at Pudeling and Malasongo to the northwest, and through Akiblîk to the northeast. Doublets in Mouk show that they also had contacts with maritime peoples from the south coast. For example:

Mo.	*ulo*	'clay pot ' (imported via north coast)
	kixdau	'clay pot ' (imported via south coast)
	tabila	'wooden dish' (from north coast)
	tumxo	'wooden dish' (from south coast)
	golomada	'giant clam shell' (from north coast)
	kaiaŋan	'giant clam shell' (from south coast)

It is clear from such doublets and other evidence that the Mouk were involved in a trading network connecting them via the north and south coasts ultimately with New Guinea and Talasea.

The Mouk allow Anêm the status of first language in the area, but claim Mouk as the second. All others, according to them, are tertiary corruptions, 'languages appropriate to birds'. Mouk healing, hunting, and fertility spells are conducted in Anêm because it is the 'true' language. Our Mouk informants claim that their ancestors spoke only Mouk and Anêm. The bonding between Mouk and Anêm is revealed not only in their attitudes

about the languages of the area, but in their previous military alliances, in their shared dances, and in certain linguistic features shared by Mouk and Anêm to the exclusion of neighbouring languages. Phonologically, Mouk and Anêm have a postvelar trill *x*, with both voiced and voiceless allophones *[ʀ~χ]*, where the surrounding vernaculars have an apical trill *r [r̃~ʂ̃]*. Mouk is also the only AN language of the area with back unrounded vowels [ɤ ɯ] like those of Anêm; but in Mouk, these are just allophones of the front unrounded vowels *[e i]*, not separate phonemes as in Anêm. The Mouk fought not only with the Anêm against the Kove and the Kabana, but also on their own against the Lamogai and Aria.

2.5 Aria

Aria is first recorded by Counts (1969), whose wordlist is used by Chowning (1969) in her classification of Aria as a member of her Lamogai Family, my Bibling Group. Allen, Rath and Johnston (1980) have published a hastily gathered and unanalysed wordlist in Aria. Nowhere in the literature is Aria distinguished from Tourai (section 2.6).

Aria is a cover term for a constellation of closely-related variants that usually includes Tourai. Speakers of Aria recognise the forms that are emblematic of each linguistic subgroup, and usually a single village mixes several varieties that are ideologically distinct. Properly, Aria is the language of Taleuaga, Kuako, Bagai, Robos, Moluo and Denga—all villages traditionally on the west side of the Aria river. The villages on the east side of the Aria river that outsiders classify as Aria are technically Tourai. Taleuaga, which used to be located on the west (Aria) side of the river, has moved across to the east side; the Aria of this village is now mixed with Tourai. The dialect spoken in Denga, now located at a site called Angariai, is mixed with Kove. Aria is also spoken in Bolo, but other speakers of Aria say that the people of Bolo really speak Mouk because of the proximity of Bolo and Salkei. It is clear that the language of Bolo is really another incipient dialect of Aria. Allen, Rath and Johnston (1980) mistakenly include Salkei as an Aria village, because, according to our informants, fieldworkers collected their data in Salkei from an Aria-speaking visitor to the aid post.

The basin of the Aria river represents a cultural subregion distinct from that of the northern slopes of Andeua. The Aria and Tourai claim descent from Lamogai; and except for the people of Denga and Bolo, speakers of Aria, Tourai and Lamogai are unaware of the existence of Anêm. The presence of women and uninitiated children in the men's lodge also indicates a cultural isogloss separating the Aria basin from the subregions to the west.

Though several of the villages are now right on the banks of the Aria river, giving them direct access to the ocean and the copra market, formerly they were located at strategic points high up on the cliffs that overlook the river. From there, they kept track of their traditional enemies—the Lamogai, Mouk and Kove. Like other villages in the region, Robos and Moluo were moved, for administrative convenience, to within easy hiking distance from Bagai where a mission, school and medical aid post were established.

2.6 Tourai

In 1981, two men arrived in Kandoka, claiming to be speakers of Longa, a language I had tried to locate on previous fieldtrips (see section 2.13). On closer questioning, it turned out that loŋa *inside* is the name given to them by the Kove who live at the mouth of the Gaho river. The people who traditionally lived inland from western Kove on the eastern banks of the Aria river call themselves either Tourai or Toruai, and classify their language as a dialect intermediate between Aria and Lamogai, but resembling Aria more closely. Linguistically, this is clearly the case. Where Tourai differs from Aria in lexicon, it usually resembles Lamogai. Grammatically, Tourai is also like Lamogai in lacking some of the anticipatory vowel assimilation rules that affect verbal prefixes in Aria.

To.	*ŋa-la*	*ŋa-due*	*ŋa-sep ŋa-me*
Ar.	*ŋa-la*	*ŋo-due*	*ŋe-sep ŋe-me*
	1s-go	1s-do	1s-in 1s-come
	'I went'.	'I did it'.	'I came in'.

On the other hand, Tourai carries certain consonant assimilations further than either Aria or Mouk:

To.	*ko-gu*	*lu-gu*	*tanra luŋoŋ*
Ar.	*koŋ-gu*	*luŋ-gu*	*tarna lugoŋ*
Mo.	*kom-gu*	*lum-gu*	*taxna lugŋoŋ*
	foot-1s	hand-1s	skin 1s
	'my foot'	'my hand'	'my skin'

Otherwise, Tourai and Aria are grammatically almost identical.

The Tourai, who used to live in the plateau area now occupied by the Lamogai, still lay mild claims to that land. Like the Mouk, the Tourai seem to have been affected by the settlement of maritime-oriented peoples on the south coast. In the oral history of one of the Lusi patriclans, the narrator states that some of his ancestors used to live in the area now inhabited by the Lamogai, but fled north where they encountered people speaking a different, but unidentified language (David Counts, personal communication). There are a few minor, but intriguing linguistic traits that seem to point to a possible connection between the Tourai and at least the eastern Lusi. For instance, the Tourai say *udage* for 'knife' and the Lusi *uzage*, while both Mouk and Aria have *elil*, and Kove has *hai*.

The main centre of Tourai is now the village of Upmadung on the Aria river between Taleuaga and Kuako. Until recently, Upmadung was located high up on a cliff face overlooking the Aria river. Tourai is also spoken alongside Aria in Taleuaga and Bagai. In the village of Esis (Gelei) on the Gaho river, Tourai is spoken along with Kove; here, Tourai has been mistakenly confused with Lamogai in Allen, Rath and Johnston (1980).

2.7 Lamogai

Like the majority of other languages in the area, Lamogai is first recorded by Counts (1969), and on the basis of his wordlist, classified by Chowning (1969) as a member of the Lamogai Family, my Bibling group. Chinnery (1926) includes data on a language he

calls Pulie (Ivanga), also classified by Chowning as a member of the same group. In 1981 and 1982, we collected very brief wordlists from single informants for Rauto and Ivanga, said to be slight variants of Lamogai spoken closer to the south coast. On the basis of these brief recording sessions, we concur with Allen, Rath and Johnston (1980) that Lamogai, Ivanga and Rauto are close enough to be considered dialects of a single language, in the usual sense of the term, but we prefer to treat them as separate languages for sociolinguistic reasons.

In 1981, the Lamogai part of the survey had to be cancelled because early rains had turned the path into a sea of mud and leeches. In 1982, we were able to make only one four-day excursion to the area. Consequently, our data on this language and the people who speak it are the least comprehensive of the languages surveyed here. Lamogai is spoken in four villages—Bulauatne, Mokukli, Batauling and Morou.

2.8 Lusi

Lusi is one of the few languages of New Britain for which there is a fairly complete descriptive grammar (Counts 1969). Counts chose to call it Kaliai-Kove, first, in recognition of the near identity in grammar and endolexicon between Lusi and Kove; and second, because the language and the people are commonly referred to as Kaliai by people outside the immediate area. Kaliai, the label most commonly used in the literature, is the name of one of the Lusi patriclans, probably the initial founding patriclan of Lusi, now centred in the village of Taveleai. Lusi, on the other hand, is also the name of the Lusi-speaking patriclan now centred in the village of Atiatu (Gilau) and also known to the Anêm as *Liŋe Rua* 'two voices'. In any case, Lusi is the name preferred by speakers of the language. Lusi is mentioned under the name of Kaliai in Friederici (1912:25, fn.14), but he collected no Lusi data at that time. On the basis of Counts' data, Chowning (1969) classifies Lusi as a member of her Bariai Language Family. Later, Chowning (1976b:368-369) and Hooley (1976:344,fn.5) agree that Lusi, Kove, Kabana (Bariai) and Maleu (Kilenge, Idne and Lolo) should be classified as members of the larger Siasi Group which includes the languages of the Siasi Islands and coastal languages on north-eastern New Guinea. The relationship between Lusi and Kabana is more thoroughly discussed in Goulden (1982).

Like Anêm and Mouk, the Lusi are organised into land-holding patriclans, but without the cross-cutting matrimoiety system. With the single exception of Kaliai, all the Lusi patriclans used to live in fortified hamlets on the mountain ridges. This is the same settlement pattern as that described for Anêm and Mouk. There are numerous bits of trivia suggesting that the language of these patriclans used to be Anêm (Thurston 1982). The Kaliai patriclan has apparently always inhabited the end of a long peninsula, until it was washed out to sea in the early 1970s. Older Lusi men remember that when they were just beginning to plant coconuts in their mountain hamlets, the coconuts at Kaliai were already very tall. This suggests that Kaliai was the founding settlement for an earlier Siasi-speaking group; and that from this single settlement, a modified form of their language and aspects of their maritime technology radiated out to the adjacent formerly Anêm-speaking areas. Though most of the time the Lusi maintain they are beach people, we have observed several occasions when they allied themselves with the Mouk and Anêm against the Kove, claiming that the Lusi, after all, are really interior peoples who have just recently moved to the beach. Lusi is now spoken as the nominal first language

in five villages—Atiatu (Gilau), Ketenge, Taveleai (Kaliai), Kandoka, (Kaini-Aoa) and Lauvore (Niuniuiai).

2.9 Kove

Friederici gives a list of over 100 words in Kove (which he calls Kobe) with the appended observation that the little difference between Kove and Kabana (his Barriai) is clear even from the limited data presented (1912:217). On the basis of her own research in the Kombe Census Division, Chowning discusses Kove in several papers (1973, 1978), but Friederici's earlier list is still the largest published body of data in the language. Chowning (1969) and Counts (1969) classify Kove and Lusi as dialects of a single language. While the two are nearly identical in endolexicon and grammar, they are apparently quite different in ectolexicon (non-core vocabulary). When the two are compared as a whole, the differences support the claims of our informants that Kove and Lusi are two different languages. When only the endolexicon is compared, the differences seem more trivial. Contrary to the claims of Haywood and Haywood (1980:46), our Kove consultants insist that Kombe is a Tok Pisin name for what is properly called Kove; indeed, if any division within Kove is sought, it is between Kove Sio (in the west) and Kove Sae (in the east, closer to the Bakovi area), but this is possibly a more political than linguistic distinction. It is also possible that the name Kombe reflects what the Kove are called by people to the east.

The current sociological relationship between the Kove and other groups in the area is a result of a rather bloody recent prehistory. More widely despised than any other group in the area, the Kove are, at the same time, admired and envied for their skill both in traditional art forms and in modern economic matters. From the admittedly biased perspective of non-Kove informants, the Kove appear to be caught in an ever-escalating system of material exchange to legitimise kinship relationships, especially those between affines. Part of the system involves incorporation of outsiders through marriage to Kove women so that the obligations imposed by in-laws can draw resources from outside groups into the Kove network. Since the system is dynamic and aggressively acquisitive, non-Kove men are discouraged from marrying Kove women. A similar system also operates in other coastal groups, but in a much more diluted form. Linguistically, the system is important to note, because it may be a clue to understanding the mechanisms by which the other coastal peoples, the Lusi and the Kabana, were able to establish themselves in north-western New Britain despite the fierce inhospitality of the Anêm and Amara. By incorporating their neighbours into their own groups, the original Siasi-speaking immigrants may have been able to swell their numbers and gradually establish the more friendly intergroup relationships that are manifest today between groups like the Lusi and Anêm or the Kabana and Amara. In the process, however, the expanding nature of the social system has been slowed as the recipient groups have copied technology, ritual and other cultural items without relinquishing their languages. The Kove are set apart from the Lusi and Kabana in this scenario, in that, by the time colonialism began to interrupt the process, the Kove had not yet fully integrated themselves socially into the regional network, as have the Lusi and Kabana. Along the coast, the Kove are referred to as 'followers of the wind', a name that refers to the apparently constant movement of Kove canoes up and down the coast. Much more than other groups, the Kove seem to have maintained an economic base that depends primarily on trade rather than on heavy investments of labour in gardening. As an economic

strategy, this may represent the retention of an economic emphasis from pre-colonial times, when the Kove were, perhaps, more like the traders of the Siasi Islands (Harding 1967). The Kove live on tiny off-shore islands rarely more than a few hundred metres wide, while the Lusi and Kabana have more spacious mainland villages, gardens and hunting space. Set apart in space, the Kove language is more conservative than either Lusi or Kabana. For example, where Lusi and Kabana have lost high vowels in usually predictable environments, Kove retains them so faithfully that many Kove words have the appearance of POC reconstructions.

Kove is spoken in all the villages from Kandoka in the Bola Census Division to Nutanovua at the western border of the Kombe Census Division. It is also spoken in two villages in the Kaliai Census Division—Tamuniai and Arumigi. These two villages have been established on what is traditionally Anêm territory by a group called Sahe who fled Kombe in post-German times and settled in Kaugo (Borgen Bay) before occupying Tamuniai and Arumigi.

2.10 Kabana

Both the Kabana and the Amara agree that the name Bariai refers to their land, and not to a group of people. Furthermore, since the name fails to distinguish two linguistic categories, we recommend that Bariai be dropped from the literature as a language name, and that it be replaced with Kabana, the name that its speakers themselves prefer. Scaletta (1985) has also opted for the name Kabana.

Kabana is first described by Friederici (1912) who calls the language 'Barriai'. Until the recent work begun by Goulden, Friederici's sketch grammar and wordlist have remained the only original descriptive material published on the language. Indeed, according to Chowning (1976a:186), Friederici's lexicon is the most extensive published in any language on New Britain except Tolai. When Friederici visited the area, he was travelling on a 'labour-recruiting' ship, which also carried procurers of artifacts. In all, Friederici found the travel arrangements unconducive to ethnographic research, allowing him to spend, at most, only a few hours in any village. The bulk of his data on Kabana comes, apparently, from a single informant named Kabui who had been signed up for labour. Having met him in Madang, Friederici employed Kabui as a personal servant during his travels to Singapore and Manila. The Kabana names for plants are so precisely identified in Friederici (1912), because Kabui was taken to the Raffles' Museum and the botanical gardens of Singapore and Buitenzorg (Friederici 1912:17-18). Friederici's sympathetic account of Kabui (1912:14-18) provides insight into European-Melanesian contacts in the early part of this century. Given that Friederici was conducting his analysis within the theoretical framework of phonetics rather than phonemics, his Kabana data are remarkably accurate.

Like the Lusi at Kaliai, the Kabana have always dwelt on the coast. According to Friederici,

> the inhabitants of the north coast of west New Britain occupy only a narrow coastal margin which their fathers once conquered from the interior inhabitants who evidently spoke a Papuan language. [This land] is now held by their sons as colonists. Since they have suffered so horribly from

> smallpox, their situation along the entire line is not an easy one. The interior dwellers, whose settlements are quite close to the coast, tend to interrupt their moderate trading relationships [with the Kabana] now and then to swoop down from their mountains to the coast and make surprise raids.
>
> (Friederici 1912:133, my translation)

Several Kabana men in Kokopo village claim that their ancestors, who lived in the mountainous interior, became Kabana when they moved to the coast. Just as Anêm is seen as the ancestor of Mouk and Lusi around Andeua, and Lamogai is seen as having given rise to Tourai and Aria in the Aria basin, so in Bariai, Amara is deemed the original language from which Kabana has arisen. As is clear elsewhere in the area, the immigrant Siasi-speaking group that has become Kabana did not exterminate the Amara to take their place; rather, they gradually incorporated more and more Amara-speaking peoples into the Kabana culture. The process is nearing completion in this generation.

Although some Amara and Kabana speak of trading friends between the two groups in pre-German times, the indication from Friederici is that the relationship between the newcomers and all the interior peoples has been marked by extreme violence. Although the Kabana and Amara are now thoroughly intermeshed in ritual, kinship and economics, old men of each side still sometimes mutter about the other with muted contempt. With the Amara almost totally assimilated into Kabana society, however, the most open Kabana disgust is reserved for the interior peoples further east—the Anêm and Mouk. The Kabana consider them all to be the same—asocial and dangerous. The vituperation dates back to a battle in very early German times when several Anêm and Mouk patriclans formed an alliance for the express purpose of total Kabana extermination in retaliation for a severe wrong. Though the Kabana had already formed links with the Amara, they had none with either the Mouk or the Anêm. The Kabana say that the battle fell short of success because they fight with slings, more effective weapons than the spears and heavy shields of the interior peoples. Tradition has it, nonetheless, that the casualties were so great that, for years, every time the Kakasi river flooded, the bones of victims would appear in the river bed. That this event took place is confirmed by separate Anêm and Mouk accounts, including one from a man over 90 who fought in the battle. In retaliation, the Kabana are believed to have performed sorcery on a grand scale aimed at exterminating the Mouk and Anêm patriclans who took part in the raid. Continued fear of Kabana sorcery is given as the reason that members of certain Anêm patriclans refuse to live on the land to which they lay claim. Except for the tiny village of Malasongo, and two Kove villages, the vast area of Anêm territory west of Karaiai is uninhabited. Between Anêm and Kabana, the Amara village of Siamatai acts as a further buffer.

Kabana relationships are now strong with the Kove and Lusi to the east, and with the Kilenge and Lolo to the west. Contacts with trading partners from the Siasi Islands are still maintained. On linguistic and sociological grounds, it makes sense to think of these trading links as a direct continuation from the earliest time of Siasi settlement in the area.

Kabana is spoken in Alaido, Namaramanga, Bambak, Akonga, Kokopo (Gumartangtang) and Gurisi. It is also an important language in the Amara villages of Kaugo, Kimbe and Siamatai.

2.11 Maleu

According to Lynn Stewart-Dillon (personal communication), Maleu is a cover name for the language spoken by the Kilenge on the north-western tip of New Britain and by the Lolo of the interior. Idne appears to be a subgroup name for those Lolo who live along the Idne river. The first information published on the language is in Dempwolff (1905) who acquired his data from people on the Tami islands. Later, Friederici (1912:218-220) published a wordlist in the language under the name Kilenge. Philip and Mavis Dark (1977) published a microfiche Kilenge-English dictionary which has some basic phonological errors that are reproduced in the bit of data published by Graham and Irene Haywood (1980). Jill Grant compiled a wordlist with some grammatical analysis in 1977; and David Counts collected some linguistic data in 1981. Both have been kind enough to allow us to have copies of their work. Currently, Lynn Stewart-Dillon is conducting ethnomusicological research in the Lolo area and collecting linguistic data as part of her doctoral program. Reports from the field so far indicate that she is concurrently making comparative notes on Kilenge as well.

During the 1982 research trip, Goulden and I had no plans to work with Maleu at all but, fortunately, Talania (a Kilenge man who has acted as an informant for the Darks, Grant, and the Counts) was detained as a visitor in Kandoka for over two months until a set of mortuary ceremonies was completed. Goulden and Talania were able to spend days together recording Kilenge data; and Goulden has kindly allowed me to present part of his results here with the caution that the data were gathered from only a single informant. Although we did not actually travel in the area to collect information about the distribution and oral history of the language, I use the data here mainly for comparison with the other languages of the Siasi group, and for comparison with Amara, which seems to share features, sometimes with Maleu, sometimes with Kabana and, at other times, with Mouk.

2.12 Amara

In 1975, while I was conducting the initial field research in Anêm, my informants mentioned that a language called Amara was spoken in the Anêm village of Malasongo. Thinking that it might be another NAN language, possibly related to Anêm, I made an excursion to Malasongo to collect a short wordlist. The language turned out to be clearly Austronesian, but not like anything else I had ever seen. While writing my M.A. thesis (Thurston 1976), I sent a copy of the Amara wordlist to Chowning, because it was not included in her 1969 survey of New Britain. Until recently, I thought that Amara might be Friederici's (1912:220) elusive Longa, because the location inland from Kabana was correct, and because some of the words in Friederici's list look like Amara words. Longa, however, now appears to be an amalgamation of words from several interior languages (section 2.13). Amara is discussed briefly by Chowning (1978), who does not cite the source of her data. In 1984, I distributed a trilingual (Amara-English-Tok Pisin) lexicon designed so that the Amara might participate more actively in the eventual production of a dictionary for their own language. Mr Peter Lingaso, a speaker of Amara, has already started compiling addenda to the lexicon.

In Kabana and Amara mythology, Amara is said to be the origin of all languages in the world. *Eivin Pio* 'The Origin Village' is said to be located on the Iep river, a tributary of the Gurisi or Mara river. From the description, it sounds as though the site is an elaborate rock shelter with petroglyphs similar to those found in at least three locations in the Kaliai Census Division. At the time of the first German contact, the Amara still felt some residual hostility toward the Kabana who had settled the coastline, cutting them off from access to the sea. In fear of the Germans, many of the Amara are said to have fled to the south coast where they established new settlements. My informants mentioned the names of four villages on the south coast where Amara is spoken—Aliepmete, Saureng, Molou and Talia. Although villages with these names appear on some maps, roughly between the Adi and Idne rivers, the status of Amara or any other language spoken in these villages remains unconfirmed.

Like Mouk, Amara seems to have occupied a central position between trading networks on the north and south coasts. Both languages have doublets for trade items that differ only in their origin.

	'clay pot' from north	'clay pot' from south	'wooden dish' from north	'wooden dish' from south
Am.	*ulo*	*ekirau*	*tavla*	*otovro*
Mo.	*ulo*	*kixdau*	*tabila*	*tumxo*

Whether the Amara and Mouk equivalents are cognates or copies, they show a parallel connection with the south coast not expressed by any languages of the Siasi group.

In Bariai, Amara is spoken in Kaugo (Natamou), Kimbe (listed in the 1980 Census with Kokopo) and Siamatai. It is also spoken by some in the Anêm village of Malasongo. At least in Bariai, Amara is close to extinction; so closely knit are the Amara with the Kabana, that Kabana is quickly becoming the vernacular of choice among children with Amara-speaking parents. Even middle-aged people sometimes have difficulty recalling Amara words and often disagree about the meanings of particular items. In 1981, in an attempt to reverse the obvious erosion of Amara language and culture, a site was cleared for a new village that would amalgamate all the Amara-speaking peoples in the Bariai Census Division. It was hoped that, with rules forbidding the use of Kabana and with a larger number of people speaking Amara together, the language might be maintained. The latest news, however, is that the settlement of the new site has gone back to the discussion stage.

2.13 Longa, Sahe and Idne

Longa, Sahe and Idne are names of elusive languages rumoured for decades to be spoken in NWNB. Friederici (1912:220) gives 17 items in a language called Longa by the Kabana-speaking informant from whom he acquired the data. Of these, 5 are distinctly Amara; 4 could be either Amara or Mouk or Aria; 6 are not Amara, but could be either Mouk or Aria; one appears to be misglossed and confused with Kabana; and the last is only partly analysable. The full list, in modified transcription, is quoted here from Friederici with the appropriate Amara, Mouk and Aria forms for comparison.

	Longa	Amara	Mouk	Aria
'one '	*kapuk, kapukn̩*	*kapuk*	*keine*	*kene*
'two '	*ruo*	*ruo*	*oxuo*	*oruo*
'three '	*etlu*	*tel*	*etli*	*etlu*
'four'	*apamal*	*paŋ*	*apeinal*	*apanal*
'five'	*elme*	*lume*	*elme*	*elme*
'six'	*lume kapuk*	*lume kapuk*	*lumakaine*	*elme kene*
'seven'	*lumeruo*	*lume ruo*	*lumaxuo*	*elme ruo*
'eight'	*lumetlu*	*lume tel*	*lumetli*	*elme etlu*
'nine'	*lumetnal, lumepaŋ*	*lume paŋ*	*lumesnal*	*elme apanal*
'ten'	*soŋotno*	*soŋoul*	*soŋotno*	*soŋotno*
'tree'	*akai*	*akai*	*akai*	*akai*
'fire'	*oiau*	*eiou*	*eiou*	*eiou*
'taro'	*ama*	*ama*	*eski*	*esi*
'coconut'	*oŋgupn̩*	*oŋgup*	*oŋgup*	*oŋgup*
'fish'	*ouŋa*	*ouŋa*	*aŋua*	*lodu*
'sugar'	*otou* (cf. Ka/tou)	*elgo*	*amxa*	*amra*

Kabana has a non-distinctive syllabic nasal *[n̩]* after word-final obstruents; its presence in the Longa forms for 'one' and 'coconut' suggests Kabana phonology. The final form in Friederici's list is *lapse kabime* which is glossed as 'Bring here!' 'Give me!' The only identifiable element is i-me *3s-come* , a form that might be used in Amara in orders to get something. The whole list seems to be what might be given by a Kabana-speaking informant when asked to list all the words he can in the language(s) of the interior people.

The Kabana word *loŋa,* itself, is a pejorative applied indiscriminately to all interior peoples including the Anêm, Amara and Mouk with whom the Kabana have battled as recently as the beginning of this century. 'In the language of the Bariai [=Kabana], Longa means: bushman, mountain dweller, stranger, foe' (Friederici 1912:27, my translation). The Kabana today still consider all distinctions among interior peoples to be trivial—all those interior people are *loŋa.* Further east, the Lusi and Kove use the word generically in the same way, while the Aria and Kove also use it specifically to refer to the Tourai.

Since the words on Friederici's original Longa list are suggestive of Mouk and Aria, Chowning (1969; 1976) tentatively classifies Longa as a member of her Lamogai Family, my Bibling group. Presumably using the same data, Allen, Rath and Johnston confidently assure us that 'Ivanga has no relationship to Longa, which is a dialect of Maleu' (1980:191). Clearly, Friederici's Longa does not identify a single language, but is an amalgam of words from various interior languages recorded with features of Kabana phonology. As a linguistic and ethnic label, Longa should be dropped from the literature.

Friederici also mentions Sare as the site of a village of mixed population at the mouth of the Sare river to which both the Kilenge and the Kabana lay claim.

> It is an important site inasmuch as it lies at the beginning of the traderoute over the mountains to the south coast. This path goes through the territory of the mountain people, the Longa, with whom the coastal people live in enmity, but with whom they also conduct trade. A quite small linguistic investigation into Longa, that I conducted second hand, so far demonstrates that, linguistically, the Longa belong to the south coast.
>
> (Friederici 1912:27, my translation)

Our informants claim that a group of Kove, fleeing warfare in the east, settled for a brief period at the mouth of the Sare river before being ousted by the Lolo. From there, the Kove then resettled on the island of Tamuniai, and eventually on Arumigi as well. Sahe, the Kove pronunciation of Sare, now refers to the two Kove-speaking groups that live on the tiny islands adjacent to the Anêm territory. All informants have rejected the idea that Sare or Sahe might refer to another language. Although we should not reject the possibility that a group speaking a distinct language once lived at the mouth of the Sare, at present there is no evidence of such a group, nor do we have any linguistic data substantiating a now-extinct language. Unless such data are found, Sare and Sahe are meaningless as language names.

Capell (1962) also mentions a language called Idne. Until recently, I thought it might refer to some of the Amara-speaking groups said to have fled to the south coast when the Germans first arrived. In a brief personal communication, however, Stewart-Dillon has informed me that the people living along the Idne river constitute a subgroup of the Lolo. More information on the region should be available within the next year or two.

2.14 Tok Pisin and English

Whether the Tok Pisin of NWNB is a pidgin, a creole, or just a young language depends totally on one's defining criteria. In all areas that we visited, Tok Pisin is spoken as one of the languages of primary acquisition; and it is spoken well by most people. Stewart-Dillon (personal communication) reports that Tok Pisin is not as well known, particularly among women and older people, in the Lolo area. Typically, in the rest of NWNB, however, only the elderly of the coastal communities and those older than late middle age in the interior seemed to have some difficulty expressing themselves in Tok Pisin. On several occasions, when a person claimed not to know Tok Pisin, we discovered that this really meant that s/he lacked the narrative skills required for expert story-telling.

Except for the children of a few immigrant couples who occupy government jobs, there are no monolingual Tok Pisin-speakers in NWNB. Nonetheless, the language is acquired along with the local vernacular by children in all communities. So far, I have been unable to detect even a subtle difference between the Tok Pisin of old people who have learned it well as a second language and the Tok Pisin of children who have acquired it as one of their first languages. In 1902, Dempwolff (1905) used Tok Pisin in linguistic research on Tami as did Friederici (1912) on New Britain in 1908. This is evidence that Tok Pisin has been known in the immediate area for over 80 years and that its spread among the people of NWNB has far outpaced it use for communicating with Europeans. According to the criteria outlined later in this work, it is clear that the Tok Pisin spoken in the area has been a creole for decades and that, as such, it is structurally indistinguishable from other so-called 'natural' languages.

If a distinction is to be sought among kinds of Tok Pisin spoken in NWNB, it is not to be found in a pidgin-creole dichotomy, but in correlation with an individual's familiarity with urban Tok Pisin and English. Those who have recently worked in towns or who know English tend to use a vocabulary larded with words copied directly from English, but normally only when speaking with formally-educated people who also know more than the usual amount of English. People who speak only rural Tok Pisin are offended by the pretensions of people who use too many English words in their Tok Pisin.

Nonetheless, the lexicon of even the most rural lects of Tok Pisin is expanding rapidly with words copied originally from English. From English to urban Tok Pisin to rural Tok Pisin, a large number of these words ultimately infiltrate the local vernaculars, sometimes even supplanting endolexical items. For example, among some Anêm speakers, *a-laikim dî tabak* 'I want some tobacco' has replaced the original *ŋi-li dî uas* as the most frequently used form. The rapidity of the process is illustrated by the following example. In 1975, when no one in Karaiai owned a tape recorder, the Tok Pisin for the machine was *masin bilong kisim toktok* literally a 'machine for capturing speech'. Six months later, the word *teprikoda* had supplanted the earlier longer form. By 1978, some people in Karaiai owned a tape recorder and the name for it in both Tok Pisin and in Anêm had been shortened to *tep*. At any rate, it is the experience of the individual with urban culture rather than his/her age or time of acquisition that determines the degree of lexical anglicisation in a person's Tok Pisin. In spite of the massive importation of English words, however, Tok Pisin syntax and semantics remain distinctly non-English.

While English is taught in schools and acts as a source of words for Tok Pisin and local vernaculars alike, it is rarely used in the villages of NWNB. I once heard an adolescent tease a school child saying, 'You have no brains, my son', but never any other spontaneous English. People who have attended school tend to understand more English than they admit to being able to speak. With some of these people, I could sometimes use English to clarify the translation of a vernacular phrase that was difficult with Tok Pisin alone. Aside from those who work in towns, however, people are exposed to English so rarely that even those who have been able to speak it fluently in the past lose their competence in it. In this situation, where most people spend little time away from the village, it would make sense to concentrate on using Tok Pisin rather than English as the major medium of instruction in schools with English being introduced much later for those with aspirations toward more urban careers where English would be required.

As stated earlier, because Tok Pisin is so useful as a lingua franca, it has supplanted the former high degree of multilingualism that was characteristic of the area. Though this trend is cause for concern among some of the elders, most young people, particularly in the coastal villages which speak a language of the Siasi group, are content to speak only their own vernacular and Tok Pisin. On the other hand, it is notable that in those villages where language death is occurring, it is not Tok Pisin that is replacing the moribund language, but another vernacular. Though people recognise the utility of Tok Pisin as a lingua franca, they nevertheless maintain that it is important for everyone to have a distinct vernacular as a badge of group membership. There are small hints that a new pattern may be developing in which the children of people who live outside the village are unable to speak the vernacular. Though this may mark the beginning of a new linguistic era, at present, the phenomenon is still insignificant.

2.15 Language boundaries

Although few linguists would claim that the boundaries between languages are clearly defined in all cases, virtually all linguists treat their data as though this were the case. The languages of NWNB show quite clearly that the boundaries defining individual languages are not entirely linguistic in nature, but also sociocultural. As shown in Chapter 4, all the languages of NWNB, whether NAN, Siasi, Whiteman or Bibling, share

a common grammatical and semantic structure that varies only in detail from one language to another. The major difference distinguishing one language from another in this area is the form of lexical items; and it is on the basis of lexical forms alone that the people of NWNB conceptualise their languages as being different from others.

Even lexically, however, several of the languages are more socially than linguistically distinct from one another. People speaking one language, for instance, may use several words for a single concept; some of these synonyms are identical in form to words of the same meaning in neighbouring languages. Of the list of synonyms used in a particular language, people usually claim one or more as their own, while ascribing the other words to neighbouring languages. For example, most of the languages of the interior have several words and idioms meaning 'wallaby ':

An/*agxoŋ, apose, gauxu, gilibês, kis, natus, paiakaua, sau dî apeŋ, taba poŋ, tîk, zei*
Am/*natus, kope kio**
Mo/*natus, apose, sokolo*
Ar/*apare, apose**
To/*apare**, *apose*
La/*airok, apare, keneŋ*

Those forms marked with an asterisk (*) are considered to be the true words for 'wallaby' in each language; in other cases, the forms are considered to be equivalent. Even though one form may be singled out as the true word in a particular language, all terms are used as alternatives. In Anêm they are used as stylistic variants; particularly in narratives, synonyms are often listed to draw a story out. Similarly, the Mouk use two forms for 'dog ': *oulei* is claimed as the true Mouk word, but *gemle*, the Aria equivalent, is more frequent and is the first offered as the Mouk word before it is corrected to *oulei.* Presumably, in time, *gemle* may be identified by the Mouk as their own word for 'dog'. Furthermore, the use of synonyms from other languages aids in regional communication, while being able to claim one word in a list as emblematic of one's group still allows distinctions between groups to be maintained, at least ideologically.

There are also words with specific meanings that seem to 'float', unconnected with any particular language. For example, the Anêm word *eziêŋ*, which I gloss as 'cultivar', refers to any variety of edible plant that a person discovers in the wild and starts to cultivate in his own garden. The Mouk recognise *edieŋ* as the Aria word for their own *adaŋ*, while the Aria claim that *edieŋ* is the Mouk word for **their** *adaŋ*. Clearly, *eziêŋ, edieŋ* and *adaŋ* are related, but the actual form is emblematic, and no one wants to claim *edieŋ*, a word that they all recognise. It is a word that no linguistic group accepts as part of the 'true' lexicon of their own language.

Distinguishing different languages from dialects of the same language is problematic both linguistically and socially for reasons that are well covered in the literature. From the point of view of native speakers, it also depends on where the information originates. For example, linguistically, Tourai and Aria are clearly dialects of a single language. In New Britain, however, Tourai is considered to be a separate language from Aria by all speakers of Tourai, Lamogai and Aria (except those of Bolo); but it is not distinguished from Aria by any others. In fact, the name, Tourai, was unknown in the Lusi village of Kandoka until 1981, when the data for this survey were being collected. Aria, as spoken on the bank of the Aria river, has a mixture of Tourai vocabulary; the Aria of Denga overlaps in vocabulary with Kove; and the Aria of

Bolo is disowned as true Aria by other Aria speakers who say that the people of Bolo, as a result of proximity to Salkei, really speak Mouk. Meanwhile the people of Salkei say that the people of Bolo really speak Aria. The people of Bolo, on the other hand, claim to be speakers of Anêm—traditionally, this was true. Now, however, only a handful of very old people speak the Bolo dialect of Anêm with anything approaching fluency. Everyone in Bolo recognises that Aria has become the functional language and that Anêm has really been lost here. The coastal Anêm villages know of the traditional relationship between their language and that of Bolo, but say the people of Bolo no longer speak acceptable Anêm. Thus, Bolo, which is said to speak Anêm, Aria, and/or Mouk, speaks no language that is accepted as valid by other speakers of those languages.

Copying foreign technology also adds to the problem of defining the boundaries of the languages in this area. Because the interior people, speakers of Anêm, Amara and the Bibling languages, have no tradition of maritime fishing, they lack the native vocabulary for marine fish, fishing tackle, canoe parts, and so on. Nonetheless, speakers of interior languages, particularly those with recent fishing experience, use a vocabulary for this domain drawn wholesale from whichever Siasi language happens to be closest to their territory. Some, like the Lumusi-Mouk, the coastal Anêm, and the Amara, who have become fisherfolk in the last 40 years, use the vocabulary copied from Siasi languages fully incorporated into their languages. Younger people in these communities may not recognise the source of these words until it is pointed out by older people. In Anêm, maritime terms copied from Lusi have been modified to conform with the phonology of Anêm (see Thurston 1982): Lu/*raŋraŋo* > An/*xaŋxaŋo* 'scorpionfish'; Lu/*kora* > An/*koxa* 'pufferfish'. The Amara have copied their maritime vocabulary from Kabana, sometimes adding a noun-marking prefix: Ka/*kalubia* > Am/*kaluvia* 'barracuda'; Ka/*kureirei* > Am/*okureirei* 'lobster '; Ka/*bakeoa* > Am/*avakeua* 'shark'. In each case, the interior languages use maritime vocabulary wholesale from the nearest coastal language when speaking their own language, while they claim that they are not, strictly speaking, using their own words. Thus, the interior languages use part of the coastal vocabulary as a resource in speaking their own languages. The question is whether this copied lexicon should be included in dictionaries of interior languages when speakers of these languages reject it as their own.

Similarly, all the languages of the area have copied hundreds of words from Tok Pisin, to label (primarily, but not exclusively) items that have come with European contact—government, medicine, mechanics and so on. Often, when speaking a second or third language, people substitute Tok Pisin for lacunae in their vocabulary. Tok Pisin copies have also infiltrated the endolexica of all languages in the area to such an extent that in Lamogai, for example, no one seemed to be able to translate 'I know him' in any way but *ŋa-save ine* where *save* 'know' is a Tok Pisin copy.

The ultimate result of the extensive overlap in lexicon from one language to the next, particularly in the endolexica of related languages, is that people can communicate quite effectively with speakers of other languages, because their vocabulary extends beyond what they consider properly their own language to include numerous words in neighbouring languages as well. This facilitates what Lincoln (1975, 1979) calls dual-lingualism, a system of communication in which speakers of different languages converse with little or no difficulty simply by speaking their own languages. It also makes it easier for a person to actually learn to speak the language of a neighbouring group.

When all one has is a list of words belonging to the endolexicon, languages can look more similar to (or more different from) one another than they do when the total lexicon is viewed. For example, Lusi, Kove and Kabana are all so similar in endolexicon that they appear to be dialects of a single language which differ in only trivial ways. But, in total lexicon, these three are much more divergent than formerly seemed to be the case. In total lexicon, Lusi is most similar to Anêm with which it shares most of its maritime and bush vocabulary. Kabana has drawn much of its ectolexicon from Kilenge, while Kove has yet another source, an as yet unidentified Kimbe language (Goulden, personal communication). As long as communication is about trivial matters, speakers of Lusi, Kove and Kabana can each use their own languages with one another and be understood dual-lingually, but when reference is made to a specific vine or tree, for instance, they might as well be speaking unrelated languages. Consequently, linguists should exercise greater caution to avoid classifying as dialects of a single language what informants consider to be separate languages, especially when the available data are superficial.

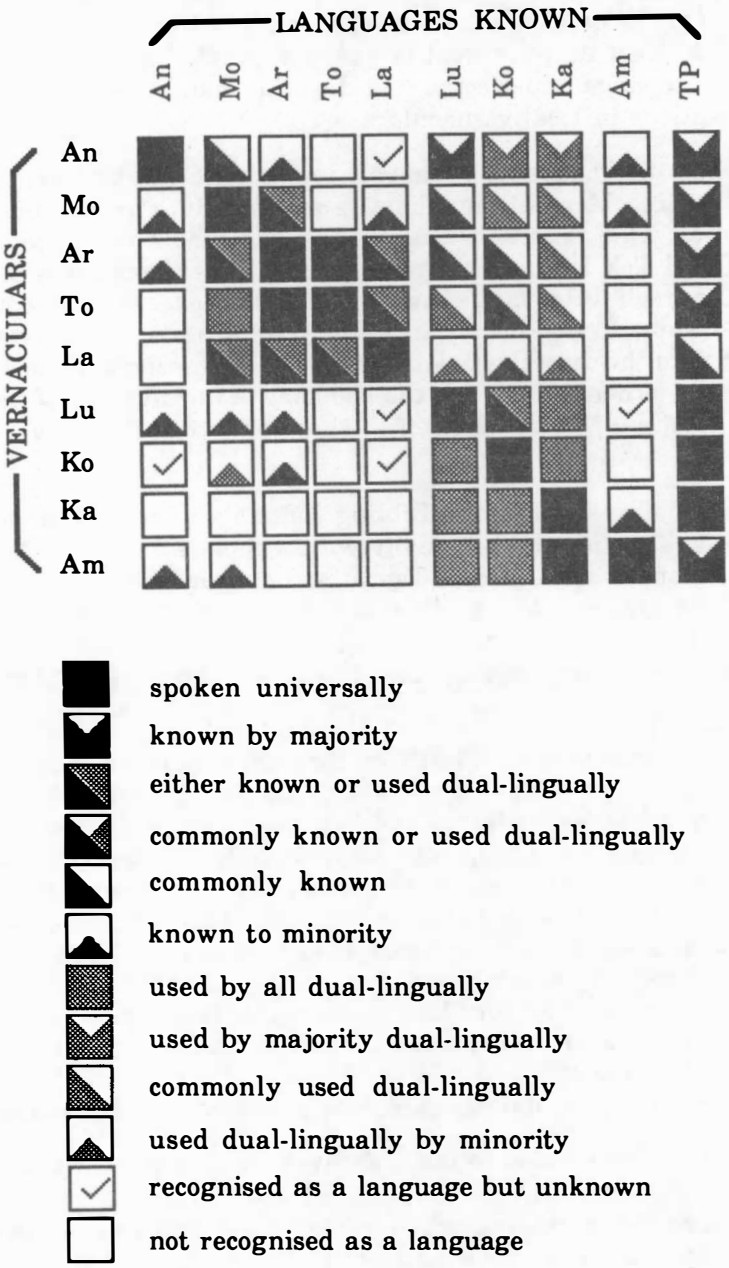
At the same time, even with nearly identical languages like Aria and Tourai, emblematic lexical forms provide each linguistic group with a device to express its ideological distinctiveness. In certain situations, a system of secret-code words (TP/tok hait) is used to accentuate the sociologically-constructed language boundaries when a speaker wishes to block communication channels that would normally be too easy for outsiders to bridge. For example, all ethnic groups have secret names that can be used to talk covertly about visitors. Thus, as pointed out in Laycock (1982), it is primarily by using different sets of words that Melanesians are able deliberately to define small social groups linguistically.

2.16 Multilingualism and dual-lingualism

As in other areas of Papua New Guinea, the people of NWNB tend to know more languages than their own vernacular. To my knowledge, there is no one in this area who is monolingual. Most people speak at least their own vernacular and Tok Pisin. The few very old people who do not speak Tok Pisin well speak other vernaculars in addition to their own. Speakers of languages that are lexically closely related to other languages in the area can usually communicate dual-lingually with speakers of those other vernaculars, not only because the languages are so similar, but also because they have learned to recognise different words in neighbouring languages through interaction with people in other communities. Chart 2.16a illustrates, in gross outline, what people know about the languages spoken by neighbouring groups.

The chart shows that Tok Pisin is clearly the regional lingua franca of the highest order. Anyone younger than about 50 years of age speaks it as one of his/her first languages. One of my informants in 1975, about six years of age, was appointed to babysit me while the men went off to cut timber for flooring; in that time, this boy acted as informant bringing me plants uprooted from the vicinity and telling me in Tok Pisin the use of each plant and its name in Tok Pisin, Anêm, Lusi and Mouk. Serious multilingualism begins early in this area. Those who do not speak Tok Pisin well are usually quite old and more frequently women; they are typically people who have never travelled outside the area and who have never worked for cash. Tok Pisin is so widely known that people express astonishment when encountering anyone who does not already know it.

2.16a Multilingualism and dual-lingualism in NWNB



The Siasi languages function as lingue franche of the second order, being surpassed in this function only by Tok Pisin. Overall, the majority of the people in northwestern New Britain speak at least one of Lusi, Kove or Kabana passably well. Since these languages are lexically very similar, particularly in endolexicon, knowledge of one of the three gives access to dual-lingual communication in the other two. Most of the interior people speak the Siasi language spoken on the coast adjacent to their territory.

Consequently, interior people can communicate dual-lingually with most of the people from Kilenge in the west to the base of the Willaumez Peninsula in the east without resorting to Tok Pisin. On the occasions I have observed, however, most interior people do, in fact, switch to Tok Pisin to avoid dual-lingualism, partly because they would be embarrassed speaking a language imperfectly. On the other hand, they enjoy being able to eavesdrop on conversations in local vernaculars.

People who speak Siasi languages as their vernacular tend not to learn any other language besides Tok Pisin. Mere bilingualism is apparently a recent phenomenon even in these communities. One venerable Lusi man admonished a youth, saying: "You can't just rely on Lusi and Tok Pisin. You have to learn other languages too; or else some day you'll find yourself in a men's house; and everyone around you will be talking; and before you know it, you'll find an ax in your head." Non-coastal peoples tend to be more polyglot than the coastal people. In this, the Lusi resemble interior peoples to a greater extent than do either the Kove or the Kabana. A fair number of Lusi have a passable knowledge of Aria, and, on the basis of this, are able to follow conversations in Mouk.

In the basin of the Aria river, the four Bibling languages are similar enough in endolexicon that they also function dual-lingually within their subregion. As with the Siasi languages, knowing one of Mouk, Aria, Tourai or Lamogai gives limited access to understanding any of the others. Mouk, Aria and Tourai are especially similar in endolexicon. Moreover, Lamogai is lexically almost identical with Ivanga and Rauto, so that the usable range of these languages in dual-lingual communication extends to the south coast.

Anêm and Amara are distinctive in NWNB in that they have no value as lingue franche whatsoever. Since there are no languages with similar endolexica spoken in the area, each is functionally an isolate, because neither can be used dual-lingually with any other language. Learning one of them is of little help in understanding other languages. The few members of other vernacular groups who also speak either Anêm or Amara are invariably close kin who participate intensively in Anêm or Amara activities. The Aria who speak Anêm are limited to Bolo, Gogola and Denga villages. A large number of Mouk, however, speak Anêm, as the two linguistic groups have a traditional cultural relation probably of very long standing. It is also noteworthy that all Anêm and Amara speak some other vernacular, usually a Siasi language. The Anêm who do not know Lusi well, invariably know either Mouk or Amara or both. All Amara speak Kabana, while those living in Malasongo village also speak Anêm and/or Mouk.

One of the most salient observations to be made about the uses of the various languages in the area is that those languages with the greatest currency as lingue franche are also among the structurally-simplest languages, while the languages with no value as lingue franche are structurally complex. The people adjacent to Anêm and Amara say that these languages are just too difficult to learn unless one is born in a village speaking one of them. I would suggest that this correlation between value as a lingua franca and simplicity is not accidental, that one is a function of the other.

2.17 Phonological outlines

All the data presented here are given in phonemic notation, which corresponds to the orthographies proposed for each of the languages. The symbols *ê*, *î* and *ŋ* are the only ones used which are not, strictly speaking, part of the standard Roman alphabet. The ŋ is required rather than *ng* because it is an extremely high frequency phoneme in all NWNB languages, and because several of the languages have contrasts among *[ŋ ng nk ŋg ŋk]*. The vowels *ê* and *î* are required for the back unrounded vowels of Anêm. Otherwise, most symbols have close to their expected values.

2.17a NWNB Consonant Phonemes

An.	Mo.	Ar.	To.	La.	Lu.	Ko.	Ka.	Ki.	Am.	
p	*p*	*p*	*p*	*p*	*p*	*p*	*p*	*p*	*p*	voiceless bilabial stop
t	*t*	*t*	*t*	*t*	*t*	*t*	*t*	*t*	*t*	voiceless apical stop
k	*k*	*k*	*k*	*k*	*k*	*k*	*k*	*k*	*k*	voiceless velar stop
b	*b*	*b*	*b*	*b*			*b*	*b*	*v*	voiced bilabial stop/fricative
d	*d*	*d*	*d*	*d*			*d*	*d*	*d*	voiced apical stop/fricative
g	*g*	*g*	*g*	*g*			*g*	*g*	*g*	voiced velar stop/fricative
					b	*b*				prenasalised bilabial stop
					d	*d*				prenasalised apical stop
					q	*q*				prenasalised velar stop
					v	*v*				voiced bilabial fricative
z					*z*	*z*				voiced apical slit fricative
					g	*g*				voiced velar fricative
s	*s*	*s*	*s*	*s*	*s*	*s*	*s*	*s*	*s*	voiceless apical sibilant
					h	*h*				glottal fricative
m	*m*	*m*	*m*	*m*	*m*	*m*	*m*	*m*	*m*	bilabial nasal
n	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	apical nasal
ŋ	*ŋ*	*ŋ*	*ŋ*	*ŋ*	*ŋ*	*ŋ*	*ŋ*	*ŋ*	*ŋ*	velar nasal
l	*l*	*l*	*l*	*l*	*l*	*l*	*l*	*l*	*l*	apical lateral
r		*r*	*r*	*r*	*r*	*(r)*	*r*	*r*	*r*	apical trill
x	*x*									postvelar trill

As shown in chart 2.17a, the consonant inventories of NWNB languages are fairly straightforward. The prenasalised stops in Lusi and Kove are extremely rare, especially in the endolexicon. The *q* has been chosen using Fijian as a precedent. Amara has *v* where one would expect *b* because the fricative allophone of this phoneme is much more frequent than the stop, and because our informants expressed a strong preference for *v*. Lusi has z for Counts' (1969) *r [ɹ]* and r for his *r̃ [r̃]*. In all languages with plain voiced stops *b d g [b d g]*, these frequently alternate with fricative allophones *[β ɹ ɣ]*. The trills in all languages have both voiced and voiceless allophones conditioned by the immediate environment, as, for example, in An/*mîxmîx* 'wasp' *[mɯʀmɯχ]*. In the Bibling languages, a non-distinctive homorganic stop is inserted after nasals that occur before trills—for example, Ar/*em-ris* 'you-bathe' *[embr̃is]*, and La/*tanra* 'its skin' *[tandr̃a]*. In Anêm, the voiced apical fricative *z* varies greatly from speaker to speaker within a range that includes a slit fricative *[ɹ]*, sibilants *[z ž]* and affricates *[d^z ǰ]*.

2.17a NWNB vowel phonemes

An.	Mo.	Ar.	To.	La.	Lu.	Ko.	Ka.	Ki.	Am.	
a	*a*	*a*	*a*	*a*	*a*	*a*	*a*	*a*	*a*	low central unrounded
e	*e*	*e*	*e*	*e*	*e*	*e*	*e*	*e*	*e*	mid front unrounded
i	*i*	*i*	*i*	*i*	*i*	*i*	*i*	*i*	*i*	high front unrounded
o	*o*	*o*	*o*	*o*	*o*	*o*	*o*	*o*	*o*	mid back rounded
u	*u*	*u*	*u*	*u*	*u*	*u*	*u*	*u*	*u*	high back rounded
ê										mid back unrounded
î										high back unrounded

All the AN languages of NWNB have a standard five-vowel system. In addition to these, Anêm has two back unrounded vowels. The symbols *ê* and *î* have been chosen because, in some words, they alternate with front unrounded vowels, as in An/*êkîs* or *ekis* 'rotten', the former used primarily by men and older people, the latter used mostly by women and younger people (Thurston 1976). Mouk, the language closest to Anêm, has back unrounded vowel phones as allophones of the front unrounded vowels; these occur before *x*, as in Mo/*basex* 'pour' *[basɤχ]* and *neŋix* 'growl' *[neŋɯχ]*. All the languages of the area have an array of diphthongs including *ei, ou, au* and *ai*. In Kilenge, the distinctions between *e* and *ei,* and between *o* and *ou* have been misinterpreted as a distinction between *[ɛ]* and *[e]* and between *[ɔ]* and *[o]* respectively in Dark and Dark (1977) and in Haywood and Haywood (1980). In all of the NWNB languages, mid and high vowels also have non-syllabic allophones in the environment of lower vowels, as in Lu/*kaua* 'dog' *[kaɻa]* and Lu/*kaoa* 'bird sp'. *[kaǫa]* (Goulden, person communication). Stress patterns in running speech have not been worked out in detail for most of the languages, but for words pronounced in isolation, stress is usually penultimate in all languages.

Chapter 3

GLOTTO-ONTOGENY

3.1 Linguistic life cycles

The standard model of the genesis and ontogeny of individual languages holds that, in normal circumstances, languages emerge gradually as dialects of their ancestral language become more and more divergent. In this model, there is no abrupt beginning of a language but a slow continuous drifting apart of dialects. Moreover, languages rarely become extinct, but live on in the form of their descendants. In this view, pidginisation and creolisation are abnormal processes resulting from abnormal sociological situations and producing subnormal linguistic codes. At the same time, decades of research have failed to reveal any feature that clearly distinguishes so-called creoles from 'natural' languages. The only obvious features of a known creole are that: (1) it looks lexically similar to the target language on which it is based, and (2) in comparison with the target language, the creole is grammatically simpler. Since very few languages have a long written history, 'we 'can never know how many of the 'normal' languages of the world originated via [the] pidgin-creole process' (DeCamp 1971:16). In view of this, the standard model of language diversification needs to be re-evaluated.

It would be most startling if anyone could actually rally enough facts to demonstrate convincingly even a single instance of language diversification according to the standard family tree model. The divergence of Latin into the Romance languages is the archetype of the model; and it has been assumed to be an accurate picture for so long that it is difficult to avoid mapping it conceptually onto the rest of the world, let alone to doubt its appropriateness in the first place. Superficially, it is easy to see the Roman Empire spread Latin across Europe, and to find a logical connection between the fragmentation of the empire and the emergence of several Romance languages. The gradualness of the transition from Latin to French or from Saxon to English, however, has been inferred from specimens that change little from century to century as long as they are being used continuously, but which are radically altered if there has been an interruption in the sequence. The traditional data consist of specimens of different languages with the hypothetical gradual transitions between them reconstructed. No extant body of data, for instance, leads to an inescapable conclusion that the transition between Saxon and English occurred gradually during the 200 years when Norman French was the court language of Britain. On the contrary, early forms of English look remarkably like Saxon simplified by the French (Bailey and Maroldt 1977). The evidence argues strongly

in favour of the hypothesis that all languages have abrupt beginnings as pidgins; far from being a freak occurrence in erratic social circumstances, pidginisation is the normal process through which new languages emerge. Just as intergroup contact is historically commonplace, so are its linguistic consequences.

If all languages are ultimately 'creoles', then all languages should be simple. Indeed, an inherent pressure to simplify language, motivated by the tendency of people to be as economical in their pronunciation as possible without disrupting communication, is said to be a major factor causing languages to change. Loss of inflections is a common example, but this can be understood more readily as a function of pidginisation rather than as an inherent phonological weakness of affixes. If inflections are doomed by gradual phonological processes, then languages such as Icelandic and Lithuanian should have dispensed with their paradigms long ago. The reason all languages are not simple is found in a set of processes that act in the reverse direction from pidginisation. This is especially true of languages used primarily for intragroup communication, and consequently transmitted directly from generation to generation in stable social systems. This type of change builds complexity into the language, not because it is required for the psychological health of its speakers, but for numerous reasons having to do with, on one hand, the greater phonological efficiency afforded by assimilation and contraction and, on the other, the lack of pressure to avoid complexity.

Languages in general, not just pidgins (Hall 1962, 1966), have life cycles. New languages emerge when a population of adults has to learn a foreign language. Without formal instruction, they do this badly—they learn some words in the target language and string them together in the simplest way they can to get their messages across. At least in the initial stages of contact, the general population is more concerned with being understood than with social integration into the foreign group. The result is a practical lingua franca, simple in structure and easily learned by others. In the appropriate circumstances, it can become established as a language in its own right, and eventually, the language by which a group might identify itself. If it continues to be used as a lingua franca, the simplicity of its original structure is maintained because of the requirement that it be easily learnable by outsiders. If it becomes emblematic of a group's distinctiveness from others, however, it is subject to different forces of change which are, for the most part, gradual.

A language which is learned primarily by children as the language encoding their ethnic identity is under no requirement to be structurally simple—children have no difficulty learning complex languages. Contractions make it possible to utter more morphemes in a shorter time; and assimilation makes words pronounceable with less effort. Words copied from another language can be copied along with the morphology of that language adding to the overall morphological complexity. Originally optional marking of gender, aspect and the like may become obligatory over time. Words may be displaced semantically to replace slots formerly occupied by transparent compounds to produce greater suppletion. Frequently used metaphors may become clichés and idioms. In all, the longer the established tradition for such a language, the greater the possibility of an accumulation of right and wrong ways of stringing words together that have less to do with getting a message across than marking one as a member of a particular group. If these processes make a language more difficult for outsiders to learn, then they also make the language a better badge of the group. Outsiders who attempt to learn such a complex language are usually marked for life by their accents as immigrants.

Thus, there are two general categories of linguistic change—simplification, associated with use as a lingua franca; and elaboration, a function of linguistic emblematicity. The model of glotto-ontogeny outlined above is congruent with the languages of NWNB. Those languages in the area that function as lingue franche—the Siasi group and Tok Pisin—are structurally the simplest; while those with no value as lingue franche—Anêm and Amara—are the most complex. The pattern is quite clear here, partly because of the small-scale, egalitarian social organisation, and partly because of the lack of a literacy tradition of the kind that has complicated the view of diachronic studies in European languages. In the subsequent sections of this chapter, evidence is drawn from the languages of NWNB in support of aspects of the model proposed here.

3.2 The processes of language change

Pidgins, creoles and natural languages are intellectual artifacts that cannot be neatly characterised so that it might be possible to identify the typological classification of a language by looking at the linguistic data alone. The processes that act upon languages, however, seem to be real. Since the same terms are used variously throughout the literature, it is necessary to define the meaning of the terms as used here.

Pidginisation is a process whereby an adult creates a lingua franca by using the words of someone else's language, one that s/he does not know. Unlike children, adults are generally poor language learners, especially if they are under pressure to begin communicating quickly. Children have both the neurological plasticity and the duration of their childhoods to acquire any language(s) that happen to be spoken in their environment. In a process of pidginisation, speakers of the language which is the source of lexical forms may aid in the creation of a lingua franca by resorting to simplified registers of their own language—foreigner talk, baby talk, telegraphic speech and the like. Since the learner and the speaker of the donor language may not share the same culturally constructed worldview, each one uses the lexical forms of the lingua franca in a way that is semantically congruent with his/her own native language. For example, in the process of pidginisation that has led to Tok Pisin, English 'sister' has become TP/*sisa* which means *cross cousin or sibling opposite sex*, while English 'brother' has become TP/*brata* with the meaning of *parallel cousin or sibling same sex*. In each case, the Tok Pisin meaning is more congruent with Melanesian kinship systems. Some expatriates living in New Britain use a pidginised form of Tok Pisin, Tok Masta, in which they use sista (=TP/*sisa*) and *brata* with the meanings of their English counterparts. As a consequence, Tok Masta-speaking expatriates have incorrectly come to the conclusion that Niuginians do not know who their brothers and sisters are, a misconception that implies insidious volumes of other misconceptions. In the initial stages of the creation of a lingua franca, moreover, each group uses the words according to the syntax of its own native language. Any success in normalising either the semantics or the syntax of the emergent lingua franca constitutes creolisation, a process that may be set into action well before pidginisation has ceased.

As used here, creolisation is a process in which prescriptive rules are established for the use of a new lingua franca. This is, admittedly, a departure from the usual use of the term to refer to what children learning a 'pidgin' supposedly do to convert it, via primary language acquisition, into a 'creole'. I have yet to be convinced that children play any

significant rôle in major processes of language change. By the time children arrive on the scene to become the first generation of monolingual speakers of a new lingua franca, what they acquire has already been creolised by adults to such an extent that it constitutes a language in its own right. Except for the striking regularity that makes them very easy even for adults to learn, what are called creoles are structurally indistinguishable from so-called natural languages, some of which, Lusi and Kove, for example, are equally regular and uncomplicated in their grammatical structures.

Indigenisation, rather than creolisation, would be a preferable term for referring to the establishment of a new lingua franca as the primary language of a group of people. This process, however, is more sociological than purely linguistic. Through indigenisation, lingue franche which might have disappeared with the situation that fostered them eventually become part of the culture, emblematic of a new ethnic group. Creolisation and indigenisation work together to provide speakers of the language with the lexical inventory required to encode the culture of its speakers. As long as the new language functions primarily as a lingua franca, the simplicity of its structure is maintained.

If, however, the rôle of lingua franca becomes so unimportant that the language becomes primarily a vehicle emblematic of the group's separate identity, another process, esoterogeny, is set into action. By definition, lingue franche are exoteric languages; consequently, they must be easy for neophytes to acquire. In Melanesia, groups commonly use language to set themselves off as distinct from surrounding groups (Laycock 1982). Passed on from generation to generation, the language of such a group can become increasingly complex. In esoterogeny, emphasis is placed on:

(1) phonological efficiency at the expense of morphological transparency,
(2) elaboration of terminology to make subtle distinctions,
(3) concomitant replacement of regular derivational forms with suppletives,
(4) augmentation in the number of opaque idioms, and
(5) the entrenchment of prescriptive traditions that limit the flexibility of the language.

Such subprocesses lead to a language that is esoteric, in that it is not intended to be easily learned by outsiders. In NWNB, Anêm and Amara are esoteric languages while Lusi, Kove and Kabana are exoteric.

In simple linguistic life cycles, the final process comes when a language is no longer valued suffiently by its community to be maintained. When a person ceases to use a language, even a language of primary acquisition, that person's competence in the language atrophies. For example, when one Tolai woman married into an Anêm community, after more than a decade, her Anêm was fluent and quite intelligible, but heavily accented, ungrammatical and unidiomatic. By that time, however, her competence in Tolai was so poor that she experienced grave difficulty in speaking with the Tolai nuns who had taken over the neonatal clinic circuit from expatriates. They quickly switched to Tok Pisin. When this process happens in a whole community, such as in the village of Bolo, the structure of the former vernacular becomes a simplified calque based on the language most frequently used. Then only a few words and formulaic phrases are remembered, and the language becomes extinct. Once the process of atrophy sets in, any attempt to resurrect the language can result in only a revised

system, because, in this phase, the dying language has become a foreign language even to those whose ancestors used to speak it (Dorian 1983).

During a more complicated linguistic life cycle, the people who use the language may go through numerous sociological periods in which their language is used alternately for esoteric and exoteric functions. Speakers of an esoteric language may adapt their language for use as a lingua franca by developing a special simplified register for speaking with foreigners. In large linguistic communities, the exoteric register, such as foreign talk, may be maintained alongside the esoteric register, but in small-scale communities, such as those typical of New Britain, it is probably more likely for an exoteric register to replace the original from which it is derived. Presumably, a language may even have a near-death experience, in which a language undergoing atrophy is revived when its speakers come to value it again. In any case, the degree of simplicity in the structures of a language at any time reflects its most recent predominant functions. In small communities with no literate tradition, complicated languages are not used for exoteric functions, while structurally simple languages used for esoteric functions become increasingly complex over time.

3.3 Linguistic gradualism and punctuated equilibrium

Historical linguistics emerged in a cybernetic relationship with geology and evolutionary biology, all three construed within a scientific paradigm of gradualism. Following the principle of uniformitarianism, it would have been considered unscientific to evoke a mechanism of change that operated in the past, but not in the present, to account for change. The scientist was not supposed to appeal to floods and other acts of a wrathful deity when great changes could be accounted for by currently observable processes. Given enough time for the results of slow, gradual and continuous change to accumulate, even massive changes could be accomplished with barely perceptible processes. As long as the earth was thought to be only a few thousand years old, the great age of the universe was one of the most difficult concepts for Lyell and Darwin to defend. Once that battle was fought, it would take another scientific revolution to purge dogmatic gradualism from the disciplines in which it became entrenched.

Largely as a result of the writings of Stephen Jay Gould (1977, 1980, 1983), this revolution is now well under way in evolutionary biology where the new model, punctuated equilibrium, has led to a rethinking of evolutionary theory. This has happened in tandem with geology where natural catastrophes are now taken into account in the explanation of change. In biology, the model of punctuated equilibrium more accurately reflects what is found in the fossil record—namely, that each species appears suddenly (in geological time) in the fossil record, changes little during its tenure on earth, and disappears just as rapidly (Gould 1980:182). Furthermore, the appearance and disappearance of fossil forms tend to be marked by fossil gaps: periods when numerous species seem to have become extinct at the same time, presumably as a result of large-scale natural catastrophes. During these periods, evolutionary change is accelerated because it can operate on tiny populations where mutations (particularly karyotic mutations) have a greater chance of surviving. Once readapted to the new environment, successful species increase in numbers to the point where most mutations are diluted in the larger population before they can become established. With proper adjustment to the cultural nature of linguistic material, the model of punctuated equilibrium would be a

better model to account for linguistic change than the gradualist models that now dominate the discipline.

Linguistics has lagged behind other disciplines; its scientific paradigm is predominately within the traditions of the nineteenth century. Unfinished business in historical linguistics has been especially neglected because glottodiachrony has been deemed uninteresting, or, at least, unfashionable in post-Chomskyan linguistics. Now, thanks to the emergence of sociolinguistics, it has become respectable to devote research energy to the study of the languages called pidgins and creoles. Once the anomalous nature of these languages is reconsidered, it is possible to get on with bringing historical linguistics into line with the general twentieth century scientific paradigm.

The syllogism of traditional glottodiachrony leading to gradualism is simple and logical—we know from written documentation that languages change; children and grandparents can communicate in the same language without difficulty; therefore, language change must be gradual. This model is adequate as long as one restricts the universe of data to only those instances in which a language is transmitted across generations within a continuous tradition. What it does not take into account, however, is the situation in which new traditions are built out of the material of a foreign culture. Ironically, these are the very situations that have been the focus of most research in historical linguistics, but they have been misconstrued as instances of language change within a continuous tradition, when they really represent punctuations. To speak of Latin gradually becoming French or Saxon gradually becoming English is a failure to recognise that the crucial data supporting the gradualism of the change do not exist—the missing links are all reconstructions. The hypothesised stages intermediary between Saxon and English or Latin and French are not documented, nor is such evidence likely to be found. In each case, the transition took place rapidly—for English, it took fewer than 200 years maximum. In each case, during the transition, the forms that would eventually become English or French would be considered bastardised languages, poor reproductions of the originals, unworthy of the expense of parchment and ink to record them. We have evidence of nineteenth and twentieth-century forms of pidginised English largely because English-speaking authors considered them to be valuable as humour and as evidence of their own superiority. Such support was needed to help justify colonialism.

This extended discussion of European languages has been necessary because, without re-evaluating the data on which current models of linguistic change are based, there is no hope of interpreting the data from New Britain correctly. The challenge to historical linguistics is now to integrate the processes that result in what we call pidgins and creoles into a general model of linguistic change in which these languages are no longer anomalies.

3.4 Egalitarianism and linguistic structure

In direct contradiction to our senses, linguists usually espouse the dogma that all languages are equally complex—there are no simple languages. They also tend to exhibit horror when this view is challenged, often dredging up the mystic argument that any language compensates for simplicity in one area with elaboration in another. That is, while a language may be phonologically simple, it has an extra dose of complexity in its morphology or semantics to even things out. I do not know the original source of this

argument, but it is the most common rebuttal submitted. The same linguists, however, always concede that pidgins/creoles are simple, but these do not really count as 'natural' languages. The term 'simple' is unfortunately loaded in the direction of implying simple-minded or primitive, and in this reading, I would certainly concur with the majority of linguists that there are no simple-minded languages. The efforts of linguists in demonstrating the rich complexity of non-European languages are laudable insofar as they are aimed at combating bigotry. On the other hand, egalitarian ideology should not prevent us from seeing and reporting what we find in our data. Oddly enough, linguists never seem to refrain from reporting that a language is highly complex. It is as though 'simple' were pejorative and 'complex' complimentary, when, surely, the relative simplicity or complexity of a language is morally and aesthetically neutral.

By way of terminological definition, the simplest language would have a perfect one-to-one correspondence between a unit of meaning and the form encoding it. It would have no stylistic or sociolectic variation. It would have the fewest possible number of grammatically marked obligatory distinctions and a small morpheme inventory from which the full lexical inventory could be predictably derived by a small set of regular derivational rules. Taking full advantage of analogy, each rule would be applicable wherever it made logical sense; and there would be one rule per function. The most complex language, on the other hand, would have all the things we use to torture students of introductory linguistics—allophony, allomorphy, unpronounceable consonant clusters, gratuitous morphophonemics, and unpredictable suppletion. It would have an enormous morpheme inventory with many near-synonyms differing in slight shades of meaning with implications of degrees of formality and socioeconomic status. The most complex language would also have a lexicon which relied heavily on a large number of opaque idioms.

Speaking a simple or complex language has nothing to do with structural limitations that might inhibit the possible expression of messages appropriate to the culture encoded in the language. The speaker of a simple language, however, is more likely to know his/her language completely, whereas the speaker of a complicated language requires a great deal of esoteric knowledge and experience to be able to use it elegantly. Whereas the simple-language speaker can easily put novel ideas into words that are immediately understood and acceptable to others, the speaker of a complex language is more constrained in expression by the degree to which s/he knows the language, because s/he cannot necessarily know whether a made-up construction is already reserved for another meaning, or whether the form s/he wants is derivationally suppletive. Simple languages are easy to learn as second languages, whereas adults may never learn to speak a particularly complex language in a manner remotely acceptable to native speakers. Adults speaking a complex language as a second language can often make themselves understood to native speakers, but the code they use is broken or heavily accented. In most cases, people who speak complex languages as second languages are linguistically marked as outsiders.

On the basis of these criteria, the languages of NWNB can be arranged on a rough scale from relatively simple to relatively complex. The people who speak these languages also make the same judgements and come to the same conclusions as I do. From most complex to simplest, the languages of NWNB can be arranged as follows:

MOST COMPLEX	INTERMEDIATE	SIMPLEST
Anêm	Mouk	Kabana
Amara	Aria	Lusi
	Tourai	Kove
	Lamogai	Tok Pisin
	Kilenge	

Tok Pisin and languages of the Siasi group are the simplest languages in the area; moreover, all of them function as lingue franche. Those with no value as lingue franche—Anêm and Amara—are the most complex; while languages of the Bibling group are intermediate. Within each list, the languages are also arranged so that the most complex languages head each list. The classification also corresponds roughly to the sequence in which each language has arrived in NWNB—Anêm first, the Bibling group later, the Siasi group quite recently, and Tok Pisin within the last century. Whether Amara precedes or follows the Bibling group is still unclear.

In the following sections of this chapter, evidence is presented to illustrate the relative simplicity and complexity of the languages of NWNB.

3.5 Subject prefixes

In the vernaculars of NWNB, pronominal inflection follows the same basic rules. In all NWNB languages, verbs are defined as those stems that occur with a limited inventory of pronominal prefixes marking at least the person and number of the subject. In all except Anêm, there is a seven-way contrast in the pronominal prefixes that occur with verbs. These are shown in 3.5a.

3.5a Subject Prefixes in the Austronesian Vernaculars

	1s	2s	3s	1n	1x	2p	3p
Mo.	*ŋA-*	*Am-*	*Ø-*	*tA-*	*(i)mA-*	*(u)mA-*	*ti-*
Ar.	*ŋA-*	*Am-*	*Ø-*	*tA-*	*(i)mA-*	*mA-*	*ti-*
To.	*ŋa-*	*om-*	*Ø-*	*tA-*	*(i)mA-*	*mA-*	*ti-*
La.	*ŋa-*	*(o)m-*	*Ø-*	*ta-*	*mi-*	*mu-*	*ti-*
Lu.	*ŋa-*	*u-*	*i-*	*t-*	*via-*	*a-*	*ti-*
Ko.	*ŋa-*	*u-*	*i-*	*ta-*	*ia-*	*a-*	*ti-*
Ka.	*na-*	*Ø-*	*i-*	*ta-*	*a-*	*a-*	*ti-*
Ki.	*na-*	*ku-*	*i-*	*ta-*	*em-*	*a-*	*ti-*
Am.	*A-*	*(k(u))-*	*i-*	*tA-*	*am-*	*kA-*	*ki-*

Lamogai and languages of the Siasi group are simpler than the other languages in that the subject prefixes are invariable. The other languages require a morphophonemic rule to account for the fairly regular alternation of the vowel in the prefix, which assimilates to the first vowel of the stem as follows:

A --->	*e*	*/__$ [e,i]*	e.g. Mo/*ŋe-inim* 'I drank it'
	o	*/__$ [o,u]*	e.g. Mo/*ŋo-doŋ* 'I sat down'
	a	*/...*	e.g. Mo/*ŋa-la* 'I went'

Tourai is intermediate between Aria which has pervasive vowel harmony in its subject prefixes and Lamogai which has none. Though minor in effect, the Tourai perceive this as a major isogloss differentiating their language from Aria and one which makes their language easier to learn. It was observed, however, that in practice the Tourai are not consistent in avoiding the vowel harmony. Except in Amara, parentheses in 3.5a indicate that the segment is optional. In Mouk, Aria and Tourai, the contrast between first person exclusive and second person plural is neutralised in most cases, but available where the constrast is contextually important. In Amara, some verbs in the second person singular occur with *ku-*, some with *k-* and others with *Ø-*. This allomorphy appears to be phonologically conditioned, but sociolinguistic factors may also be involved.

Where all the other vernaculars have a maximum seven-way contrast in subject prefixes, Anêm has a more complicated system with a larger inventory of forms which mark more obligatory distinctions than are possible in the other languages of the area.

3.5b Subject prefixes in Anêm

	1s	2s	3m	3f	1p	2p	3p
REALIS (R)	*a-*	*nI-*	*u-*	*i-*	*mI-*	*ŋI-*	*i-*
IRREALIS (Q)	*da-*	*nE-*	*do-*	*dE-*	*mE-*	*ŋE-*	*dE-*
IMPERATIVE (I)			*o-*	*E-*			*E-*

Though the Anêm subject prefixes do not make a distinction between inclusive and exclusive in the first person plural, they are, nevertheless, much more complicated than any of the Austronesian languages in making obligatory distinctions of mood and in having distinct forms for masculine and feminine in the third person singular. The realis forms are used for real events that have either occurred or are in progress. I also have a single instance of the realis in a text being used as a second person imperative in a situation that is insistent and threatening: An/*nî-uai-k-î* 'You are going to tell me about it!', where normally one would find An/*nê-uai-k-î* 'Tell me about it'. The irrealis forms are used for events that have not occurred or that are hypothetical, usually conditions and futures. Imperatives, in which the subject is not third person, also appear in the irrealis; third person imperatives have a special form. (In the example below, *na-k* 'you will go' is irregular.)

An.	*na-k*	*nê-uai-l*	*tita-nî*	*o-mên*	*o-sêm*	*uor.*
	2sQ-go	2sQ-tell	father-your	3mI-come	3mI-sleep	here
	'Go tell your father to come sleep here'.					

An.	*nê-l*	*lam*	*sê*	*omba*	*ê-mên*	*da-k-êm.*
	2sQ-get	lamp	the-f	big	3fI-come	1sQ-light-her
	'Get the big lamp and bring it for me to light'.					

The few people from other linguistic groups who have learned Anêm as a second language invariably muddle distinctions of mood and gender. For regular Anêm verbs,

two morphophonemic rules are required to account for the vowel harmony in the prefixes. The principles are similar to those in Amara and the Bibling languages, but more complicated by virtue of the larger vowel inventory of Anêm.

E --->	*e*	/__$ *[e,i]*	e.g. An/*ne-ke-l-e* 'look at me'
	o	/__$ *[o,u]*	e.g. An/*no-ko-l-o* 'look at him'
	ê	/...	e.g. An/*nê-kê-l-êm* 'look at her'
I --->	*i*	/__$ *[e,i]*	e.g. An/*ni-ke-l-e* 'you saw me'
	î	/...	e.g. An/*nî-ko-l-o* 'you saw him'
			e.g. An/nî-kê-l-êm 'you saw her'

While the Siasi languages generally have a maximum of seven morphs in the inventory of subject prefixes, Mouk has 17 and Anêm has 34, excluding irregular forms. Even in regular verbs, allomorphy adds to the burden of learning both to produce and to recognise the correct forms. Though the prefixes in Mouk and Lusi make the same number of distinctions, no information beyond group membership is transmitted in the greater allomorphy of Mouk.

3.6 Anêm verbs with plural subjects

Of all the languages of NWNB, only Anêm has a special suffix to indicate that the subject is plural. This suffix, *-îl, -ul, -il* or *-l* in form, is used with only some, but not all, intransitive verbs. The occurrence of this suffix is not predictable from either the form or the meaning of the verb. The allomorph *-l* regularly occurs with vowel-final stems; the vowel in the other three allomorphs assimilates to the last vowel in the stem, with *-îl*, the base form, frequently occurring where one would expect either *-ul* or *-il*.

An.	*u-glîk*	'he vomited'	*i-glîk-îl*	'they vomited'
	u-gêx	'he went down'	*i-gêx-îl*	'they went down'
	u-sim	'he returned'	*i-sim-il*	'they returned'
	u-kei	'he went in'	*i-kei-l*	'they went in'
	u-bazê	'he smiled'	*i-bazê-l*	'they smiled'

This morpheme may seem like a useless but innocuous affix, but several complexities involved in its distribution make Anêm even more difficult to learn to speak properly. First, several of the allomorphs of the plural-subject suffix are homophonous with some of the pronominal object suffixes (discussed in 3.8) used with transitive verbs.

An.	*u-ies*	3m-dig	'He's digging'.
	i-ies-il	3p-dig-p	'They're digging'.
	u-ies-il êbîk	3m-dig-it hole	'He's digging a hole'.

Second, several verbs undergo stem syncope or suppletion when the plural-subject suffix is added. In 'bathe', syncope is optional: An/*da-ŋak* 'I'll bathe', *mê-ŋak-îl* or *mê-ŋal* 'Let's bathe'. Verbs with suppletive stems include *-k/-ul* 'go' and *-sêm/-tel.* 'sleep'. Finally, the plural-subject morpheme is yet one more tiny morpheme that outsiders must learn to recognise and produce if they are to speak acceptable Anêm. The following example illustrates this: *i-n-î-m-ak-îl* 'They copulate' is composed of *i-* 3pR, *-n-* 'copulate', *-î them*, *-m* 'reflexive', *-ak* 'reciprocal', and *-îl* 'plural-subject'.. In this example, the stem is overwhelmed by the affixes. Since this complexity is not unusual in Anêm, the

result is that Anêm is much more complicated to learn in secondary language acquisition than a simpler language like Lusi or Tok Pisin.

3.7 Possessive affixes in the AN languages of NWNB

As is common elsewhere in Melanesia, all the languages in this area have a basic three-way distinction in possessive constructions, roughly according to whether the possessed noun is inalienable, edible or neutral. Although the forms marking these contrasts have several other functions, these three categories capture the focal distinctions. All Anêm possessive pronominal distinctions are indicated with suffixes bound directly to the nominal stems. The AN languages have the same or similar constructions for inalienable nouns but, in the other two categories, particles with suffixes are preposed to the noun. These preposed particles, marking the edible and neutral categories, are called auxiliary nouns here; they can be used alone in roughly the same way as possessive pronouns are used in English. In structure, they are almost identical to inalienable nouns, as for example, in Lu/*legu* 'it's mine' (neutral) and Lu/*agu* 'it's mine' (to eat).

Lu/*mata-gu* 'my eye'
Lu/*a-gu gaea* 'my pork'
Lu/*le-gu gaea* 'my pig'

Mo/*omto-gu* 'my eye'
Mo/*ŋa-gu abax* 'my pork'
Mo/*lu-gu abax* 'my pig'

Am/*moto-k* 'my eye'
Am/*ko-k esŋei* 'my pork'
Am/*lo-k esŋei* 'my pig'

Lusi, Kove and Kabana are aberrant in having a prefix in the third person singular forms of all three constructions; while Kilenge, the other member of the Siasi group on New Britain, has a suffix *-a* for third person singular. Lusi, Kove and Kabana are otherwise extremely simple and easy to learn, because the possessive particles are invariant, and virtually the same set of affixes is used in all three classes. Table 3.7a gives the full paradigms for 'eye' in the languages of the Siasi group; with few variations, all inalienable nouns in these languages follow the same pattern.

3.7a 'eye' in the Siasi Languages

	Lusi	Kove	Kabana	Kilenge
1s	*mata-gu*	*mata-gu*	*mata-g*	*airo-k*
2s	*mata-mu*	*mata-mu*	*mata-m*	*airo-m*
3s	*ai-mata*	*ai-mata*	*i-mata*	*airo-a*
1n	*mata-za*	*mata-za*	*mata-da*	*airo-ra*
1x	*mata-mai*	*mata-mai*	*mata-mai*	*airo-em*
2p	*mata-mi*	*mata-mi*	*mata-mi*	*airo-mi*
3p	*mata-zi*	*mata-zi*	*mata-d*	*airo-re*

Tables 3.7b and 3.7c give the full paradigms of the auxiliary nouns in the languages of the Siasi group. In Lusi, Kove and Kabana, these are identical in structure to the inalienable nouns except for the third person singular. The Kilenge forms are more irregular than those of the other Siasi languages.

3.7b The 'edible' auxiliary noun in the Siasi group

	Lusi	Kove	Kabana	Kilenge
1s	*a-gu*	*a-gu*	*a-g*	*a-k*
2s	*a-mu*	*a-mu*	*a-m*	*a-m*
3s	*ae-a*	*ae-a*	*ae-a*	*e*
1n	*a-za*	*a-za*	*a-da*	*a-ra*
1x	*a-mai*	*a-mai*	*a-mai*	*em*
2p	*a-mi*	*a-mi*	*a-mi*	*a-mi*
3p	*a-zi*	*a-zi*	*a-d*	*e-re*

3.7c The 'neutral' auxiliary noun in the Siasi group

	Lusi	Kove	Kabana	Kilenge
1s	*le-gu*	*le-gu*	*le-g*	*le-k*
2s	*le-mu*	*le-mu*	*le-m*	*le-m*
3s	*e-le*	*e-le*	*e-le*	*le*
1n	*le-za*	*le-za*	*le-da*	*ra*
1x	*le-mai*	*le-mai*	*le-mai*	*lem*
2p	*le-mi*	*le-mi*	*le-mi*	*li-mi*
3p	*le-zi*	*le-zi*	*le-d*	*re*

There are a few minor variations in the third person singular inalienable affix. In Kilenge, a stem-final a is replaced by e in the third person singular, e.g. Ki/*tama-a* > *tame* 'his/her father'. In Lusi, *ai-* > *a-* /#__*u*, as in *a-uti* 'his penis' and *a-ura* 'his strength', where Kove has *ai-uti* and *ai-uha* respectively. In Kabana, high vowels become null in final position, as, for instance, in *tini-g* 'my body', but *i-tin* 'his body'. Kove seems to have none of this slight allomorphy. In all four languages, once the possessive system has been learned with one stem, it can be transferred reliably, by straightforward analogy, to any other stem with only a few minor adjustments of the nature mentioned above.

For the learner, however, Amara and the Bibling languages, pose greater complexity in the possessive system. Even though the same tripartite distinction among inalienable, edible and neutral pertains in all languages of the area, analogy plays a diminished rôle in learning the Bibling languages or Amara because of numerous irregularities in the paradigms. In the inalienables, the most common words are generally the most irregular.

3.7d 'eye' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*omtogu*	*omtogu*	*omtogu*	*antuŋu*	*motok*
2s	*emtem*	*emtem*	*emtem*	*antem*	*motom*
3s	*bitna*	*bitna*	*bitna*	*anta*	*mete*
1n	*amtada*	*amtada*	*amtada*	*antise*	*motodo*
1x	*emtemi*	*emtemi*	*emtemi*	*antimi*	*metemi*
2p	*omtomu*	*omtomu*	*omtomu*	*antumu*	*metemam*
3p	*amtaxsak*	*amtarak*	*amtarak*	*antesek*	*metede*

3.7e 'ear' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*slaŋagu*	*tologu*	*talagu*	*beikoŋ*	*telŋe guduk*
2s	*slaŋap*	*talap*	*talap*	*beikom*	*telŋe gudum*
3s	*slaŋa*	*tala*	*tala*	*beine*	*telŋe gudio*
1n	*slaŋada*	*talda*	*talalite*	*beinte*	*telŋe gudto*
1x	*slaŋapmi*	*telepmi*	*talepmi*	*beikmi*	*telŋemam gudio*
2p	*slaŋapmu*	*tolopmu*	*tolopmu*	*beikmu*	*telŋemi gudio*
3p	*slaŋalsak*	*talansak*	*talansak*	*beinsek*	*telŋe gudde*

3.7f 'head' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*opogu*	*opogu*	*opugu*	*apuŋu*	*guduk*
2s	*epem*	*epem*	*epem*	*apem*	*gudum*
3s	*apna*	*apna*	*apna*	*apna*	*guda*
1n	*apada*	*apada*	*apada*	*apeda*	*gudto*
1x	*epemi*	*epemi*	*epimi*	*apimi*	*gudmam*
2p	*opomu*	*opomu*	*opumu*	*apumu*	*gudmi*
3p	*apaxsak*	*aparsak*	*aparsak*	*apersek*	*gudde*

3.7g 'mouth' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*ogu*	*ogu*	*ogu*	*agu*	*nok kane vre*
2s	*ouop*	*ouop*	*ouop*	*aop*	*nom kane vre*
3s	*eine*	*ene*	*ene*	*aona*	*na kane vre*
1n	*ada*	*ada*	*ada*	*aote*	*nodo kane vre*
1x	*epmi*	*epmi*	*epmi*	*aopi*	*nem kane vre*
2p	*opmu*	*opmu*	*opmu*	*aopu*	*nemi kane vre*
3p	*axsak*	*orsak*	*orsak*	*aosek*	*nede kane vre*

3.7h 'hand' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*lumgu*	*luŋgu*	*lugu*	*molugu*	*lumok*
2s	*libep*	*libep*	*libep*	*melep*	*lumom*
3s	*limla*	*limla*	*limla*	*meila*	*lume*
1n	*limda*	*limda*	*limda*	*melte*	*lumodo*
1x	*lipmi*	*lipmi*	*lipmi*	*melpi*	*lumemam*
2p	*lupmu*	*lupmu*	*lupmu*	*melpu*	*lumemi*
3p	*limsak*	*limsak*	*limsak*	*melsek*	*lumede*

3.7i 'foot' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*komgu*	*koŋgu*	*kogu*	*kaŋgu*	*kak ruo*
2s	*kebep*	*kebep*	*kebep*	*kaep*	*kam ruo*
3s	*kamla*	*kamla*	*kamla*	*kamla*	*ka ruo*
1n	*kamda*	*kamda*	*kamda*	*kamte*	*kaito ruo*
1x	*kepmi*	*kepmi*	*kepmi*	*kampi*	*kaimam ruo*
2p	*kopmu*	*kopmu*	*kopmu*	*kampu*	*kaimi ruo*
3p	*kamsak*	*kamsak*	*kamsak*	*kamsek*	*kaide ruo*

3.7j 'father' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*ligau*	*libou*	*abo*	*ibo*	*areŋ tok*
2s	*lemau*	*tmem*	*pmem*	*tumom*	*areŋ tom*
3s	*ilau*	*timla*	*timla*	*tumla*	*areŋ teme*
1n	*udou*	*tmada*	*pmada*	*pmarte*	*temedo*
1x	*limau*	*tmemi*	*pmemi*	*pmimi*	*tememam*
2p	*lumau*	*tmomu*	*pmomu*	*pmumu*	*tememi*
3p	*uxokau*	*tmarak*	*pmarak*	*pmarsek*	*temede*

3.7k 'mother' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*lugude*	*aia*	*aia*	*iname*	*akmareŋ tnok*
2s	*lemide*	*tnem*	*tnem*	*kinom*	*akmareŋ tnom*
3s	*ilaide*	*tna*	*tna*	*kina*	*akmareŋ tne*
1n	*udeide*	*tnada*	*tnada*	*kinre*	*tnodo*
1x	*limemide*	*tnemi*	*tnemi*	*kinmi*	*tnemam*
2p	*lumude*	*tnomu*	*tnomu*	*kinmu*	*tnemi*
3p	*uxokide*	*tnarak*	*tnarak*	*kinrek*	*tnede*

3.7l 'son/daughter' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	...	*ergu*	*ergu*	*orugu*	*okukse*
2s	...	*etim*	*etim*	*otum*	*otum se*
3s	...	*otno*	*otno*	*ginou*	*etio se*
1n	...	*otodo*	*otodo*	*ilarse*	*etido se*
1x	...	*etepmi*	*etepmi*	...	*etimam se*
2p	...	*otopmu*	*otopmu*	...	*etimise*
3p	...	*otorok*	*otorok*	...	*etide se*

3.7m 'sister' in the Bibling languages and Amara

	Mo.	Ar.	To.	La.	Am.
1s	*luku*	*luku*	*luku*	*luku*	*lukmaŋ*
2s	*lup*	*olup*	*olup*	*loup*	*lumŋaŋ*
3s	*lutno*	*lutno*	*lutno*	*luto*	*liokmaŋ*
1n	*ludo*	*lutodo*	*lutodo*	*lutre*	*lidokmaŋ*
1x	*lipmi*	*lipmi*	*lipmi*	*lutmi*	*limamkmaŋ*
2p	*lupmu*	*lupmu*	*lupmu*	*lutmu*	*limikmaŋ*
3p	*lutxok*	*lutorok*	*lutorok*	*lutrek*	*lidekmaŋ*

In the paradigms given above, the morpheme boundaries have not been indicated because: (1) it is difficult in many cases, without making a totally arbitrary decision, to identify the morpheme boundaries, (2) in all cases, the obvious morpheme boundaries are based on diachronic rather than synchronic analysis, and (3) the people who speak these languages conceive of these words as unanalysable forms. The paradigms are complex in that they exhibit vowel harmony, suppletion, and different sets of affixes that are not predictable from one paradigm to the next. In Mouk, for instance, while the first person singular usually ends in *-gu,* the second person singular sometimes has *-m* and sometimes *-p,* while the third person singular has one of *-Ø, -na, -la, -ne,* or -no. Furthermore, in neither the Bibling languages nor Amara do all inalienables follow these patterns, such as they are. Amara has the additional complication that most inalienables occur with what might be called a postposed auxiliary noun that is only partly predictable—in the case of 'ear', *telŋe* occurs with the auxiliary noun *gud-* in a paradigm almost the same as that for 'head'. But, while it is usually the auxiliary noun that occurs with the possessive suffixes, in some forms the suffixes are irregularly applied to the head noun, in which case the auxiliary noun occurs in what looks like a third person singular. Some of the auxiliary nouns have individual meanings on their own, but their occurrence with other nouns is not predictable from the semantics. For example, Am/*kane* 'its fruit' makes no obvious sense in the form Am/*nok kane vre* 'my mouth' which can be glossed literally as 'mouth-my fruit-its hole-its' ; one cannot say just **nok*, for instance. In other cases in Amara, a head noun is required in the singular, but dropped in the plural, as in *akmareŋ tnok* 'my mother', literally 'old-woman mother-my', but *tnodo* 'our mother'.

In any case, the paradigms show that there is no single reliable pattern that can be transferred from one paradigm to the next by way of analogy. In any particular language, patterns of vowel harmony operate in most paradigms, but not reliably in others. Most of the stems and affixes shown here are obviously AN in origin, but have

undergone irregular processes of assimilation. Though it is possible, in most cases, to reconstruct underlying forms from which to derive the attested forms, the rules for doing so have limited and irregular application. For a person to learn one of these languages as a second language, each word (or sequence of words) in each paradigm must be learned separately.

The languages of the Bibling group have another subsystem used with inalienables that seems to be different in source from that used with the nouns illustrated above. Among inalienables, these nouns are in the majority. The construction involves a set of possessives postposed to an invariable head noun. Diachronically, many of these words are forms with a third person suffix derived from **-na*, so that each form contains a fossilised *-na, -ne* or *-no*, originally a third person suffix, in all persons and numbers. In some cases, words of this subclass are intrinsically third person singular, as the postposed possessive in this slot is often omitted. Otherwise, however, each word in this class is synchronically monomorphemic. From one perspective, the construction represents a simplification in the Bibling languages in that, to use one of these nouns, the speaker need know only the form of the stem (rather than a full paradigm) and that it belongs to this subclass. On the other hand, that there is a further subclassification of inalienables in these languages is, at the same time, a complication.

3.7n Postposed inalienable possessives in the Bibling group

	Mo.	Ar.	To.	La.
1s	*lugŋoŋ*	*lugoŋ*	*luŋoŋ*	*inoŋ*
2s	*luguom*	*lugom*	*luom*	*inom*
3s	*ine/Ø*	*ine/Ø*	*ine/Ø*	*ine/Ø*
1n	*lite*	*lite*	*lite*	*inte*
1x	*libmi*	*lipmi*	*limi*	*inmi*
2p	*lubmu*	*lupmu*	*lumu*	*inmu*
3p	*lisak*	*lisak*	*lisak*	*insek*

The use of these forms is illustrated in the constructions below:

Mo.	Ar.	To.	La.	
taxna lugŋoŋ	*tarna lugoŋ*	*tanra luŋoŋ*	*tanra inoŋ*	my skin
atna lugŋoŋ	*bomso lugoŋ*	*pupu luŋoŋ*	*pupu inoŋ*	my liver
exi lugŋoŋ	*eri lugoŋ*	*eri luŋoŋ*	*kaka inoŋ*	my bones

In form, the postposed inalienable possessives in the Bibling languages are similar to the free pronouns which function as subjects in verbless sentences and as objects of verbs. With certain verbs, the postposed inalienable possessives also mark particular semantic rôles as illustrated in the examples below:

Mo.	*ŋa-uai*	*luguom*	*tan*	*gute*	*exi.*
To.	*ŋa-pelio*	*luom*	*ge*	*ute*	*ari.*
Ar.	*ŋa-uai*	*lugom*	*ke*	*gute*	*ari.*
	1s-speak	to-you	preposition	man	yonder

'I'm telling you about the man over there'.

Amara too has an alternate pattern for inalienable nouns based on the free pronouns, but in these the pronominal distinctions are indicated by suffixes similar to those used to mark the objects of transitive verbs. Though a general theme runs through these

paradigms, the individual details of any particular noun are not entirely predictable. A few paradigms illustrating this pattern are given in 3.7o.

3.7o Other inalienables in Amara

	liver	veins	hip	brains
1s	*katkateiou*	*alislisiou*	*geliou*	*teveliou*
2s	*katkateŋe*	*alislisieŋe*	*geleŋe*	*teveleŋe*
3s	*katkate*	*alislisio*	*gelio*	*tevelio*
1n	*katkateito*	*alislisto*	*gelto*	*tevelto*
1x	*katkateimam*	*alislisiam*	*gelmam*	*teveliam*
2p	*katkateimi*	*alislisiemi*	*geliemi*	*teveliemi*
3p	*katkateide*	*alislisde*	*gelde*	*tevelde*

In comparison with the languages of the Siasi group, possessive morphology in the Bibling languages and Amara is much more complex. In order to pass as a native speaker of these languages, one must control all the details of each paradigm. Such complexity adds no information to any message beyond establishing one's status as a member in the linguistic group. If these languages were used extensively as lingue franche, adults learning them as second languages would level the irregularities by generalising the simplest and most productive pattern to all new nouns learned.

3.8 Pronominal suffixes in Anêm

With one notable exception, all possessives in Anêm are indicated by suffixes—hundreds of them. As in the AN languages of the area, these suffixes mark pronominal distinctions of person and number. Anêm also has a basic inalienable-edible-neutral distinction, undoubtedly a point of convergence with the surrounding AN languages.

An.	*dêk-g-a*	my (body part) thing
	dêk-at	my (edible) thing
	dêk-n-ai	my (neutral) thing

Without including minor patterns or irregularities, however, Anêm has four basic paradigms of pronominal suffixes. Though, in some cases, these occur with the bare nominal stem, usually they occur with a ligative morpheme. The ligatives and pronominal suffixes interact to result in 18 common classes of possession. Each class has been assigned a code which consists of the ligative and an arbitrary number referring to the pronominal paradigm. For example, *pomka* 'my chest' consists of *pom-* 'chest', *-k-* a ligative, and *-a* the first person singular form in paradigm 3; thus, the Anêm citation form for 'chest ' is *pom-k3.* Some paradigms differ from others only in the second person singular which has an unexpected r; in these cases, the code also has an *r.* The four basic pronominal suffix paradigms are given in 3.8a. Though these are the most common forms, in several cases, the actual form of the suffix is conditioned morpologically by the ligative.

3.8a Anêm pronominal suffix paradigms

	1	2	3	4
1s	*-i*	*-e*	*-a*	*-at*
2s	*-î*	*-ê*	*-îr*	*-ir*
3m	*-u*	*-o*	*-î*	*-îl/-ît*
3f	*-îm*	*-êm*	*-î*	*-îl/-ît*
1n	*-iŋ*	*-eŋ*	*-iŋ*	*-nis*
1x	*-în*	*-ên*	*-în*	*-nit*
2p	*-îŋ*	*-êŋ*	*-îŋ*	*-ŋît*
3p	*-î*	*-ê*	*-i*	*-îl/-ît*

Unlike the paradigms of the AN languages in the area, particularly those of the Siasi group, the forms of one paradigm are not neatly transferable to another paradigm. Learning all the forms of a noun with paradigm-1 suffixes is of little help in learning how to use a noun that occurs with paradigm-3 suffixes. For instance, the form -î is either second person singular or third person plural with nouns of paradigm 1, but third person singular with nouns of paradigm 3. Moreover, not all the paradigms operate according to the same principles. In the third person singular, masculine is distinguished from feminine in paradigms 1 and 2, but not in the other two paradigms. In paradigm 4, the third person forms do not distinguish number or gender, but have forms that alternate according to whether the possessor is expressed as a following nominal argument or not—for example, *uas-il Maria* 'Mary's tobacco', but *Maria uas-it* 'Mary's tobacco' and *uas-it* 'her/his tobacco'. The same distinction is made in paradigms 1 and 2, but in these, the suffix indicating a following nominal argument is identical in form to the third person singular feminine—for example, *tîm-n-îm Paulus* 'Paul's arm', but *Paulus tîm-n-u* 'Paul's arm', *tîm-n-u* 'his arm' and *tîm-n-îm* 'her arm'. In paradigm 3, no such distinction is made. The systems of pronominal suffixes in Anêm also differ from the system of subject prefixes used with verbs. Whereas Anêm pronominal suffixes distinguish inclusive from exclusive in the first person plural, just as the AN languages in the vicinity do, this distinction is neutralised in the subject prefixes.

With a little stretching of the imagination, some classes have identifiable semantic ranges. Most, however, appear to be entirely arbitary in classification. Those classes with semantic correlations include the examples given in 3.8b.

3.8b Anêm possessive classes with semantic ranges

CODE	SEMANTIC RANGE	EXAMPLES
lEx1	anal	*taba*-lEx1 'tail'; *tapox*-lEx1 'rectum'
u1	garden	*nan*-u1 'garden'; pên-u1 unplanted garden
l2r	head parts	*og*-l2r 'head'; *ki*-l2r 'hair'
k2	village mammals	*kaua*-k2 'dog'; *aba*-k2 ' pig'
ŋ2	genitals	*nil*-ŋ2 'testicles'; *gi*-ŋ2 'son/daughter'
d4	things to sit on	*mîk*-d4 'mat'; *eig*-d4 'bench'
m4	skin diseases	*beta*-m4 'ulcer'; *potepote*-m4 *smallpox*

Many body parts occur with suffixes of classes *3, g3,* or *k3,* but body parts are not limited to these classes. Some nouns occur with several different classes of possessive suffixes, the corresponding differences being marked in the relationship between the possessor and the possessed:

An.		
	aŋ	tree, wood
	aŋ-n-ai	my tree (the one I planted)
	aŋ-at	my tree (the one I'm cutting down)
	aŋ-l-e	my firewood
	aŋ-d-at	my tree (the one I sit on)
	êbêl-g-î aŋ-k-a	my heart (LIT: fruit-its tree-my)
	aba	pig
	aba-k-e	my pig
	aba-i-at	my pork
	ki-l-e	my hair (on my head)
	ki-ŋ-e	my pubic hair
	ki-g-a	my body hair
	texik	chicken
	texik-n-ai	my chicken (that I could sell alive)
	texik-i-at	my chicken (that I am eating)

Though there are fairly regular alternations between *k2/n1* classes for living plants and livestock, and *4/i4* for food, in most other cases, the possessive class is not predictable either from the meaning of the stem or from its phonological shape.

Further complexity arises in Anêm possession as a result of vowel harmony that affects some stems but not others. In those nouns with vowel harmony, the stem vowel assimilates in frontness and rounding to the vowel of the suffix.

An.		
	el-ŋ-e	my penis
	êl-ŋ-ê	your penis
	ol-ŋ-o	his penis
	le-l-i	my characteristics
	lo-l-u	his characteristics
	lê-l-îm	her characteristics
	li-l-i	my voice
	lu-l-u	his voice
	lî-l-îm	her voice

Which stems are subject to vowel harmony is entirely unpredictable. Consequently, each word in each paradigm must be learned separately. Since the learner cannot rely on analogy, his/her task is greatly increased both in production of correct speech and in understanding the speech of others.

I have called these suffixes pronominal suffixes rather than possessive suffixes in Anêm because, with only minor differences, the same sets used to mark possessives in nouns are also used to mark the objects of verbs and prepositions. That is, the complexity of possession in nouns is recapitulated in transitive verbs and prepositions. The paradigm used to mark objects with transitive verbs is equally unpredictable. Some verbs occur with pronominal suffixes bound directly to the stem, while others have an

intermediary morpheme that is probably originally a preposition. Some examples to illustrate this complexity are given below:

An.	*u-sn-i*	he gave (it) to me
	u-sn-îm	he gave (it) to her
	u-i-a-l-e	he met me
	u-i-a-l-er	he met you
	u-daŋo-i-at	he tied me up
	u-daŋo-t	he tied him up
	u-daŋo-l aba	he tied the pig up
	u-mosi-d-at	he looked after me
	u-mosi-d-it	he looked after him
	u-kên	he does planting
	u-kên-a-g-î	he planted it

Just as with nouns, some Anêm verb stems are affected by the rules of vowel harmony while others, unpredictably, are not. With such stems, vowel assimilation spreads through the whole word to affect the prefix as well. With such processes, the form of the stem is difficult to identify, especially for the learner who is an adult speaker of a language like Lusi which has invariant stems and affixes.

ne-ke-l-e	you look at me
no-ko-l-o	you look at him
nê-kê-l-êm	you look at her
ne-lexem-i	you follow me
nê-lêxêm-îm	you follow her

Some verbs are bitransitive—that is, they may occur with two objects marked with suffixes at the same time. These constructions allow for a verbal head stem marked for three arguments in a single word.

ne-sn-i-d-it	you will give it to me
da-sn-ir-d-it	I'll give it to you
da-ni-k-îr-l-o	I'll point you out to him
ne-ni-k-a-l-êm	you will point me out to her
ne-ni-k-a-l-ê	you will point me out to them
da-uai-k-îr-l-êm	I'll tell her about you
nê-uai-k-a-l-êm	you will tell her about me

In the other languages of the area, the maximum number of arguments for a stem is two—a subject and object with a transitive verb. Propositions with more than two arguments must contain a preposition phrase, as they do in Anêm when the arguments are nominal rather than pronominal.

An. *da-uai-l-êm kan Paulus.* 'I'll tell her about Paul'.
*da-uai-k-îr a-l P*aulus. 'I'll tell Paul about you'.

In Anêm, some nouns can also occur with two arguments in the form of two pronominal suffixes. Though these stems are translated by verbs in English, they are structurally nouns in Anêm because they have no subject prefix.

An.	*eg-l-i-d-it*	I am forbidden to eat it
	og-l-u-d-it	he is forbidden to eat it
	ŋi-l-i-d-it	I like it
	ŋi-l-îm-d-it	she likes it

3.9 Accumulating grammatical baggage

In the previous section, I mention that Anêm has a notable exception to the rule that all pronominal affixes marking possession be suffixes. That exception has to do with paradigms in Anêm that have been copied from Lusi, and that consequently have a prefix in the third person singular. There are other features in these paradigms that are incongruent with the general morphological pattern of Anêm. In Anêm, the u of the forms in 3.9a is a non-syllabic glide alternating between *[ǫ]* and *[ɰ]*. In Lusi, the distinction between what are two allophones in Anêm is contrastive. Anêm has no phoneme corresponding to Lusi *h* and does not permit long vowels. Consequently, the Lusi stem *oaha-* corresponds systematically to the Anêm stem *ua-*. Anêm also raises *ai* to *ei* with near regularity, so that the third person singular form is also the expected Anêm copy of the Lusi. However, the forms of the first and second person plural reveal that, in the process of copying the paradigm, Anêm has generated an irregular stem allomorph *uam-* based on the second person singular and plural, and on the first person exclusive in the Lusi paradigm. That is, while the Lusi source is regular, what has been copied into Anêm is an irregular noun. Anêm also has a regular synonym for 'mother's brother' *aua-nl*, most commonly heard as a vocative *aua*. For 'younger sibling same sex', I could elicit only *tadigu* 'my little brother/sister' and *eitadi* 'his little brother/her little sister'. These forms have been copied from Lusi *tazigu* and *aitazi* respectively, but constitute a deponent paradigm.

3.9a 'mother's brother' in Anêm and Lusi

	Anêm	Lusi
1s	*ua-gu*	*oaha-gu*
2s	*ua-mu*	*oaha-mu*
3s	*ei-ua*	*ai-oaha*
1n	*uam-iŋ*	*oaha-za*
1x	*uam-in*	*oaha-mai*
2p	*uam-îŋ*	*oaha-mi*
3p	*ua-di*	*oaha-zi*

These examples clearly show, contrary to standard rules of thumb in historical linguistics (but see Weinreich 1953 and Grace 1981), that languages can borrow 'grammar'; and that, in doing so, they can also generate their own systems of irregularities at the same time. If these forms were more numerous, and if Lusi and the other Siasi languages were to disappear, these would constitute a separate class of Anêm nouns the origin of which might prove difficult to account for. At the same time, this example is a useful model to account for those languages which seem to have several different kinds of morphological systems. Mouk, for instance, seems to have two distinct pronominal sets, both ultimately AN in origin, but acquired possibly via two separate routes. Mouk *ŋoŋ* and *-gu* 'my' are probably both cognate with Lusi *-gu*, the former having

undergone a change in which the velar stop has become a nasal, as may also be seen by comparing the following from **kani:*

Mo/*ŋa-gu*	Am/*ko-k*	Lu/*a-gu*	my (edible)
Mo/*-ŋan*	Am/*-ken*	Lu/*-ani*	eat

Several studies, including Goulden (1982), show that, contrary to the neogrammarian hypothesis, sound change is not regular. For example, among the Siasi languages, we find POC**p* reflected as *p, u, o, v, p~u,* and *Ø.*

POC**patu*	Lu/*patu*	stone
	Lu/*-uatu*	break with stone
POC**nsapa*	Lu/*saoa*	what
POC**potu*	Lu/*potu*	outside
	Lu/*-otu*, Ka/*-uot~-ot*	go outside
POC**ponse*	Lu/*poze*, Ka/*pode*	a paddle
	Lu/*-uoze~-oze*, Ka/*-ode*	to paddle
POC**topu*	Lu/*tou*	sugarcane
POC**pulu* 'hair'	Lu/*vuvuru*	body hair
	Lu/*ulu*	fringed mask

(data from Goulden 1982:34-37)

The data from the other languages in the area reveal the same irregularity of correspondences. For example, note the correspondences of POC**R* in the following set of words.

POC**paRi*	Mo/*peli*, Ar/*polu*, Am/*pel*	reciprocal
POC**kiRam*	Mo/*akxa*, Ar/*akra*, Am/*okudi*	ax
POC**maRi*	Mo/*max*, Ar/*me*, Am/*me*	come

One possible explanation for these unsystematic sound correspondences is that languages tend to copy words from neighbouring languages. If a sound change has occurred in a related source language, the copied word may reflect that change while still looking like a cognate. At the same time, the lack of regularity in sound correspondences points to the grossly underestimated rôle of copying in linguistic change; and as demonstrated at the beginning of this section, copying words may also involve copying morphology, and, consequently, adding to the complexity of a language.

Among other processes that make languages more complex are phonological assimilation and contractions. Both make strings of morphemes into more phonologically efficient packages for rapid pronunciation. Assimilation in the vowels of affixes has already been illustrated in previous sections. Syncope makes morphemes shorter by removing a syllable. For example, in Anêm, the intransitive verb *-degiŋ* 'hear, understand' normally undergoes syncope when a pronominal suffix is added to make it transitive: *a-degiŋ* 'I hear', but *a-deŋ-k-îr* or *a-degiŋ-k-îr* 'I heard you'. Similarly, *pîk* 'faeces' undergoes syncope when a suffix is added: *p-lex-i* 'my faeces'.

Some of the numerous pronominal paradigms of Anêm probably have their origins in formerly independent words that have become fused to their stems by contraction. For example, the *k-* of *k3* nouns is probably the residue of a former preposition *kan* that still exists as an independent word:

An *da-uai-k-îr-l-êm.*
1sQ-speak-about-2s-to-3f
'I'll tell her about you'.

da-uai-l-êm *kan* *Paulus.*
1sQ-speak-to-3f about Paul
'I'll tell her about Paul'.

Similarly, the m of *m4* nouns probably derives from the word for skin: *a-m-at* 'my skin', *beta-m-at* 'my sore'. In this process, constructions that were probably much more transparent in the past have become fused, obligatory and opaque.

Another area of contraction in Anêm has resulted in verb forms that have no segmentable stem whatsoever. The most obvious example is the verb 'eat' which consists of subject prefixes fused directly with paradigm-4 suffixes. This has resulted in irregular vowel syncope in most forms. Some of the forms given below seem ludicrous, but are perfectly normal in the context of evil monsters (TP/*tambaran*) that feature frequently in stories.

An.	**da-it*	*dat*	I'll eat it
	**da-ir*	*dar*	I'll eat you
	**i-at*	*iat*	they are eating me
	**u-at*	*uiat*	he's eating me
	**dê-nis*	*denis*	she'll eat us

Another complexity that is common in esoteric languages is suppletion. Anêm has numerous forms that, for whatever reason, exhibit suppletive allomorphy depending on the number of the subject or object.

An.	*u-k*	he went	*i-ul*	they went
	u-sêm	he slept	*i-tel*	they slept
	u-zik	he died	*i-lk-îl*	they died
	u-b-î	he killed it	*i-b-î*	they killed it
	u-pel-it	he killed them	*i-pel-it*	they killed them

Most of the forms which change as a result of having plural subjects tend to end in *l*, suggesting that they are derived from a class of Anêm intransitive verbs which occur with the suffix *-îl* when the subject is plural (see section 3.6).

Unlike any of the other languages in the area, Anêm has an obligatory distinction in gender, not unlike that of many European languages. All nouns are either masculine or feminine. Subject prefixes of verbs must agree in gender with subject nouns; and demonstrative particles must agree in gender with their head nouns. Masculine demonstratives begin with *l-* while their feminine counterparts begin with *s-*. The names of most female animals and people are feminine, while male animals and people are masculine. As in European languages, however, complexity arises when the rest of the universe is categorised arbitrarily as one or the other. Most trees, but not the betel palm, are masculine, while most vines are feminine. 'Axe' and 'leg' are masculine, but 'knife' and 'hand' are feminine. A switch in the gender of a subject pronoun can spread throughout the sentence so that little is left untouched.

An.	*doxa*	*l-êxa*	*l-êxîd*	*u-kon*	*u-k*	*u-sîk.*
	person	m-the	m-yonder	3m-move	3m-go	3m-sit

'That man over there moved over and sat down'.

	doxa	*s-êxa*	*s-êxîd*	*i-ken*	*i-k*	*i-sîk.*
	person	f-the	f-yonder	3f-move	3f-go	3f-sit

'That woman over there moved over and sat down'.

The gender system has the effect of requiring an alternation between sequences of *l~u* and *s~i*, a distraction to the person who is trying to identify primarily content words. The net yield of this distinction, in terms of literal meaning, is extremely low; few words are distinguished from one another on the basis of gender alone. Moreover, the gender of a noun cannot be predicted from its phonological shape or from the pronominal suffixes that occur with it.

Over many generations of esoteric use, Anêm has become a very difficult language to learn quickly. To use a noun properly, an Anêm speaker must know: (1) its form and meaning, (2) the pronominal suffixes it requires, and (3) its gender. The first is a given in learning any language, but the second and third are largely arbitrary and useless as mechanisms to encode referential meaning. All these barriers (and some I have not even mentioned) conspire against the second-language learner to make Anêm useless for exoteric functions. The Bibling languages and Amara are not nearly as complex in this way, but all are much more complicated than any of the Siasi languages that are spoken on New Britain. With their regular morphology, Lusi, Kove and Kabana are not simple-minded, but easily learned and, therefore, suited to their exoteric functions.

3.10 Compactness and esoteric functions

Contraction and assimilation allow a language to fit a greater number of morphemes into a single phonological word. The predominant canonical shape of morphemes is also involved here. In a language with exoteric functions, it is of great help to the learner if each morpheme can be easily parsed and identified. Invariance in form certainly helps, but other factors are also involved. For instance, a longer morpheme is more easily identified than a shorter one; and one that is individually pronounceable is even better. In Lusi and Kove, the shortest morphemes all contain at least a vowel. Most functors have a CV shape, while most content words are CVCV or a reduplication of this form. Thus, each morpheme is not only invariant, but is also individually pronounceable. With the loss of final vowels in Kabana, several functors have become single consonants, but they are still invariant in form, and morpheme boundaries are easily drawn. As shown in section 3.7, morpheme boundaries are difficult to establish, on synchronic bases alone, in the languages of the Bibling group and Amara. This makes them more difficult for adults to learn. In Anêm, on the other hand, the most common morphemes tend to be unpronounceable by themselves and are often fused with other morphemes. In section 3.9, the verb 'eat' was presented as a verb consisting of prefixes joined directly to suffixes. Many other verb stems and inalienable noun stems consist of single consonants, consonant clusters or a single vowel phoneme. The list below includes some of the most common words in mundane Anêm speech. Lusi equivalents are given to demonstrate the comparative lengths of morphemes. In each case, the Lusi morpheme consists of a least one full syllable.

Anêm	Lusi	
u-i	*i-otu*	he arrived
u-k	*i-la*	he went
u-t	*i-ani*	he ate it
u-b-a	*i-rau-gau*	he hit me
u-d-at	*i-suklani-gau*	he pushed me
u-g-a	*i-uato-gau*	he named me
u-k-o	*i-tunu*	he lit it
u-l-o	*i-vaza*	he took it
u-m-d-it	*i-pasu*	he plucked it
u-n-i	*i-gare-gau*	he had sexual intercourse with me
u-n-dit	*i-lalo*	he straightened it out
u-ŋ-i	*i-sali-gau*	he defeated me
u-s-î	*i-gogo*	he gathered it
u-t-i	*i-sula-gau*	he sent me
u-kŋ-i	*i-keti-gau*	he cut me
u-sn-i	*i-pa-gau*	he gave (it) to me
u-tl-i	*i-gali-gau*	he stabbed me
d-o	*ai-ezaoa*	his wife
d-êm	*ai-ezaoa*	her husband
p-lexi	*tahe-gu*	my faeces

There are also hundreds of single-syllable morphemes in Anêm. With such short morphemes, the functional yield of phonological constrasts is much higher than it is in a language such as Lusi which has consistently longer morphemes. In exoteric languages, a slight slip of the tongue is not as likely to be fatal to communication. Anêm also has portmanteau morphs as subject prefixes. For example, in an Anêm word such as *u-sn-i-d-it* 'he gave it to me', there are six morphemes, because the prefix *u-* encodes mood as well as the pronominal distinction. All this is encoded in seven phonemes. Thus, in an esoteric language like Anêm, several morphemes can be encoded in only a few syllables; consequently, the rate at which the morphemes are encoded by the native speaker is much quicker than is possible in an exoteric language like Lusi. Added to the high degree of allomorphy in esoteric languages, this compactness presents yet another barrier to learning esoteric languages as second languages, particularly without the benefit of formal instruction.

Another way of achieving compactness is to elide certain phonemes when they come together, thereby reducing the ratio of phonemes to morphemes. The most exoteric vernaculars, those of the Siasi group, do not do this, while Anêm, the Bibling languages and Amara all have rules of elision that shorten phrases into phonological words. In these languages, the actual form of the rules is still under investigation, but their existence was obvious from the beginning of research. In many cases, rules of elision make it difficult to identify the full shape of certain morphemes. For example, after the first research period in Anêm, my lexicon contained a verb of the form *-sîx* meaning 'chop' as in 'to chop firewood'. What I had recorded was *[isɯχáŋ]*, glossed in Tok Pisin as *ol i brukim paiwut* 'they chop firewood'. The *aŋ* 'wood' was clearly segmentable. In subsequent research, however, I discovered that this form, now almost a verb in its own

right, could be pronounced carefully as *i-sêxî aŋ [isɨ̀χɯ̀ ʔáŋ]* and would be more accurately glossed as 'they break off wood'. The verb stem *-sêxî* is also used for picking berries, breaking off clumps of grass, and so on; the major focus of the meaning involves grasping and twisting to break off with the hand. When chopping firewood, the ax is used primarily for splitting the wood to the point where it can be broken off in chunks with the hands. When used with *aŋ*, however, the *î+a* sequence is reduced to a and the previous vowel is raised in compensation. The phenomenon recurs throughout the data. Similarly, my first sketchy notes in Amara listed two noun-marking prefixes *a- ~ e- ~ o-* and *na- ~ ne- ~ no-*, the former used in subject and object positions, and the latter used to mark oblique relationships to the verb. In most cases, the vowel assimilates to the first vowel of the stem. On the last research trip, however, a literate informant insisted that we write *nakai* 'with a stick' as *ne akai* because, for him, the form consisted of two words. Subsequent research has confirmed his analysis. In Mouk, too, longer forms sometimes turned out to be composed of phrases that have become fused together with vowel elision. Some examples are given in 3.10a.

3.10a Vowel elision

	full form	normal pronunciation	
An.	*axîene*	*axene*	at home
	axîagonu	*axagonu*	in the village
	nêbî aba ok	*nêbabok*	hit the pig to chase it away
Am.	*akai*	*akai*	tree, wood
	ne akai	*nakai*	with a stick
	le akai	*lakai*	his firewood
	ka akai	*kakai*	the tree he is cutting down
	oŋgup	*oŋgup*	coconut
	ne oŋgup	*noŋgup*	onto the coconut tree
	le oŋgup	*loŋgup*	his coconut tree
	ka oŋgup	*koŋgup*	his coconut to eat
	esŋei	*esŋei*	pig
	ne esŋei	*nesŋei*	with a pig
	le esŋei	*lesŋei*	his pig
	ka esŋei	*kesŋei*	his pork
Mo.	*luguadou*	*lugadou*	my friend
	bani ina oŋgup	*baninoŋgup*	variety of taro
	lugu ide	*lugide*	my mother

With elision so common, one wonders just how many words in the lexicon, particularly those that are rarely heard in a variety of contexts, are actually composite phrases. Most informants, usually older men, found it impossible to pronounce many of these phrases as individual whole words, but agreed readily to the analysis worked out with other informants, typically younger, and literate in at least Tok Pisin. It appears that going through the experience of learning to write another language gives the informant a better idea of how his/her own language should look when written. Without literacy, most of these fused phrases would normally be treated as unanalysable words, and would have to be learned by the second-language learner as such.

Thus, vowel elision and other forms of contraction that fuse two or more words into a single phonological unit make the language more efficiently pronounceable to native speakers, but at the cost of making such units more difficult for second-language learners to analyse. In New Britain, esoteric languages employ these techniques extensively, while the exoteric languages have virtually none. Compactness makes a language phonologically more efficient, but unsuitable for use as a lingua franca.

3.11 Literacy and lexicon size

In the first few days of research on a language, a few hundred words can be collected. Progress is limited by the speed of transcription, the need for rest and the informants' tolerance for the ordeal. But the pace soon slows down when the standard lists of obvious things to ask for are exhausted. At this point, the researcher resorts to eliciting all the names for different kinds of kin, trees, vines, bananas, taro, fish, bugs, and so on. In my own research in Anêm, when I had systematically exhausted the lexical items in Mihalic's (1971) Tok Pisin dictionary, I was at a loss for what to ask—I found it impossible to elicit vocabulary for concepts outside my own cultural experience. By that time also, my wordlist already included numerous items that were considered esoteric by many of the Anêm themselves, but in size, the total list still looked much more like a list than a dictionary—it included about 1500 content words. A concordance of two Anêm texts (which take about 90 minutes in total to relate) revealed only about 500 individual morphemes once the functors were eliminated. From these texts, only a few new words were added to the dictionary. Subsequent research on Anêm involved the finer details of specifically Anêm culture, and eliciting the vocabulary for this was time-consuming, because each item had to be explained in painstaking detail. At this stage for a researcher (and presumably for a learner), the only way to discover new words is to participate informally in the host culture in the hope of stumbling upon uninvestigated areas. From a strictly linguistic point of view, however, this effort yields diminishing returns.

The actual inventory of words used in speaking Anêm includes: (1) those claimed by the Anêm as true Anêm words, (2) those copied from neighbouring AN languages and Tok Pisin and used as stylistic alternatives to true Anêm words, and (3) those copied from other languages for concepts that are alien to Anêm culture. As distinct from the inventory of words, the lexicon as a whole also includes: (1) transparent compounds (e.g. *agîmkî tîga* 'my ankle', LIT: 'the neck of my leg'), (2) metaphorical compounds (e.g. *kilêm amsexe* 'stingray', LIT: 'hibiscus leaf', so named because of the ray resembles the leaf), and (3) opaque idioms (eg. *ziazim uzizni* 'I hiccoughed', LIT: 'a frog sp. gave me drink'). Counted in this way, the first edition of the Anêm dictionary will probably contain some 5,000 lexemes, still small in comparison with the lexica of European languages.

The comparison of the lexica of New Britain languages with those of European languages, however, is unjustifiable on several grounds, primary among them literacy. It is safe to say that in actual mundane conversation, the average speaker of English uses only a small proportion of the words attributed to the language as a whole, probably a figure more in line with the number used by the average speaker of Anêm. In small egalitarian societies such as those of NWNB, there is no room for the extreme specialisation that characterises European societies. In these small-scale social

networks, the little specialisation there is involves the expertise acquired with age; and specialists increase their vocabulary primarily by learning other languages. In NWNB, the learnèd class counts for only a handful of people per linguistic group. Only what they manage to pass on to the next generation orally can be preserved; and since there is no socioeconomic room in small-scale egalitarian groups for a class of specialists (e.g. priests, professors, and pundits) whose primary rôle is to preserve and transmit esoteric knowledge, the bulk of the accumulated knowledge, and consequently, vocabulary, is necessarily limited by what can be stored in the memories of a few individuals.

What is stored in the massive dictionaries of English, French and Spanish is another matter, because most European languages have been written for centuries. Literacy is a powerful tool that can, theoretically, compensate for the lexical limitations built into small societies, but in practice, large vocabularies are still associated with specialists in large-scale societies. With literacy, a language takes on an existence somewhat more independent of the limitations of the individuals who speak it. Indeed, the written word typically becomes the prescriptive model dictating the form of the standard spoken language. Depending on one's sentiments, the dictionaries of written languages become either like a museum or like an attic, cluttered with treasures or junk that are kept around because someone might someday want to use them. Meanwhile, in the spoken language, in contrast with the written monument, the number of words in actual use is more like that which constitutes the vocabulary in small linguistic groups such as those in NWNB—a few thousand.

3.12 The rôle of the linguist in language change

When I first began to study linguistics within the context of an anthropology department, I naïvely assumed that linguistic fieldwork would be exempt from the problems often encountered in conducting fieldwork in social anthropology, where a great deal of tact is required to avoid the possibility of highlighting political tensions among one's hosts. What could be more harmless than asking people to translate sentences from Tok Pisin into their vernaculars? By avoiding topics that might lead to an opening of old wounds, I hoped to visit my research area and leave everything behind me untouched. The naïveté of this turned out to be profound. First, when one is living as an exotic oddity in the midst of a small community, it is impossible to avoid potentially touchy topics in conversations with people who are quickly becoming one's friends. The mere position of one's living quarters places one in the sociopolitical context of one network of people and at a sociopolitical distance from those who are physically distant. The people in the adjacent buildings are those who are most likely to provide food, more likely to organise the linguist into the Sunday picnic, and more likely to be one's informants.

More interesting from a linguistic point of view, however, is the effect one has on a language by merely following the procedures used to record it. By my focussing attention on the language for months at a time, the perception my hosts had of their language was changed. As a consequence, the language itself changed, and political values attached to the language became highlighted.

When I began work on Anêm in 1975, Anêm was spoken with a thick admixture of Tok Pisin and Lusi. Sentences like *a-laikim-dî tabak* (cf. TP/*mi laikim sampela tabak*) instead of *ŋi-li-dî uas* 'I would like some tobacco', and *bil u-sabe bizaŋ* (cf. TP/*bil i save*

pinis) instead of *bil u-pun-u bizaŋ* 'Bil already knows' were commonplace, particularly among middle-aged people and younger. Gradually, the older people of the village took it upon themselves to point out the 'real' Anêm versions so that what I recorded for posterity would, at least, be 'correct'. More and more frequently, the younger people began correcting one another, starting first with the Tok Pisinisms and eventually aiming at the Lusiisms. Old and young alike became involved in the purging of foreign words and phrases where Anêm equivalents were available. At the same time, in giving names for various bugs, birds and plants, younger people adopted the procedure of consulting with elders when they did not know the names. In 1978, during my second field trip, the process was intensified. By 1981, when we started the survey of the whole area, the Anêm youth were remarkable for the thoroughness of the knowledge they had of their own language and for the 'purity' with which they spoke it. A certain amount of linguistic pride was evident in their interactions with young speakers of Lusi who were described as 'not even knowing how to speak their own language'.

In 1981, in the Mouk village, Salkei, an old man appeared from the periphery to chastise the young men who were teaching us introductory Mouk. We were being taught *nasaksak itau* 'good morning', and *epmes itau* 'good night', as standard greetings. The old man was in a rage, not because the greetings were ungrammatical, nor because the words used were not Mouk, but because the Mouk did not traditionally greet one another with times of the day described as 'good'. The old man identified the usage with Tolai teachers who had introduced it through the school system; he wanted an end to this new custom because, in his view, it had been introduced by 'decadent people who marry their own sisters'. For him, the greeting formula was symbolic of all that was wrong with young people. When his complaint was acknowledged, he sat down to monitor the sessions in case anything else foreign would be passed off as Mouk. The tone set by this man stimulated an awareness of prescriptive norms in Mouk versus normal Mouk usage.

In both Anêm and Lusi villages where we had been conducting research, we found increasingly that the vocabulary we used was archaïc; even some middle-aged people failed to understand some of the words that we used until instructed by even older people. For instance, what were commonly called *sisas* (<TP) 'scissors' in Anêm were called *kaida* by the old people who instructed us to record the word as such. *Kaida* normally applies to bamboo tongs, but has been extended to all bifurcated tools, including pliers and scissors. The Anêm word *kananai* is the archaïc form for *puda* <Lu/*puza* 'European'; when I used this in conversation, only two old people in the group recognised it. Later in that research period, even young people recognised the archaïc uses of both *kananai* and *kaida*.

Not only vocabulary, but also grammatical structures are subject to this process. In Lusi, the traditional way of saying 'I like it' is *mana-gu*, literally 'like-my', a possessed inalienable noun (cf. An/*ŋi-li* 'I like it', syntactically identical to the Lusi). The most common Lusi form heard, however, is *ŋa-laikim*, which consists of *ŋa-* '1s subject prefix'. plus *-laikim*, copied directly from Tok Pisin. With children and young people, the more archaïc structure is often not even recognised. In the Lusi-speaking villages where we have spent the most time, this is now changing back in the direction of conservatism.

In the first months of my research in Anêm, a sector of the community quickly developed a new simplified register of Anêm for use with the awkward foreigner who seemed to have little aptitude for language learning. Simplified Anêm has no

demonstrative particles; its words are pronounced individually rather than in phrase groups; it has a higher frequency of free pronouns used redundantly with the pronominal affixes; and it has very short sentences, usually unipropositional. Speaking this way even has a label—informants urged others to speak simpler Anêm to me by saying *nêuai pîtîk* 'speak short'. It was this command that ultimately drew my attention to the difference between actual Anêm and what I was recording up to that point. Although the simplified register helps in learning Anêm by presenting smaller segments at a time, it is not a *great* help, because the major complexity of Anêm resides in the convoluted morphology, which remains intact even in 'Anêm made simple'. Moreover, the use of the simplified register was restricted mainly to young men who read and write Tok Pisin; older people typically found it impossible to either slow down or break phrase groups into individual words. What the younger people seemed to be doing was transferring skills acquired within the school system for learning English, into a system for presenting their language as a foreign language to an outsider. They were attempting to adapt Anêm for use as a lingua franca. I am confident that, were this rôle to achieve significant importance in the community, the Anêm would establish a normative foreigner-talk register; and that, given the the small size of the linguistic group, this simplified register would come to compete with the normal register, particularly if intergroup marriage were involved.

The Amara and Akiblîk Anêm are both keenly aware that their languages are in the process of being lost. Akiblîk Anêm is being replaced by a version of Aria that is rejected as 'true' Aria by other speakers of Aria; and Amara is being replaced by Kabana. In an attempt to preserve both the language and the culture of Amara, as distinct from Kabana, it has been proposed that a village be established in which all the Amara from the area would congregate in a critical number large enough to perpetuate Amara traditions. One educated Amara man is particularly interested in the help that linguists can provide in producing dictionaries and other written materials for use in the Amara village; it is his intent to use his father, a revered elder, as the standard for the language. The success of this plan will ultimately depend on whether the preservation of the language can come to override the importance of rivalries among various Amara groups. Having a linguist provide a dictionary of Amara may be crucial in influencing how the Amara evaluate their language.

Thus, far from being a neutral observer, the linguist can become the catalyst for a purist prescriptivism which alters the path of language change. Words that would otherwise die with the old people who know them are quickly reinstated into the working vocabulary of the young. Lexical items copied from neighbouring languages, that would become *de facto* native, are purged before they become completely established. The uses of language also become retraditionalised. Standards of right and wrong language usage become established with reference to the most conservative elements of the society. In effect, the process of observation may halt language change in progress and reverse language change that is nearly accomplished. The effect of the linguist, as an artifact in his or her own data, is probably intensified in a small community where, within day or even hours, most of the speakers of the language can be made to feel the influence of a new prescriptivism. In large-scale stratified societies, however, even the intentional influence of a linguistic committee has little chance of being realised.

3.13 Group size and language maintenance

The size of a linguistic group is a crucial factor in determining whether a language survives or becomes extinct. Below a critical mass, marriage must be linguistically exogamous; with a large number of outsiders in the group, the language is exposed to the possibility that children may choose not to speak the traditional language of the group. Moreover, if a small linguistic group is located adjacent to a large group, it is more likely that members of the small group will become bilingual in the language of the large group rather than *vice versa* . If the language spoken by the larger group seems to have wider currency; if members of one's own group use it more frequently than the small-group language; and if both languages occupy the same functional niche, then it is likely that the small-group language is doomed to extinction. Amara and Akiblîk Anêm are prime examples of such cases in NWNB.

The reason some linguistic groups grow at the expense of others is usually construed as an entirely different process from the one proposed here. Writing on the general linguistic picture in Papua New Guinea, Sankoff suggests that:

> Differential size of the various language groups can be seen therefore not as a result of the general prestige and/or economic utility of these languages, but rather as a result of the differential rate of expansion of the populations speaking them and of their success in competing with other populations for material resources such as land.
>
> (Sankoff 1980:13)

The evidence from NWNB points to the opposite conclusion; namely, that over the period of a few generations, small communities can switch from their traditional language to that of their neighbours without competition for land and without major population movements. For example, the Lusi village of Atiatu is descended from an Anêm patriclan called *liŋe rua* 'two voices', named because the patriclan spoke both Anêm and Lusi. Now only a few youths in Atiatu speak any Anêm, and the village is considered part of the Lusi, rather than the Anêm area. In all the other Lusi patriclans, most people claim more than one Anêm-speaking ancestor. Also, the Lusi area is completely bounded by Anêm-speaking territory, and, until recently, all Lusi villages except Teveleai (Kaliai) were located on the mountain ridges just inland from their present coastal locations in the traditional Anêm settlement pattern (section 2.2). Some Lusi place names are just place names in Lusi, but separately meaningful in Anêm. In this case, the facts argue that the Lusi language has radiated out from an earlier coastal settlement at Kaliai to encompass its current range at the expense of the Anêm language, but not by the Lusi displacement of Anêm people.

The same pattern has been repeated in Bariai where formerly the Kabana occupied several sites on the coast while the Amara lived in fortified hamlets on the interior mountain crests. In legend, the Kabana trace their origins to Eivin Pio, the origin place of the Amara; and, at the same time, the Kabana list Amara-speakers among their direct ancestors. Moreover, current Amara-speakers are extremely worried about the future of their language, because their children typically speak Kabana rather than Amara.

Meanwhile, the Akiblîk Anêm village of Bolo has lost its traditional language in all functions but name. In Bolo, only a few very old people speak Akiblîk Anêm fluently.

Within a generation, the people of Bolo will be speaking a dialect of Aria rather than a dialect of Anêm. The details of this transition have already been discussed in section 2.3.

Finally, as an obvious example of the phenomenon, Tok Pisin has acquired speakers throughout Papua New Guinea without a concomitant Germanic migration to accomplish it. Because of European traditions, such as imperial social organisation, linguists have come to misconstrue lexical relationships among languages as reflections of previous migrations of people.

3.14 Group size and the rate of linguistic change

That all languages change at a constant rate is one of the primary assumptions underlying glottochronology and its partner in crime, lexicostatistics. This assumption must be swallowed whole if one is to have any faith in the results produced by this method. More specifically, in glottochronology and lexicostatistics, language change is reduced to an equation that takes into account only the replacement of endolexical items. Though most linguists appear to have reservations about the hypothesis of constant rate in endolexical substitution, the methods continue to be used, partly because they can be applied to superficial data, which is mostly what we have to work with, and partly because they produce instant rational-sounding arguments for linguistic classification. In turn, these classifications can be used by archaeologists, who eagerly seek them, and who seem to have more faith than do linguists in the methods by which they are produced. There is, however, ample evidence that languages do not change at a constant rate. One factor affecting the rate of linguistic change is contact with other languages; another is literacy; and yet another is the size of the group speaking the language.

Returning to the biological analogy, mutations are like linguistic innovations in that both have a greater chance of becoming established in small populations than in large populations where they must overcome the conservative inertia of the gene pool of a well-adapted species or, in the case of language, the traditions of numerous individuals in large impersonal societies. Families and small networks of close friends rapidly generate words and idioms based on common experience, peculiar to themselves and difficult for outsiders to interpret correctly. In-group jokes, professional jargon and adolescent slang are examples of this. Mass media may extend the range of some of these to the wider linguistic community, but mostly they remain the esoteric property of smaller subgroups in large societies. In small groups such as those in New Britain, however, one's close friends are usually also kin, or construed as such, and the entire linguistic population may constitute the in-group for any spontaneous linguistic innovations. Consequently, in small groups, innovations can be shared with the entire group, and usually *are,* within hours of their creation. While most are ephemeral, others persist, becoming part of the linguistic tradition of the group.

Many linguistic innovations arise in the context of humour, a common mechanism for mediating interpersonal relationships. For example, in 1978, during my second trip to work with the Anêm, but Goulden's first, we had passed weeks without eating an egg. One morning, an Anêm woman proudly presented Goulden with one, and carefully enunciated the phrase *nilŋêm texik* 'chicken egg' (*nil-ŋ2* 'egg/testicle', *texik* 'chicken') for Goulden to repeat. (The Anêm apply Pavlovian principles to language teaching.) At this stage, Goulden's knowledge of Anêm was at the wordlist level. He graciously accepted

the gift, but in his fluster to be polite and repeat what he thought he had heard, he uttered *biŋêm texik* 'chicken vulva' instead. Both *bi-ŋ2* and *nil-ŋ2* belong to the genital class of nouns. No sooner had the slip left his tongue than he knew his mistake, but it was too late. Goulden's obvious discomfiture only accentuated the hilarity of the event. Acutely embarrassed, he returned to the house with the egg in hand. In subsequent weeks, Goulden was the recipient of all available eggs in Karaiai and Pudeling villages; each one was presented as a *biŋêm texik*, a lexeme temporarily reassigned a new meaning for the duration of the gag. Similarly, in Lusi, events not involving us (except as privy to the joke) resulted in *kalo* 'frog' coming to mean a wanton woman and *bogbogi* 'spider conch' coming to mean a lecherous old man with a deformed foot.

The anecdotes related here have resulted in admittedly ephemeral lexical changes, but, at the same time, they may represent a process by which new words are added to the lexicon. Starting as in-group jokes or other individual creations, such innovations can spread almost instantaneously to encompass the entire linguistic group. If they persist, the ultimate stimulus for the creation may be lost, but the usage remains. Opaque idioms probably arise in this manner, a process that is intensified by the intimate nature of small societies. Consequently, other things being equal, the rate of change in languages spoken by small intimate linguistic groups is potentially much greater than in languages spoken by large impersonal societies.

Chapter 4
CONVERGENCE

4.1 The language teachers of NWNB

The people of NWNB are experienced language teachers with their own ideas about language instruction. That their language teaching is rule-governed became apparent to us only after we had begun collecting data in all the languages. The methods Goulden and I had initially devised for the elicitation of data turned out to be partly at odds with the established procedures used by our informants to present their languages to outsiders. In subsequent encounters with new informants, the same patterns emerged over and over again. That language teaching is a cultural syndrome reveals just how important language differences are to the people of NWNB. The use of the same techniques throughout Kaliai and Bariai is evidence of a common culture shared by all the peoples of the area. That is, for all the peoples of NWNB, the universe is basically the same, and it is encoded in language in basically the same way. The most important thing that distinguishes one language from another is the form of labels attached to concepts. In switching between languages, a speaker is mostly switching between wordlists while using the same semantic and syntactic structures. Even the languages with a high degree of morphological complexity make basically the same sets of contrasts as do the simpler languages. Anêm, for instance, makes more distinctions in possession than any other language, but these are largely subcategories of the same distinctions made in all the other languages.

Language teaching proceeds according to a set of formulae. The first individual words offered by informants always include: 'betel, betel pepper, lime powder, fire' and 'tobacco'. Typically, as each of these words is given, it is included in a few common sentences, all of which are requests. Older instructors usually become impatient with wordlists, recognising that no one can communicate appropriately with only individual words. The student is then required to drill the complete sentence until it is correct and fluent. Later, the student can expect to be tested in public by virtually anyone. If s/he fails, people get embarrassed, because this implies that the instructors have been lax in their duties; if the student passes, however, approving laughter is the award, especially if the language is Anêm or Amara, since outsiders are not supposed to be able to learn these languages.

Requests for items follow the same formula in all languages of the area: (1) the item desired is named; (2) a third person form of the verb *come* follows; and (3) a short first person verb phrase states what the petitioner intends to do with the requested item.

An.	*ezim*	*o-mên*	*da-kîn.*
Mo.	*eliep*	*max*	*ŋa-ŋas.*
Ar.	*bile*	*me*	*ŋe-ŋes.*
To.	*bile*	*me*	*ŋa-ŋes.*
La.	*bile*	*me*	*ŋa-ŋes.*
Lu.	*vua*	*i-nama*	*ŋa-soŋo.*
Ko.	*vua*	*i-nama*	*ŋa-soŋo.*
Ka.	*bua*	*i-nam*	*na-soŋo.*
Ki.	*vua*	*i-mai*	*na-soŋo.*
Am.	*eilep*	*i-me*	*a-ŋas.*
	betel	3s-come	1s-chew.betel

'Hand me some betelnut to chew'.

An.	*uas*	*gox*	*o-mên*	*da-t.*
Mo.	*uas*	*silaŋ*	*max*	*ŋa-ŋan.*
Ar.	*uasi*	*kesa*	*me*	*ŋe-ŋen.*
To.	*uasi*	*gesa*	*me*	*ŋa-ŋen.*
La.	*ombos*	*isa*	*me*	*ŋa-ŋen.*
Lu.	*uasi*	*eta*	*i-nama*	*ŋa-ani.*
Ko.	*uasi*	*eta*	*i-nama*	*ŋa-ani.*
Ka.	*guas*	*eta*	*i-nam*	*na-ean.*
Ki.	*navuas*	*tea*	*i-mai*	*na-kani.*
Am.	*aguas*	*kapso*	*i-me*	*e-kenen*
	tobacco	some	3s-come	1s-eat

'Hand me some tobacco to smoke'.

An.	*kmî*	*ê-mên*	*da-ko*	*uas.*
Mo.	*eiou*	*max*	*ŋo-kobi*	*uas.*
Ar.	*eiou*	*me*	*ŋe-tin*	*uasi.*
To.	*eiou*	*me*	*ŋa-tin*	*uasi.*
La.	*ei*	*me*	*ŋa-tin*	*ombos.*
Lu.	*ziŋa*	*i-nama*	*ŋa-tunu*	*uasi.*
Ko.	*ziŋa*	*i-nama*	*ŋa-tunu*	*uasi.*
Ka.	*diŋa*	*i-nam*	*na-tun*	*guas.*
Ki.	*nariŋa*	*i-mai*	*na-tun*	*navuas.*
Am.	*eiou*	*i-me*	*e-tin*	*aguas.*
	fire	3s-come	1s-light	tobacco

'Pass me a lighter to light my cigarette'.

Not only do these sentences have the same word-for-word structure, but they encode the same worldview at several different levels. First, as far as we can tell, the words in the different languages with the same gloss have precisely the same range of meanings from language to language. More significantly, that these sentences are offered first indicates what is perceived as the primary function of language in the area—it is most important for initiating and maintaining human relationships. One of the first things people do after greeting is share betel or tobacco. Requesting betel and/or tobacco is a sign of trust, because its very use indicates that there is no suspicion of a spell having been cast on the product. To refuse goods provided by someone else is a covert signal of mistrust;

chewing betel or smoking together sets a context for relaxed conversation. People spend a lot of time asking each other for both products, and even little children ask for betel. Consequently, if one is to use the language competently, learning how to initiate friendly situations is the first crucial step; all else follows from this.

The next step in learning a language in NWNB involves requesting food, usually starting with *taro* , which is symbolically the most important traditional staple. Requests for food are grammatically identical to requests for tobacco, but sharing food indicates an escalation in the degree of social proximity. Giving and accepting food indicates mutual respect, while actually eating it together indicates the degree of closeness enjoyed by a mother and her children. Refusing food or mocking food insults the donor, while the inability to ask for food would put a stranger into a situation of social isolation.

The subsequent stages in language instruction are less neatly ordered, but pertain to aspects of daily activities. Greeting and departure formulae involve stating the obvious in terms of enumerating the people staying and the people going. If one gets up to leave, someone is likely to ask:

An.	*na-k*	*au?*
Mo.	*am-la*	*ge?*
Ar.	*am-la*	*ge?*
To.	*om-la*	*ge?*
La.	*om-la*	*kaino?*
Lu.	*u-la*	*soza?*
Ko.	*u-la*	*soza?*
Ka.	*la*	*sida?*
Ki.	*ku-la*	*siaŋ?*
Am.	*k-la*	*ŋai?*
	2s-go	where

'Where are you going?'

To be polite, one should normally state that one is departing and what one intends to do. If the intention is to return shortly, the sentence is marked with the modality particle, here glossed as *first* , indicating that the stated itinerary is a brief interruption in the social interaction.

An.	*da-k*	*da-keziŋ*	*gak.*
Mo.	*ŋa-la*	*ŋo-duxie*	*da.*
Ar.	*ŋa-la*	*ŋo-durie*	*da.*
To.	*ŋa-la*	*ŋa-durie*	*da.*
La.	*ŋa-la*	*ŋa-duriep*	*kik.*
Lu.	*ŋa-la*	*ŋa-meme*	*muga.*
Ko.	*ŋa-la*	*ŋa-meme*	*muga.*
Ka.	*na-la*	*na-meme*	*bua.*
Ki.	*na-la*	*na-mail*	*ge.*
Am.	*a-la*	*e-liŋliŋ*	*ge.*
	1s-go	1s-urinate	first

'I'm going to relieve myself (I'll be right back)'.

Anyone walking in the late afternoon with towel, soap and a change of clothes in hand, along the path from the village that leads to the river, is likely to be greeted by everyone encountered along the way as follows:

An.	*na-k*	*nê-ŋak?*
Mo.	*am-la*	*em-xis?*
Ar.	*am-la*	*em-ris?*
To.	*om-la*	*om-ris?*
La.	*om-la*	*om-ris?*
Lu.	*u-la*	*u-liliu?*
Ko.	*u-la*	*u-liliu?*
Ka.	*la*	*liliu?*
Ki.	*ku-la*	*ku-ualiu?*
Am.	*k-la*	*k-ri?*
	2s-go	2s-bathe

'Are you going to bathe?'

To this, the polite answer is that one is, indeed, going to bathe. If the people one greets in this situation are obviously going toward the village, it is then appropriate to ask them whether they are going to the village. In all NWNB linguistic groups, a typical interchange would be glossed as follows:

GROUP 1	GROUP 2
Are you going to bathe?	Yes, we're going to bathe. Are you going to the village?
Yes, we're going to village. OK, you go bathe. We'll go to the village.	OK, you go to the village. We'll go bathe.

Asking obvious questions allows for friendly phatic communion without setting the scene for another common cultural scenario, the gossip session. In any of these encounters, if actual information (beyond the obvious) is requested or offered, people usually drop their loads, find a place to sit down, start exchanging betel and tobacco, and then get into the details. Once such a scenario is initiated, it is almost impossible to extract oneself from the situation without causing offence. If a greeting contains non-obvious information, and the hearer cannot stop to chat, it is appropriate to make some reference to the lateness of the hour and keep on walking while the greeting is in progress. This response is a signal that a gossip session cannot be initiated at that time. Such patterns of interaction have been observed all over NWNB in exactly the same form, regardless of the language being spoken.

In all groups of the area, the words for body parts are invariably introduced in the context of their being sore or injured, and are often provided in a list that might be glossed: 'My head is sore.' 'My knees are sore.' 'My stomach is sore.' 'My chest is sore....' Given the relationship between illness and sorcery in the area (Scaletta 1985), communicating about illness to others is part of a constant review of interpersonal relationships. Consequently, the language learner is given the names for body parts in the context in which they might be commonly used. If the researcher asks for 'my head', the usual response is:

An.	*og-le*	*sis.*
Mo.	*opo-gu*	*nisi.*
Ar.	*opu-gu*	*doro.*
To.	*opu-gu*	*doro.*
La.	*apu-ŋu*	*kisis.*
Lu.	*zava-gu*	*i-aiai.*
Ko.	*vola-gu*	*i-aiai.*
Ka.	*labora-g*	*i-aiai.*
Ki.	*kuri-k*	*i-karkar.*
Am.	*gud-uk*	*i-pid.*
	head-1s	hurts

'I have a headache.'

Later in the program, students are instructed in gardening, hunting, and fishing terminology. The names of animals, trees, vines and so on are enumerated as part of all-night singing events. Much later, depending on the age, gender and marital status of the student, s/he may be instructed in what is considered rude language. The most common formula for insulting others with crude language is the same throughout the area: (1) choose a body part, preferably genitalia, and (2) describe it as *red.* Why red should be such an offensive colour is unclear to me; our informants could not offer an explanation, or declined to do so. This formula may be an instance of an opaque idiom whose source has been lost. Insulting language is used in two distinct ways—or actual verbal abuse and for joking with friends. On several occasions, I took notes as Goulden was being coached on the use of Lusi insults in intricate repartee. I have also witnessed the same sort of coaching in Anêm villages in which people who had married into the society from other groups were being taught the language used for repartee. Receiving instruction in such language use is an important signal of acceptance into the linguistic community. The outsider who is not urged to learn the local vernacular is being kept at a social distance. People should know when they are being insulted by others. The insult below is the first one encountered in all communities.

An.	*siêxê*	*êxiêk.*
Mo.	*teinam*	*eibmox.*
Ar.	*tenam*	*dimor.*
To.	*pigine luom*	*dimor.*
La.	*piginom*	*dimotmot.*
Lu.	*mozemu*	*siŋsiŋia.*
Ko.	*mozemu*	*siŋisiŋia.*
Ka.	*sem*	*siŋsiŋia.*
Ki.	*morem*	*kilkiluaŋe.*
Am.	*modom*	*toptopaŋa*
	buttocks-2s	red

'Your buttocks are red'

Not all repartee, however, involves coloured genitalia; more sophisticated joking is dependent on intimate knowledge of personal details that can be gleaned only through close interaction over a long period of time.

The New Britain concept of language instruction is highly systematic in that the language taught follows the progression of social use parallel to the socialisation of the student into the linguistic group. The process begins with the formulae appropriate to the interactional needs of first greeting, leading eventually to the subtle insinuations needed

to tease a friend. At all stages, the language taught is governed by its use in actual social situations. In contrast, our structured wordlists and grammatical checklists allowed us to be able to construct sentences that were grammatical but artificial in terms of the local culture. In the villages where we spent sufficient time, our informants patiently humoured us by cooperating with our procedures, but always, in less formal situations, gently tried to lead us back through the progression they deemed appropriate.

Not only are the lexical meanings, the syntax and the idiomaticity the same from language to language, but the system for presenting them to strangers is also the same. That the language lesson program used with us is the same one used with other Niuginians reveals a dimension in the commonality of the worldview shared by all linguistic groups of the area. Studies from around the world have shown that where several languages are spoken in the same cultural region, all of them seem to bear similarities in grammar that supersede their individual classification on other grounds. For example, Gumperz and Wilson (1971) have investigated the local varieties of Marathi and Urdu (Indo-European languages) and Kannada (a Dravidian language) as spoken in Kupwar village, India. They state:

> So great is the similarity among [Kupwar] grammatical structures that we were able to analyse an extensive corpus of bilingual texts involving all three local varieties without having to postulate syntactic categories or rules for one language which were not present in the other language. We may say, therefore, that the codes used in code-switching situations in Kupwar have a *single syntactic surface structure.*
>
> (Gumperz and Wilson 1971:155, emphasis orginal)

In Thurston (1982) I show that Anêm and Lusi also have a common grammatical structure. Subsequent research in NWNB has revealed that all languages in the area share a single syntactic structure, with the major qualification being that the exoteric languages have fewer grammatical categories than the others. The order of morphemes within words is also subject to a small degree of variation from language to language; for example, Lusi has a prefix in the third person singular possessives where other languages have a suffix. Since the people of NWNB tend to conceive of their languages as being composed of unanalysable words, however, I consider this to be a minor departure from total identity from language to language. In any case, this is more than compensated for by the seemingly total identity in worldview encoded in the languages of NWNB. In the subsequent sections of this chapter, I argue that the languages of this area share not only a single grammatical structure, but also a single semantic system. Though some languages are more complex than others, the primary distinction among them is in the forms of the labels that stand for semantic categories.

4.2 Syntactic convergence

As shown in Thurston (1982), the syntactic structure of Lusi (an AN language), while similar in syntactic structure to Anêm (a NAN language), differs significantly from the AN languages that are spoken outside the Melanesian area. As expected, Kove and Kabana share these distinct typological features with Anêm. Subsequent research has revealed that the Bibling languages and Amara are also part of this syntactic sprachbund. Moreover, many of the areal features of NWNB are also shared by Tok

Pisin, a Germanic language. Just as in Kupwar village where it is possible to translate morpheme by morpheme among the local varieties of Marathi, Urdu and Kannada (Gumperz and Wilson 1971), so in NWNB is it possible to translate word by word among languages that belong to three different branches of AN and a NAN isolate. In view of the extensive multilingualism and dual-lingualism in NWNB, the implication is that all of these languages share a single semantic and syntactic structure, differing only in the forms encoding items of their lexica.

That is, regardless of one's vernacular, the way in which one's thoughts and ideas are construed in language operates with the same sets of categories arranged according to the same sets of rules. This is another way of saying that throughout NWNB, there is a single basic culture and that this is encoded in language in the same way in all linguistic communities. Learning a neighbouring vernacular, then, is mostly a matter of learning a new set of words to substitute for semantic and grammatical slots that are already known from one's own language. Language in NWNB is an index of subcultures rather than of separate cultures.

This is, of course, a gross over-simplification of the situation, but true in its general outline. One of the ways in which this is a distortion is that it fails to take into account that some of the languages are simpler than others. In general, the interior languages are more complicated than the Siasi languages of the coast. As a consequence of this, speakers of Siasi languages resist learning the languages of interior peoples, saying that they are too hard to learn, while interior peoples tend to learn the languages of coastal peoples. This, in turn, appears to be the cause of a steady erosion in the number of people who speak interior languages.

Another way in which the one-culture-many-lexica model is a distortion is that it fails to acknowledge the dynamic nature of the cultures in the area. Obligations to kin and affines in other linguistic groups ensure that people are constantly incorporated into new cultural traditions. For instance, one complex called Aulu, involving masked dancers and intricate exchanges of pigs, originated in Kabana (Scaletta 1985) and has steadily enmeshed more people into a web of new kinds of relationships. The Lusi have been performing Aulu for some time. In 1981 Salkei, the Mouk village closest to the coast, performed Aulu for the first time. Similarly, new European-type government, medicine, education, and entertainment entails cultural change and new ways of encoding the changes in language.

Nevertheless, in spite of these distortions, the generalisation is useful in that it captures an important aspect of the linguistic situation in NWNB and is undoubtedly applicable elsewhere in the world. The model of one culture/grammar being reflected in several languages that differ only in lexical form also has implications for methods of linguistic taxonomy, because, since these languages belong to divergent taxa, the similarity in grammatical and semantic structure is not easily attributable to the inheritance of features from a common ancestral protolanguage. Futhermore, in the case of the Siasi group, the member languages spoken on New Britain share more syntactic features with New Britain languages than they do with members spoken on the north-eastern coast of New Guinea.

In extremely general terms, all the languages of NWNB have quite rigid SVO word order. Except in Anêm, all modality is expressed in all languages of the area by a closed

set of independent morphemes, the modality markers, which occur in sentence-final position. Anêm differs from the others in that it encodes distinctions of mood in the subject prefixes (section 3.5); otherwise, the Anêm modality system is identical to that of the other languages. Even in multipropositional sentences, modality markers are mutually exclusive, free morphemes. No language in the area has grammatical marking that indicates tense distinctions. Where tense is not clear from the context, time words like 'today' or 'tomorrow ' are used.

As shown in 4.2a, the negative has the expected value. Dehortatives are used for negative imperatives, prohibitions and negative admonitions—'do not, should not, must not, stop...-ing', and so on. Though most frequently used with second person forms, as in 4.2b, the dehortative can also be used with any person. For example, An/*kekele lan dobeit êbêl.* 'That child should not touch it ' or 'The child must stop touching it' has a third person singular subject.

4.2a	An.	*Paulus*	*u-tl-î*	*aba*	*mantu.*
	Mo.	*Paulus*	*Ø-mtex*	*abax*	*kobok.*
	Ar.	*Paulus*	*Ø-mter*	*obar*	*kobok.*
	To.	*Paulus*	*Ø-mter*	*obar*	*kobok.*
	La.	*Paulus*	*Ø-grai*	*kanem*	*adai.*
	Lu.	*Paulus*	*i-gali*	*gaea*	*mao.*
	Ko.	*Paulus*	*i-gali*	*gaea*	*mao.*
	Ka.	*Paulus*	*i-gal*	*gaea*	*mao.*
	Ki.	*Paulus*	*i-gali-e*	*na-ga*	*eavo.*
	Am.	*Paulus*	*i-se*	*esŋei*	*imna.*
		Paul	3s-spear	pig	negative
		'Paul did not spear a pig.'			

4.2b	An.	*ne-ki*	*êbêl.*
	Mo.	*em-siŋit*	*sakam.*
	Ar.	*em-kŋis*	*sakam.*
	To.	*om-tŋis*	*sakam.*
	La.	*om-kirpin*	*sokol.*
	Lu.	*(u)-taŋi*	*mina.*
	Ko.	*u-taŋi*	*mina.*
	Ka.	*Ø-taŋ*	*padam.*
	Ki.	*ku-taŋ*	*kute.*
	Am.	*Ø-taŋ*	*kate.*
		2s-cry	dehortative
		'Don't cry.' or 'Stop crying.' or 'You shouldn't cry.'	

All these languages also have a modality marker that, depending on the context, can be glossed as either 'not yet' or 'still'. Lamogai and Kilenge, the languages geographically most distant from Anêm, have clearly segmentable forms for *not yet* in which the first element is the negative; in all other languages of the area, the form for 'not yet' is monomorphemic. In all languages of the area, the verb 'die' is conceptually a process, rather than a punctual event as it is in European languages. In NWNB languages, a person can be anywhere in the process from fainting to being 'completely dead'. Consequently, both 4.2c and 4.2d might both be appropriate answers to a question such as 'Is he dead?'

4.2c	An.	*pmaga.*	*u-zik*	*pmaga.*
	Mo.	*dau.*	*Ø-mete*	*dau.*
	Ar.	*dau.*	*Ø-mete*	*dau.*
	To.	*dau.*	*Ø-mete*	*dau.*
	La.	*adai no.*	*Ø-uren*	*adai no.*
	Lu.	*maitne.*	*i-mate*	*maitne.*
	Ko.	*maitune.*	*i-mate*	*maitune.*
	Ka.	*maitne.*	*i-mate*	*maitne.*
	Ki.	*eavo ta.*	*i-mate*	*eavo ta.*
	Am.	*dodo.*	*i-mo*	*dodo.*
		not-yet	3s-die	not-yet

'No, he hasn't died yet ' or 'Not yet, he's still dying.'

4.2d	An.	*pmaga.*	*ol-u*	*u-sîk*	*pmaga.*
	Mo.	*dau.*	*an-o*	*Ø-doŋ*	*dau.*
	Ar.	*dau.*	*an-o*	*Ø-doŋ*	*dau.*
	To.	*dau.*	*an-o*	*Ø-doŋ*	*dau.*
	La.	*adai no.*	*an-ine*	*Ø-ma*	*no.*
	Lu.	*maitne.*	*ai-anunu*	*i-mozo*	*maitne.*
	Ko.	*maitune.*	*ai-anunu*	*i-vuhi*	*maitune.*
	Ka.	*maitne.*	*i-anun*	*i-dio*	*maitne.*
	Ki.	*eavo ta.*	*anuni-a*	*i-sio*	*ta.*
	Am.	*dodo.*	*kan-io*	*i-su*	*dodo.*
		not-yet	soul-his	3s-remain	still

'Not yet, his soul is still there.'

As the label suggests, the *completive* indicates actions or processes that are complete. The Tok Pisin equivalent for this is *pinis* for which the gloss 'already' is appropriate in most contexts. Although most completives refer to events in the past, the completive itself does not mark tense. It is possible, for instance, to have a completive in a future context, as in the following Anêm, which has two irrealis verb forms.

An.	*me-i*	*axî*	*agonu*	*a*	*de-zik*	*bizaŋ.*
	1pQ-arrive	at	village	and	3fQ-die	completive

'By the time we get to the village, she will be dead.'

Sentence 4.2e illustrates another typical completive.

4.2e	An.	*onu*	*i-i*	*a-x-î*	*agonu*	*bizaŋ.*
	Mo.	*osep*	*ti-polou*	*tan*	*axmok*	*kodoŋ.*
	Ar.	*osep*	*ti-polou*	*ge*	*armok*	*kodoŋ.*
	To.	*osep*	*ti-polou*	*ke*	*amrok*	*kodoŋ.*
	La.	*oduk*	*ti-gel*	*pe*	*itar*	*kodoŋ.*
	Lu.	*pana*	*ti-otu*	*pa*	*tuaŋa*	*gasili.*
	Ko.	*pana*	*ti-otu*	*pa*	*tuaŋa*	*gasili.*
	Ka.	*panua*	*ti-uot*		*tuaŋa-i*	*ga kus.*
	Ki.	*tamtamaol*	*ti-pot*	*kŋe*	*na-nia*	*o.*
	Am.	*otodgoio*	*ki-pod*	*ne*	*eivin*	*ma.*
		People	3p-arrive	at	village	completive

'People have already arrived at the village'

All languages of the area have a modality marker for which *first* seems to be a convenient gloss. Use of this marker indicates that its dependent clause occurs before some other (usually unspecified) event happens. For example, An/*nêmên gak* means roughly 'come here first (before you carry on with whatever else you might have been doing)', while *mêtêŋ gak* means 'let's rest, before (we get on with our work)'. The marker also has the effect of implying that the plans under way will resume once the action marked has been accomplished. For example, if a group of people is ready to set off on a journey, and one of the members is noted missing, his absence can be accounted for in Anêm with a sentence like *ukeziŋ gak* 'he's urinating', but the implication is that once he has finished, he will return, and the group can move onward. The Tok Pisin equivalent for this marker is *pastaim.*

4.2f				
	An.	*mê-t*	*tuna*	*gak.*
	Mo.	*ta-ŋan*	*bleten*	*da.*
	Ar.	*te-ŋen*	*aidaŋ*	*da.*
	To.	*ta-ŋen*	*aidaŋ*	*da.*
	La.	*ta-ŋen*	*aidaŋ*	*kik.*
	Lu.	*ta-ani*	*tuna*	*muga.*
	Ko.	*ta-ani*	*tuna*	*muga.*
	Ka.	*ta-ean*	*tuna*	*bua.*
	Ki.	*ta-kan*	*na-tuna*	*ge.*
	Am.	*te-ken*	*evlei*	*ge.*
		1n-eat	eel	first
		'Let's eat some eel first, before...'		

In the wordlists from the Bibling languages published by Allen, Rath and Johnston (1980), several of the words listed contain a form given variously as *wala, bala* or *uala.* These are instances of the modality marker for which 'just', 'only', or 'merely' might be an appropriate gloss. This marker indicates that one constituent of the sentence is limited. For example, Allen, Rath and Johnston give Rauto *ta-akap-uala* as the first person dual exclusive pronoun (1980:193); more likely, this is equivalent to La/*ta-kap bala* '1n-two just ' meaning 'just the two of us', where 'two' is a verb inflected for a first person inclusive subject. In the same paper, Mouk 'one' is listed as *kainɛbala* (1980:195), which can be analysed as *kaine bala* 'just him by himself'. The limiter is frequent in response to attempts to delimit a specific category—pronouns and numerals, for example. It is equivalent to the Tok Pisin *tasol.* 4.2g and 4.2h illustrate some of its functions.

4.2g				
	An.	*gi-ŋe*	*u-deta*	*pêt.*
	Mo.	*lugu enen*	*kaine*	*bala.*
	Ar.	*er-gu*	*kene*	*bala.*
	To.	*er-gu*	*kene*	*bala.*
	La.	*lumumi*	*isa*	*bala.*
	Lu.	*natu-gu*	*eze*	*teze.*
	Ko.	*natu-gu*	*eze*	*teili.*
	Ka.	*natu-g*	*ede*	*tede.*
	Ki.	*tu-g*	*tea*	*volem.*
	Am.	*lok emim*	*kapuk*	*iaka.*
		my-child	one	just
		'I have only one child'		

4.2h			
	An.	*a-li*	*pêt.*
	Mo.	*ŋe-lila*	*bala.*
	Ar.	*ŋe-lila*	*bala.*
	To.	*ŋa-lila*	*bala.*
	La.	*ŋa-lilia*	*bala.*
	Lu.	*ŋa-lalao*	*teze.*
	Ko.	*ŋa-lalao*	*teili.*
	Ka.	*na-lalala*	*tede.*
	Ki.	*na-laia*	*volem.*
	Am.	*e-leila*	*iaka.*
		1s-walk	just
		'I'm just walking around.'	

Finally, the modality marker illustrated here in 4.2i can be glossed variously as 'too', 'again', 'also', or 'another', depending on the context.

4.2i				
	An.	*ni-t*	*moi*	*blaŋ?*
	Mo.	*em-ŋen*	*eski*	*blaŋ?*
	Ar.	*em-ŋen*	*esi*	*blaŋ?*
	To.	*om-ŋen*	*esi*	*blaŋ?*
	La.	*om-ŋen*	*esin*	*saŋ?*
	Lu.	*u-ani*	*moi*	*paze?*
	Ko.	*u-ani*	*moi*	*paze?*
	Ka.	*Ø-ean*	*moi*	*pade?*
	Ki.	*ku-kan*	*na-mo*	*pau?*
	Am.	*ku-kenen*	*ama*	*pau?*
		2s-eat	taro	again
		'Are you eating some more taro?'		

As the examples given above show, the system marking modality in these languages is congruent from one language to the next throughout the area—the same categories are distinguished and they are indicated with free morphemes that occur in sentence-final position. Outside the immediate area, AN languages have different systems of indicating modality. For example, at least some of the Kimbe languages follow the Oceanic norm in indicating tense and aspect distinctions obligatorily with preverbal particles, as in the following Bali sentence taken from Johnston (1980:118), with slightly revised orthography:

Bali	*ɣau*	*ta*	*ɣani*	*a*	*kamo*	*ŋorapa.*
	1s	past	eat	NM	taro	yesterday
	'I ate some taro yesterday.'					

To the west, Gitua marks what Lincoln calls a future with a prefix *na-* which occurs between the subject-marking prefix and the verb stem; this is illustrated by the sentence below taken from Lincoln (1977a:11).

Gitua	*yau*	*ŋa-na-gan.*	vs.	*yau*	*ŋa-gan.*
	1s	1s-future-eat		1s	1s-eat
	'I will eat'			'I ate'	

That Gitua has such marking is significant because, on lexical grounds, it is one of the closest relatives of Lusi, Kove and Kabana. Further west on the north coast of New Guinea, other languages of the Siasi group have basic verb-final sentence construction,

rather than verb-medial as in the Siasi languages further east, including those spoken on New Britain (Lincoln 1977b). It appears to be the case that geographic proximity is more predictive of syntactic structure than the degree of genetic relatedness. That is, regardless of linguistic classifications based on lexical evidence, the syntax of a language is most likely to resemble those languages that are spoken by neighbouring groups.

A further example of this is shown by the distribution of particles that mark noun phrases among the languages of the area. Most AN languages spoken outside Melanesia have particles, commonly called articles, that at minimum mark a phrase as a noun phrase. In most AN languages, these particles also mark distinctions of uniqueness, number, focus and semantic rôle (see Thurston 1982 for a more extended discussion). In NWNB, only Kilenge and Amara, which are contiguous, have noun-phrase markers—Ki/*na-* and Am/*a-~e-~o-*. These prefixes indicate only that a form is a noun, and do not occur with inalienable nouns. In the Bibling group, numerous words appear to have a fossilised prefix with the same original function—Mo/*a-bax* <**a boRok* 'pig' and *o-mto-gu* <**a mata-ŋku* 'my eye'. Synchronically, however, these diachronically identifiable prefixes are now part of the stem in these languages. The stimulus for this lack of a distinct noun-phrase marker in these languages, I believe, is Anêm. Presumably, in an earlier era, the group of languages for which Anêm is the only remaining evidence had no such particle, and, consequently, the AN languages that arrived later have assimilated to Anêm in this respect.

Finally, most AN languages have reciprocals that are indicated by a preverbal form, usually a reflex of **paRi*.

Gitua *yam* *amora* *a-pa-rap.*
you you-dual you-recip-hit
'You two fought each other.' (Lincoln 1977a:24)

It is in reciprocal constructions that the languages of NWNB diverge the most in syntax. While most languages of the area have a distinct reciprocal particle, Lusi, Kove and Kabana use a preposition to mark the construction. Given that Gitua (a closely related Siasi language) has a distinct reciprocal marker, the constructions in Lusi, Kove and Kabana look like recent innovations making use of the available resources at a time when the language ancestral to them was a new lingua franca. Nevertheless, all vernaculars in NWNB have a reciprocal marker that occurs in postverbal or postnominal position as shown in 4.2j and 4.2k. In Kilenge, Amara and the Bibling languages, the reciprocal marker is a reflex of **paRi*, but it is used in a syntactic construction more like that of Anêm than any other AN language I am aware of. The minor differences among the languages of NWNB are distributed according to the proximity of the languages to one another; that is, those languages closest to Anêm are most similar to Anêm, while those most distant are most different.

4.2j	An.	*i-kê-l*	*mak*	*mantu.*
	Mo.	*ti-xik*	*peli*	*kobok.*
	Ar.	*ti-erke*	*polu*	*kobok.*
	To.	*ti-rik*	*polu*	*kobok.*
	La.	*ti-rek*	*pulu*	*adai.*
	Lu	*ti-kona*	*ŋa-zi*	*mao.*
	Ko.	*ti-kona*	*ŋa-zi*	*mao.*
	Ka.	*ti-gera*	*ŋan-gid*	*mao.*

	Ki.	*ti-li*	*pol-re*	*eavo.*	
	Am.	*ki-rei*	*pel*	*imna.*	
		3p-see	reciprocal(-3p)	negative	
		'They did not look at one another.'			
4.2k	An.	*i-kisi-axî*	*tîm-nî*	*mak.*	
	Mo.	*ti-kis*	*lim-sak*	*peli.*	
	Ar.	*ti-kis*	*lim-sak*	*polu.*	
	To.	*ti-kis*	*lim-sak*	*polu.*	
	La.	*ti-gis*	*mel-sek*	*tu-pulu.*	
	Lu.	*ti-kisi*		*ŋa*	*lima-zi.*
	Ko.	*ti-kisi*		*ŋa*	*lima-zi.*
	Ka.	*ti-kisi*		*ŋan*	*bage-d.*
	Ki.	*ti-kisi*		*pol*	*vage-re.*
	Am.	*ki-kiskis*		*pel*	*nelume-de.*
		3p-hold	hand-3p	reciprocal	(preposition) hand-3p
		'They are holding hands.'			

Syntactically, then, all the languages of NWNB belong to a single sprachbund. In spite of their belonging to three subgroups of AN and one NAN isolate, they have more in common grammatically with one another than they should, given the assumptions underlying the standard models of language change and language classification. Moreover, even those languages that have close relatives elsewhere—the Siasi languages, for instance—have more in common syntactically with the contiguous languages than they do with their relatives spoken near other NAN or AN languages. Where variation in syntax is found among the languages of NWNB, isoglosses usually keep neighbouring languages together. For example, Kilenge and Amara share more features with one another than do Kilenge and Mouk.

4.3 Semantic convergence

It is, perhaps, presumptuous to say that all the languages of NWNB encode basically the same culture with different labels attached, but this is what all the evidence collected so far suggests. This is not to say that the subcultures of the area are all identical, but that they have much more in common than is suggested by the lexical differences among the languages. This is a crucially important point because, if languages diversify as a result of sociocultural isolation as the standard models of historical linguistics would have us believe then there should be four distinct clusters of cultures in NWNB, each reflected in the linguistic classification. As stated at the beginning of chapter 2, the cultural sub-zones of NWNB appear to be based on geographic contiguity rather than on linguistic classification per se. For instance, Mouk, Lusi and Anêm share many more linguistic and cultural traits with one another than with other groups, because they are all spoken around the slopes of Mount Andeua. Following the assumptions of the current linguistic models, Mouk culture should be more similar to Aria culture than to Lusi, and Lusi culture should be more similar to Kove culture than it is to Anêm.

In the model presented here, the labels attached to cultural concepts are seen as the most easily replaced items of culture. Whether one calls the evil but easily tricked monster that lives in the forest an *eni* or an *antu* has no observable effect on what the creature means to the people who believe in its existence. Similarly, the European and Middle

Eastern concept of a single omnipotent, omniscient, omnipresent being is basically the same whether one calls him (or her) *God, Dieu, Allah* or *Yahweh.* Languages acquire greater numbers of speakers primarily because people in other cultures learn to speak them. They diversify because the people who learn them generally do a poor job. What gets changed in the process of language transference is of the same order as what gets reinterpreted when a religion or sport is passed from one culture to another. Consequently, what appears superficially to be a great change, such as a switch from one language to another, may be nothing more than the same thing dressed up differently. Even more than syntax, the semantic structure of cultural concepts is more resistant to change than the mere labels, because the bearers of a culture may continue to transmit their culture to subsequent generations in spite of a switch from one language to another.

On the other hand, *real* cultural change may occur without an obvious change in language. For instance, that some people in European cultures can now conceive of their omnipotent deity as feminine or genderless is symbolic of a change in segments of these societies in which the formerly rigorous division of rôles according to gender has been relaxed. The point is that the collection of labels for cultural concepts—what we normally conceive of as language—is not irrevocably tied to the structure of concepts. Each is free to develop independently of the other. Neither, moreover, is dependent on the biology of its bearers. The implication for NWNB is that the culture of the area is, to a certain degree, a continuation of the culture of people whose languages are ancestral to the modern Anêm. As each contact brought about the accommodation of a new language, what changed linguistically in each case was the forms in the lexicon. Meanwhile, other aspects of the culture were free to develop independently, and the movement of people (primarily women) among groups has ensured a high degree of regional cultural congruence despite changes in the names for things. While a cultural innovation in one group can quickly spread through other groups in the area, the arrangement of phonemes labelling the innovation is trivial.

That the various linguistic groups of NWNB share a common culture has already been introduced in section 4.1. The arrangement of items in the lexicon also shows that basic vocabulary cannot be captured in any universal list—what constitutes the endolexicon in other languages is not necessarily an appropriate list for the languages of NWNB. For example, the verb for 'appear' is an endolexical item in NWNB, but does not appear on the standard Swadesh list while 'horn', which is found on the Swadesh list, is an inappropriate item to attempt to elicit in New Guinea, since there are no horned animals. Furthermore, the separate items 'hair', 'leaf' and 'feather' are all treated as instances of the same thing in all languages of NWNB and elsewhere in the Pacific. In the remainder of this section, further linguistic evidence, focussing on body parts, is given in support of the hypothesis presented above—namely, that the various languages of the area tend to segment basically the same cultural universe according to the same principles.

The body is divided according to the same pattern in all languages of the area. Moreover, terms for parts of the body are extended to other situations which are neither expected nor transparent. In the following lists, some ectolexical items are given to show how body part names are extended to cover other lexical items.

4.3a lateral fin of a fish = ear of fish[1]

An. *gêtî ia*[1]
Mo. *aŋua slaŋa*[1]
Ar. *lodu tala*[1]
To. *lodu tala*[1]
La. *oŋua ila sapiu* = 'fin of fish' (any fin)
Lu. *iha aitaŋa*[1]
Ko. *iha aitaŋila*[1] (with metathesis)
Ka. *ia itaŋapu*[1] = 'fish's base of ear'
Ki. *naia taŋe*[1]
Am. *ouŋa telŋe*[1]

4.3b blade of the knife = eye [1] or mouth[2] of the knife

An. *eilîm te*[1]
Mo. *elil bitna*[1]
Ar. *elil bitna*[1] *or elil ene*[2]
To. *udage ene*[2] *or udage bitna*[1]
La. *udage auna*[2]
Lu. *uzage aimata*[1]
Ko. *hai aimata*[1]
Ka. *didid imata*[1]
Ki. *napul mate*[1]
Am. *eseve mete*[1]

4.3c my ankle = neck of my foot[1]

An. *agîmkî tiga*[1]
Mo. *komgu agum ine*[1]
Ar. *koŋgu agune*[1]
To. *kogu agune*[1]
La. *kaŋgu agune*[1]
Lu. *ahegu aigauli*[1]
Ko. *ahegu aigalu*[1]
Ka. *aeg igagal*[1]
Ki. *aek segeŋe* = 'joint of my foot'
Am. *kak ruo laslak* = 'wrist or ankle of my foot'

4.3d my calf = meat [1], fruit [2] or belly [3] of my foot

An. *kînai* (possibly related to *ki-g3* 'meat')
Mo. *komgu apok uatna*[2]
Ar. *koŋgu okur*[1]
To. *kogu okur*[1]
La. *kaŋgu kabur* [1] (?)
Lu. *ahegu aiopo*[3]
Ko. *ahegu aiapo*[3]
Ka. *aeg iapa*[3]
Ki. *aek gamaea* = 'calf of my foot'
Am. *kak ruo avo kane*[2]

4.3e my heel = base of my foot [1]

An. *apanai* [*apa-x3* 'fork'; 'crotch'; 'shoulder'. *apa-g3* 'end']
Mo. *komgu apa ine* cf. An.
Ar. *koŋgu batne*[1]
To. *kogu batne*[1]
La. *kaŋgu bate*[1]
Lu. *ahegu aikuti* = 'penis of my foot'
Ko. *ahegu aiguvi*
Ka. *aeg igub*
Am. kak ruo pio[1]

4.3f my knee = joint of my foot[1]

An. *bolsi* = 'my knee'
Mo. *komgu bune*[1]
Ar. *koŋgu buno*[1]
To. *kogu buno*[1]
La. *kaŋgu buno*[1]
Lu. *ahegu aivolvolu* = 'knee/elbow of my foot'
Ko. *ahegu aivolvolu* = 'knee/elbow of my foot'
Ka. *aeg kubal*[1]
Ki. *aek sukia* = 'knee/elbow of my foot'
Am. *kak ruo kuvusŋe*[1]

4.3g my toe = children[1] or toe[2] of my foot

An. *êlkŋêm tiga*[1]
Mo. *komgu titno*[1]
Ar. *koŋgu titno*[1]
To. *kogu kuskus*[2]
La. *kaŋgu siŋle*[2]
Lu. *ahegu aiziziki*[2] (<POC**liki* 'little')
Ko. *ahegu aiziziki*[2]
Ka. *aeg igoŋa*[2] cf. thumb
Ki. *aek goŋe*[2]
Am. *kak ruo kokŋe*[2]

4.3h my toenail = claw of my foot [1]

An. *gisim tiga*[1] (also *gisi* 'my toenail/fingernail')
Mo. *komgu talpes*[1]
Ar. *koŋgu talpes*[1]
To. *kogu talpes*[1]
La. *kaŋgu katalpis*[1]
Lu. *ahegu aitai*[1]
Ko. *ahegu aitai*[1]
Ka. *aeg itemia*[1]
Ki. *aek temia*[1]
Am. *kak ruo vlisio*[1]

4.3i my sole = 'belly[1]' or 'guts[2]' of my foot (cf. palm)

An. *pêlŋêm tiga*[1]
Mo. *komgu damaine*[1]
Ar. *koŋgu damaine*[1]
To. *kogu damaine*[1]
La. *kaŋgu anto*[2]
Lu. *ahegu ailolo*[2]
Ko. *ahegu ailolo*[2]
Ka. *aeg ilolo*[2]
Ki. *aek atea* = 'liver of my foot'
Am. *kak ruo gorio*[2]

In all languages of the area, a single stem is used to refer to 'hair', 'leaf' and 'feathers'. As this is extremely common throughout the Pacific and elsewhere, having them as separate items on the Swadesh list is probably inappropriate. The Tok Pisin *gras* also means 'hair/leaf/feather', but also 'grass' and 'herb'. This may seem to be an example of how English has been simplified in the pidginisation process, but is more accurately an example of a newly created lingua franca reflecting the structures of substrate languages. In most of the languages of the area, the word for this item occurs only in the third person singular; consequently, another noun must be used with it to specify the possessor of the 'hair/leaf/feathers'. One cannot, for instance use Am/*uoruore,* the reduplicated form of Am/*uore,* without the nominal compound meaning 'head'. Even in languages like Lusi where affixes can occur directly with the stem *launi-*, and the unmarked form normally means 'hair of the head', it usually occurs with the noun for 'head' anyway. In other cases, as in 4.3k, where 'hair' can be deduced from the verb, the word for 'head' usually stands for 'hair' as well.

4.3j my hair = hair of my head[1]

An. *kile*[1] (*l2r* suffixes mark this as a head part)
Mo. *opogu uole ine*[1]
Ar. *opogu elilo*[1]
To. *opugu elilo*[1]
La. *apuŋu kolouna*[1]
Lu. *zavagu ailauni*[1] or *launigu*
Ko. *volagu ailauni*[1] or *launigu*
Ka. *laborag ilaun*[1] or *launig*
Ki. *kurik louloua*[1] or *loulouk*
Am. *guduk kane uoruore*[1]

4.3k I comb my hair = I comb my head[1]

An. *ati kile* = 'I pull out my hair'.
Mo. *ŋesex opogu*[1]
Ar. *ŋeser opogu*[1]
To. *ŋaser opugu*[1]
La. *ŋaser apuŋu*[1]
Lu. *ŋapele zavagu*[1] *(ailauni)*
Ko. *ŋapele volagu*[1] *(ailauni)*
Ka. *napele laborag*[1] *(ilaun)*
Ki. *nasilpeke kurik*[1] or *nasilpekau* (reflexive)
Am. *esir guduk*[1]

4.3l my elbow = knot/joint of my hand[1]

An. *punai* (*pu-l2* 'joint' (in bamboo); *pu-g3;* 'knot' *pu* 'bump')
Mo. *lumgu bune*[1]
Ar. *luŋgu buno*[1]
To. *lugu buno*[1]
La. *molugu buno*[1]
Lu. *limagu aivolvolu* = 'knee/elbow of my hand'
Ko. *limagu aivolvolu* = 'knee/elbow of my hand'
Ka. *bageg kubal*[1]
Ki. *vagek goŋe* = 'knee/elbow of my hand'
Am. *lumok kuvusŋe*[1]

4.3m my fingers = 'children[1]' or finger/toes[2] of my hand

An. *êlkŋêm tîmnai*[1]
Mo. *lumgu titno*[1]
Ar. *luŋgu titno*[1]
To. *lugu titno*[1]
La. *molugu siŋle*[2]
Lu. *limagu aiziziki*[2] (cf.POC**liki* 'little')
Ko. *limagu aiziziki*[2]
Ka. *bageg igoŋa*[2] (cf. 'thumb')
Ki. *vagek goŋe*[2]
Am. *lumok kokŋe*[2]

4.3n my fingernail = claw of my hand[1]

An. *gisim tîmnai*[1] (also *gisi* 'my fingernail/toenail')
Mo. *lumgu talpes*[1]
Ar. *luŋgu talpes*[1]
To. *lugu talpes*[1]
La. *molugu katalpis*[1]
Lu. *limagu aitai*[1]
Ko. *limagu aitai*[1]
Ka. *bageg itemia*[1]
Ki. *vagek temia*[1]
Am. *lumok vlisio*[1]

4.3o my palm = 'belly[1]' or 'inside[2] of my hand'

An. *pêlŋêm tîmnai*[1]
Mo. *lumgu damaine*[1]
Ar. *luŋgu damaine*[1]
To. *lugu damaine*[1]
La. *molugu anto*[2]
Lu. *limagu ailolo*[2]
Ko. *limagu ailolo*[2]
Ka. *bageg ilolo*[2]
Ki. *vagek atea* = 'liver of my hand'
Am. *lumokgorio*[2]

4.3p my thumb = 'mother[1] ' or 'stone[2] of my hand'

An. paui[2] (*pa-ul* 'thumb'; *pa* stone +*ul* garden-class suffixes)
Mo. *lumgu opmu*[1]
Ar. *luŋgu tna*[1]
To. *lugu tna*[1]
La. *molugu touk*
Lu. *limagu aigoga*
Ko. *limagu aigoga*
Ka. *bageg igoŋa kapei* = 'big finger of my hand'
Ki. *vagekgoŋaiŋa*
Am. *lumok kokŋe ui* = 'big finger of my hand'

4.3q my wrist = neck of my hand[1]

An. *agîmkî tîmnai*[1]
Mo. *lumgu agum ine*[1]
Ar. *luŋgu agune*[1]
To. *lugu agune*[1]
La. *molugu agune*[1]
Lu. *limagu aigauli*[1]
Ko. *limagu aigalu*[1]
Ka. *bageg igagal*[1]
Ki. *vagek segeŋe* = 'joint of my foot'
Am. *lumok laslak* = 'ankle/wrist of my foot'

Like 'hair', 'leaf' and 'feather', the words for 'lip' and 'teeth' are not part of the endolexicon in many of the languages of NWNB. In the majority of the languages, these are polymorphemic lexemes, as shown in 4.3r and 4.3s.

4.3r my teeth = 'bones[1]' or 'fruit[2] of my mouth'

An. *loga*
Mo. *ogu uatna*[2]
Ar. *ogu erine*[1] or *ogu otna*[2]
To. *ogu erine*[1] or *ogu otna*[2]
La. *agu kakai*[1]
Lu. *luogu*
Ko. *luogu*
Ka. *luog*
Ki. *roŋak*
Am. *nok kane vre kokŋe* = 'fingers/toes of my mouth'

4.3s my lips = skin [1]of my mouth

An. *asigî boŋga* = 'edge of my mouth'
Mo. *ogu taxna*[1]
Ar. *ogu tarna*[1]
To. *ogu tanra*[1]
La. *agu tanra*[1]
Lu. *aoagu aikukuli*[1]
Ko. *aoagu aikulkuli*[1]
Ka. *aoag ikukul*[1]
Ki. *aok kulkulia*[1]
Am. *nok kane vre kulkulio*[1]

There are two major points made in this section. First, by and large, the languages of NWNB label the same categories in the same ways. Those languages that are adjacent are the most similar. Those languages that have been in close association the longest (Anêm and Mouk, Amara and Kilenge) exhibit identical structures most often, regardless of the linguistic taxonomy. If it is asserted that languages inherit unique syntactic, semantic and phonological categories directly from their ancestral languages, then the languages of NWNB should be more different from one another in these respects. At minimum, the Bibling and the Siasi languages spoken in the area should be as different in other ways from one another as they are lexically; and both should diverge radically from Anêm, which is not even an AN language. That they are so similar to one another in all respects except lexical form demonstrates clearly that languages do not inherit the bulk of their structures from protolanguages, but converge with the other languages spoken in their multilingual regions.

Second, little appeal can be made to universals of semantics to account for the similarities demonstrated among the languages of this area, because the endolexica of languages differ from continent to continent. Beyond the examples given above, other items that are supposed to be separate according to the Swadesh list are treated together in all the languages of the area. For example, 'bark' is the same as 'skin', 'hit' is the same as 'kill', and 'all' is the same as 'many '. Furthermore, several very important items in the endolexica of the languages of NWNB are not included in the standard Swadesh list. Without working long enough with the languages of the area, one could not predict what they are. Among the notable missing in the Swadesh 100 list are: 'appear/arrive/ exist/ happen'; 'base/origin/stump/reason'; 'cut'; 'extract/dig up/pull out'; and 'spear/pierce/ stab/ shoot'. These items are among the most basic lexemes in these languages—they are high frequency items, among the first learned, and crucial to saying even the simplest things in each language. If the Swadesh list were universally applicable, these items would be included as surely as 'leaf' and 'feather' are now included as separate entries in the currently used Swadesh list.

4.4 Substratomania

Within the contexts of: (1) trying to classify particular Melanesian languages as either AN or not, and (2) attempting to account for the marked diversity among Melanesian languages, several Oceanic linguists have engaged in discussions of pidginisation, language mixing, substratum influence and creolisation (Capell 1962, 1971, 1976; Chowning 1969; Dyen 1962; Grace 1962; Lynch 1981; Thurston 1982) . Some authors have used these terms almost interchangeably, because the focus has been on the classification of results (AN, NAN or semi-AN) rather than on the processes themselves. Pidginisation and creolisation have been defined in section 3.2. I would prefer to reserve the term 'mixing' for the types of convergence that occur among fully-indigenised languages whose speakers are multilingual in the neighbouring languages. The results of mixing and substratum are similar in many respects—both result in languages that share many of their linguistic resources. Mixing, which is discussed more fully in the following section, results in segments of the lexica of several formerly distinct languages being copied into a single language; it also results in shared syntax and semantics. As conceived of here, substratum influence operates primarily in the initial stages of pidginisation when people are trying to construct a lingua franca using the words of someone else's language. Since the process of pidginisation results in the simplified relexification of one's first language, the lexical forms are derived primarily

from a single language according to fairly regular phonological reinterpretations of the target language. This, I believe, is what is responsible for the systematic sound correspondences that the neogrammarian hypothesis was designed to account for. The substratum in a language, then, is the sum total of features retained from languages given up in favour of a newly created language; it is the phonologic, syntactic and semantic matrix onto which lexical *forms* derived from another language are mapped. Features of a substratum persist in a geographic area despite recurrent processes of relexification.

The appeal to substratum has been used to explain the marked diversity of Melanesian AN languages (Ray 1926; Capell 1962, 1971, 1976; Thurston 1982). The substrata of diverse autochthonous NAN languages are seen to persist in those languages that are AN almost exclusively in lexical form alone. The response to this model has ranged from rejection of the idea (Dyen 1962; Goodenough 1962; Chowning 1969) to cautious reservation (Grace 1962). On the languages of New Britain, Chowning states:

> I should emphasize the fact that these NAN languages do not seem to have greatly influenced any of the neighbouring AN languages.... It is certainly begging the question to speak of an NAN substratum in such languages when this substratum cannot be derived from any identifiable NAN language.
>
> (1969:21)

Chowning's assertion is easy to make in the virtual absence of relevant data. Even the rather sketchy data now available, however, seem to point toward the possibility of a pre-Anêm substratum in the Bibling and Whiteman languages. Anêm mythology mentions a group of little people, the Enieni, who used to live on the southern slopes of Andeua. The Enieni are said to have spoken a language similar to Anêm, with words like *uger* for Anêm/*ugêx* 'he went down'. Today, the Lamogai do not know that a language called Anêm exists; nor do most of the people of western Bariai. Nonetheless, all the languages of NWNB share a single syntactic and semantic structure. The evidence available on the Whiteman languages (Johnston, ed. 1980; Goulden, fieldnotes) seems to suggest that the range of this sprachbund extends much further east. Some Whiteman languages even have a gender distinction like that of Anêm.

Just as mythology can be easily dismissed, so shared syntax and semantics can be equally a result of convergence through multilingualism or common substratum. To argue that pre-Anêm might have acted as an ultimate substrate language for the Bibling and Whiteman languages, we would have to demonstrate that something akin to modern Anêm was probably spoken within the modern range of these AN languages. If a small number of immigrant AN settlers managed to get the resident NAN speakers to take on their languages, then one would expect the original NAN languages to persist for at least a generation or two in some adjacent areas. With the NAN languages still at hand, one would expect that some of their lexical forms might be copied into the new AN languages. Because of the insufficient data on the Whiteman languages, the evidence supporting this scenario is scant, but the initial published wordlists contain hints of words that look remarkably like modern Anêm, and unlike anything reconstructed for POC or PAN. Some of these words are given in 4.4a.

4.4a Proto-Anêm in the Bibling and Whiteman languages

POC	GLOSS	ANÊM	BIBLING AND WHITEMAN
**apuR*	lime	*glîm*	Rauto,La/*oglum* Bebeli/*gulum* (Goulden,fieldnotes) Mo/*eglim* 'white'
**manuk*	bird	*êknîn*	Psohoh/*e-kiŋ* (Johnston 1980) Miu/*ɛgin* (Throop and Throop 1980) Kaulong/*ɛkiŋ* (Throop and Throop 1980)
**tolu*	three	*bîk*	Bebeli/*miuk* (Goulden, fieldnotes) Kaulong/*miuk* (Throop and Throop 1980) Atui/*ɛmik* (Hoopert andWakefield 1980)
**pati*	four	*tanol*	Mo/*apeinal* Ar/*apanal* Kaulong/*mnal* (Throop andThroop 1980) Asengseng/*inal* (Throop and Throop 1980) Atui/*ɛpinɛl* (Hoopert and Wakefield 1980)
**pani*	give	*-soŋ-k3* *-sn-1r*	Am/*-suŋ* Mangsing/*suŋu* (Johnston 1980)

The list in 4.4a is skimpy, partly because the data available on the Whiteman languages are so superficial, and partly because it is difficult to identify a particular word as AN or NAN with certainty. Anêm shares a great number of ectolexical items with the Bibling languages (see 4.5a). This may also be true for the Whiteman languages. In Thurston (1982), I argue that Lusi is a recently-created language with an Anêm substratum. It appears, however, that the Bibling languages were probably involved as well. Nevertheless, whether we hypothesise Anêm or the Bibling languages as substrata for Lusi, the results would be similar, because the Bibling languages themselves retain substrate features of either Anêm or a now-extinct close relative of Anêm. At this stage, what is most clear is that an enormous amount of research in the basic descriptions of these languages and in comparative reconstruction remains to be done before this can be satisfactorily sorted out.

4.5 Language mixing

In 1962, Capell suggested the category 'semi-AN' to include the superficially AN languages of Melanesia that are difficult to classify unequivocally as either AN or NAN. Since Capell's article is largely responsible for synthesising what was then known about the languages of the Pacific and reasserting Ray's (1926) hypothesis regarding the mixed ancestry of certain Melanesian languages, I feel that it is appropriate to quote parts of Capell at length. Though some of the languages in question are in New Britain, the problem is widespread throughout Melanesia.

> In New Britain certain languages are known to be NAN, and others have been reported as NAN although no specimens are available. In the west of the island, where general information is scarce, a language called Idne is reported to be NAN. All the languages of the southwest coast, though classified as AN and certainly containing AN elements, are only NAN

> languages overlaid with a veneer of AN. This applies from the west end of the island (where Kilenge is much more clearly AN) right along the south coast as far as Cape Orford. Some languages classified by Loukotka as "Papuan" (A Kinun, Pulie) are members of the semi-AN group.
>
> (Capell 1962:375)

> ...Loukotka (1957:66ff.) has classified the languages of New Caledonia and the Loyalty Islands, as well as Aneityum in the southern New Hebrides, as NAN; but this is not a fact. All these languages diverge very widely from the AN, but do contain an AN element sufficiently large to justify grouping them with those languages. They have been sources of difficulty to all classifiers of Oceanic languages, and Codrington (1885:16) regarded the Loyalty Island languages as especially troublesome to place. Ray (1926:76) was of the same opinion. Structurally, however, as well as in a portion of the vocabulary, they are AN. A better case might be made out for regarding the Tanna languages as NAN, but even Loukotka does not do this. A subdivision of "semi-AN" languages seems to be called for.
>
> (1962:376-377)

> This area [Santa Cruz and Reef Islands] hardly enters into AN studies. Some of the languages are PN [Polynesian], and the remainder predominantly NAN with a veneer of AN, chiefly vocabulary.
>
> (1962:382)

Among the admonishments, Capell earned the following statement by Dyen in which Capell's very credentials as a linguist are challenged—according to Dyen, Capell has not kept up with developments in linguistic theory over the last century.

> Some of [Capell's] attitudes are reminiscent of theoretical views abandoned by the foremost comparativists of the late nineteenth and early twentieth centuries.... One of the powerful conceptions pressed by Meillet was the presistence [sic] of a language as a unique entity. His postulate was: *There are no mixed languages.* If languages do not mix, then each language represents a continuous unique historical development.... A paraphrase of Meillet's dogma is as follows: *Once a language is discrete, it is always discrete....* To the extent that the absolute nature of the principle that languages do not mix is ignored, it becomes less possible to classify languages genetically.... The hypothesis of pidginization is untenable.
>
> (Dyen 1962:403-404, emphasis original)

Dyen's reply to Capell is most remarkable in that it reveals the exposed nerve, the theoretical implication that must be considered: if pidginisation or language mixing (the same thing for Dyen) were demonstrated among what we would now (for no good reason) call 'natural' languages, genetic classification would be impossible. As shown in the following chapter, although the processes of language change discussed here do indeed have theoretical implications for glottotaxonomy, all is not lost.

Not all the criticism directed toward Capell is mere sniping from the trenches of dogma. Grace, for example, recognises the implications of what Capell is pointing out. Although he is understandably unsatisfied with Capell's scenario, he is well aware that the linguistic data from Melanesia contain anomalies that need addressing. He even lays out what sort of evidence would be required to substantiate Capell's position. His comments form the major point of departure for my own research (Thurston 1982):

> ...our hope for progress in determining linguistic relationships must depend on two kinds of developments. First, we need to know more about the processes of linguistic change and linguistic differentiation, and secondly, we need a more consistent application of that knowledge which is already available. There are some indications that the languages of Oceania might contribute significantly to a better theory of linguistic change and differentiation.
>
> Capell has mentioned the pidginization hypothesis of the origin of the Melanesian languages. Although I feel that that hypothesis is unfortunate, *it did arise in response to certain phenomena which appear to require explanation.* First of all, there are those facts which have led some to the assumption that some of the Austronesian languages of Melanesia are more Austronesian than others. *To reject this particular interpretation of the facts does not dispose of the facts themselves.*
>
> (Grace 1962:409, emphasis mine)

At the time this was being written, important developments in other areas of linguistics were occurring that would have ramifications for Oceanic linguistics. In 1959, the first international conference on creoles was convened in Jamaica. Since then, investigation into pidginisation and creolisation has become a respectable occupation for a scholar; and consequently, the intellectual climate has become more receptive to letting the data speak for themselves, rather than denying the data on the basis of incontrovertible theory. By 1976, Capell was still defending the hypothesis of mixture among AN and NAN languages in Melanesia, but the discussion had been joined by Dutton (1976) and Wurm (1976). Recently Lynch (1981) has summarised four case studies of language mixing in an effort to account for the diversity of Melanesian AN languages in comparison with Polynesian linguistic homogeneity. In refutation of Pawley's (1981) argument that Melanesian diversity can be accounted for by greater time depth alone, without appealing to different processes of language change, Lynch argues that 'the factor of Papuan-AN contact cannot be ignored in any discussion of the process of linguistic diversification in Melanesia' (1981:122). I could not agree more.

The languages of NWNB share a single semantic map and the same general syntactic structures. Since they belong to three subgroups of AN and one NAN isolate, it is difficult to argue that all four groups, by mere coincidence, have developed in a parallel manner. They have obviously exchanged linguistic resources; and these include more than mere atomic lexical forms—they include, for instance, full paradigms. Lexicon aside for the moment, it is obvious that these languages have been mixing with one another by exchanging semantic and syntactic structures. It is also obvious that the direction of influence has been from NAN to AN, from AN to NAN and from AN to AN.

An example of AN influence in Anêm is the inclusive/exclusive distinction in the first person plural pronominal suffixes. No such distinction is made in the subject prefixes that occur with verbs. That the forms indicating this distinction are almost entirely regular also suggests that they have been recently formulated and not subjected to the processes of esoterogeny that have made the other pronominal suffixes so unpredictable. Anêm also has, as most basic in the possessive distinctions, the tripartite inalienable/edible/neutral contrast that is one of the defining features of AN languages in Melanesia.

In lexicon, Anêm has copied several strata of vocabulary: (1) from the contiguous Bibling languages, (2) from the Siasi languages, and (3) from Tok Pisin. Words copied

from the contiguous Siasi languages are the most easily identified. They include primarily names associated with maritime technology (Thurston 1982), but also a large number of other items, including endolexical items such as *ado* 'sun' and *kaua* 'dog', from Lu/*azo* and *kaua*, respectively. Until the work began on Mouk and the other Bibling languages, I had assumed that most of the rest of Anêm vocabulary was NAN. The data on Mouk, however, point definitely to AN origins for many Anêm words and cast suspicion on the etymology of numerous others. For example, only the *b* in An/*aba* 'pig' looks anything like Motu/*boroma*, until Mo/*abax* and Ar/*obar*, all meaning 'pig', are available for comparison. That Aria has a fossilised article in the form of *o-* rather than the expected *a-* suggests that the vowel in the original stem might have been higher and back, as in the Motu word. Similarly An/*eni* 'tambaran' may ultimately be derived from POC**qanitu* 'spirit'. An/*bli-g3* may derive from **muRi* 'back'. An/*og-l2r* may be related to Mo/*guxno* 'canopy' (of a tree), Am/*-gud* and Lu/*-uru* 'carry on head', and Ki/*kuri-* 'head', all from POC**qulu*.

That Anêm shares a great number of lexical items with the neighbouring languages is amply supported in the comparative lexicon presented in the appendix. Some words in Anêm are obviously AN, while other words in the AN languages are most likely derived from pre-Anêm. A few examples of the latter category are shown in 4.5a.

4.5a Anêm Vocabulary in the AN languages of NWNB

ANÊM	GLOSS	NWNB AN LANGUAGES
sakêx	ginger bed	Mo/*saxkei*, Am/*asarke*, Lu/*sareke*
tatigêl	boulder	Mo/*tatigel*
texik	chicken	Am/*otorokok*
iîk	leaf wrapper	Mo,La/*eiuk*, Am/*eiuek*
bêgêt	husband	Mo/*bogot*, La/*pagat*, Ka/*beget*, Am/*avagad*
êbîk	hole	Mo,Ar,La/*obuk*
êŋîl	hot	Mo,Ar,La/*eŋil*
êuziê	men's lodge	La/*oudiep*
omba	big	Mo, Ar/*omba*

As stated earlier, pidginisation is a process in which the lexical forms of someone else's language are mapped in a quite regular manner onto the phonology, syntax and semantics of one's first language. Pidginisation, then, is relexification, a kind of copying; and it results in fairly systematic sound correspondences between the new lingua franca and the target language. Exchange of lexical forms, however, obscures the pattern, especially when words are copied from several related languages. For example, Lamogai has both *eiuk* and *orou* for 'leaf wrapper', the first from pre-Anêm, the second from **laun* 'leaf'. It also has kolouna 'hair/leaf/feather' from **laun*; that one form has *r* as a reflex of **l*, while the other has *l*, suggests different routes of inheritence for each word. Similarly, POC **kiRam* has three different reflexes in Mouk—*akxa* 'ax', *kulaluo* 'adze' and *nakila* 'Papuan ax'. Identifying systematic sound correspondences, in such cases, is dependent on being able to distinguish direct copies from indirect copies (see also Biggs 1965). The prefix *na-* marks Mo/*nakila* as a copy from Ki/*nakila* copied by way of Lusi; in terms of canonic form, Mo/*akxa* looks more like a typical Mouk word than *kulaluo*, which is also found in Lusi. In other cases, the data are not available to allow such judgments. For instance, sometimes **R* is reflected in Mouk as *x*, as in *max* 'come' <**maRi*; in other cases, it is reflected as *l*, as in *peli* reciprocal, <**paRi*. Aria has *nomuk*

'mosquito' from **namuk*, while Mouk has *lomuk* with an unexplained *l*. In the Bibling languages, **k* is sometimes reflected as *ŋ*, as in Mo/*ŋan* 'eat' <**kani*, but sometimes as *k*, as in Mo/*akxa* 'ax' <**kiRam*. Either something is terribly wrong with the reconstructions, or the systematic nature of the sound correspondences has been obscured by language mixture. The kind of etymological study required to sort out such problems has been possible in European languages, because the written record extends back some 2,000 years, and because Europeans have lived in large societies with imperial social organisation from the beginning of written history. Since Melanesian languages are typically spoken by tiny linguistic groups with no central authority and no tradition of literacy, we should anticipate that, even when all the languages of the area have been thoroughly described, much of the relevant information will still be unavailable, because many of the source languages for modern lexical forms have already become extinct.

Language mixing takes place primarily among fully indigenised languages. The emblematic functions of a language have enormous influence on the degree and nature of exchange in lexical form. For instance, the Siasi languages of NWNB are so similar in endolexicon and structure that they have been called dialects of a single language. The people who speak these languages, however, insist that Kove, Lusi and Kabana are distinct languages. Once one starts to investigate more than the core vocabulary items, the reasons for this insistence become apparent. Lusi has copied most of its ectolexicon from Anêm and Aria; Kabana has drawn heavily from Kilenge (which also has striking similarities to Amara); and Kove has apparently copied, to some extent, from the Kimbe languages to the north and east (Goulden, personal communication). Tourai is most distinct from Aria in that it has copied heavily from Lamogai. By copying from one language rather than another, languages that are otherwise identical diverge so much that their speakers can point to blatant linguistic contrasts between themselves and other groups.

All languages are mixed languages insofar as all have copied lexical forms and other linguistic resources from neighbouring languages. Consequently, geographic proximity is of greater significance than genetic relationship in accounting for the structure of a language. Lexical form, however, is another matter. Since people generally construe languages as being collections of words, it is primarily by lexical form that linguistic groups identify linguistic contrasts among themselves (see also Grace 1975 and Laycock 1982).

Speaking of mixed languages as the norm while using such taxonomic terms as 'Austronesian' and 'Siasi' appears to be an incongruity in the model presented here. In the following chapter, this is resolved by reinterpreting the meaning of linguistic classification and limiting the criteria by which languages can be demonstrated to be related to one another.

Chapter 5
DIVERSIFICATION

5.1 Diversification and the isolation myth

Explicit in the family tree model is the composite notion that: (1) a group of people speaking a single language splits into two subgroups; (2) each goes its separate way; (3) the inevitable processes of language change continue to affect the speech of the two communities; and (4) since they are isolated from one another, the direction of change is independent, leading first to what are distinct dialects which then diverge to the point where they must be called separate languages. The notion of isolation is similar to the concept used in classical evolutionary biology; and just as in biology, bodies of water and mountain ranges are evoked as the physical barriers that permit the independent divergence. Unlike most other organisms, however, humans are cultural—while genes determine permanent biological characteristics of an individual, language is not inherited in the same unalterable way. Unlike some other organisms, moreover, humans typically live in social groups that are not totally isolated from other human social groups. Among the best examples of isolated societies that come to mind are Iceland and Polynesia, but even here, there is still evidence of contact with other peoples. More importantly, the kinds of changes witnessed in Icelandic and in Polynesian languages are not typical of the processes of linguistic change seen in most of the languages of the world. They have not changed much in the last 1000 years. Icelanders can still read the sagas with little difficulty, while during the same period, the language of Beowulf has supposedly turned into that of Chaucer, Shakespeare and song-writers of the 1980s. If Hawaii and New Zealand have been settled for approximately the same span of time during which Anglo-Saxon has turned into modern English, Hawaiian and Maori should be more different from one another than they are.

Rather than accelerating the speed of linguistic diversification and permitting it to occur in the first place, true isolation appears to impede the sorts of radical changes that one expects to find in languages. On the other hand, when we look more closely at the social conditions in which we find radical language change, we discover language contact rather than isolation. For example, Saxon disappears from the written record at the time of the Norman conquest, just when England has been unsuccessful in repelling Viking invasions. By the time Middle English is written again, most of the complex morphology of Saxon is gone; English has a pronominal system similar to that of North Germanic languages; English syntax looks much more like that of French; and a large sector of the lexicon has been copied from French. In comparison with the change attested

in those 200 years, the change in English since then has been relatively minor. The change from English to Tok Pisin is somewhat more extreme, but of the same quality as the change from Saxon to English.

In Melanesia, where there are many languages in contact, the diversity of AN languages is greatest. On the one hand, the very fact that Polynesia was settled first by Austronesians accounts for the small degree of dissimilarity exhibited by the languages; it also accounts for the reason Polynesian languages have been so easily recognised as a coherent subgroup within AN. There was no one there to greet the Polynesians in a different tongue—no one to make a mess of their language in the attempt to learn it as a second language. Melanesia, on the other hand, has been inhabited in some places for at least 40,000 years. Any late-comers had to negotiate linguistically and otherwise with their hosts. If a single mother community were to send out ten groups of successful colonists, the result could be ten different new language varieties, some based lexically on the speech of the colonist and some based lexically on the languages of the host communities, depending on the variables in each case. Moreover, while we are focussing on the interaction between AN and NAN languages, there is no reason whatsoever to rule out interactions among AN languages, on one hand, and NAN languages, on the other.

NWNB is mountainous and cut up by numerous rivers that were, until recently, well stocked with crocodiles. Yet peoples speaking different languages traditionally attended dances in each other's villages, traded overland, and arranged marriages. No one in the area is monolingual today; moreover, before Tok Pisin, people generally had larger inventories of languages in which they were competent. Language contact is evident from the number of obvious lexical copies found in each language. To argue that the high degree of linguistic diversitiy of NWNB is the result of the isolation of tiny groups for a long time is to argue from dogma alone rather than from the facts as they are now beginning to be known.

5.2 Linguistic speciation

The most basic process in the diversification of languages is the creation of new languages. In this process, a population of adults creates a lingua franca using lexical forms drawn from another language. In most respects, the phonology, syntax and semantics of a new lingua franca are simplified subsets of substrate languages. This process is what is usually discussed under the heading of pidginisation. At first, a new lingua franca is used primarily to make interaction possible between two groups who would otherwise share no language. A new language is simple, because its most important function is to communicate literal information in the most straightforward manner possible without frills like the obligatory tense and aspect marking that normally occur in established languages. At the earliest stages, a new lingua franca is also impoverished, in that it lacks a sufficient lexical inventory to permit sophisticated communication about a wide range of culturally-relevant topics. If the usefulness of a language is short in duration, it disappears without repairing this lack of lexicon and normative structure. The more it continues to be used, however, the more its speakers come to a consensus about proper form. This process of normalisation is creolisation. As I use the term here, creolisation results in a grammatical structure and lexical inventory that is more or less consistent from speaker to speaker. Creolisation and

pidginisation are overlapping processes—before pidginisation is finished, creolisation is already well under way, and certainly without the necessity of children being the first monolingual native speakers. At this point in the process, numerous social variables come into play to produce different results.

Given the proper sociolinguistic setting, a new lingua franca can persist for a long time without being adopted by a community as its linguistic emblem. Trade languages, for example, may be based on the language of a trading community, but not necessarily the same language as that used in either the traders' or the clients' villages. If a new lingua franca (or even an established one) is indigenised, it must be supplied with all the resources, primarily lexical, that are required to make it suitable for a full range of communicative functions. The basic rule, then, is that the resources of a language expand as a function of the communicative needs of its speakers, an idea already expressed in Hymes (1971:84, Sankoff 1980) and elsewhere.

In NWNB, Lusi, Kove and Kabana are the result of exoteric speciation from another Siasi language. That these languages are so similar in endolexicon suggests that they are based on the same Siasi language. That they differ significantly in endolexicon from Kilenge suggests that Maleu (Lolo and Kilenge) is derived from a different Siasi language. Kilenge is also morphophonemically more complex than Lusi, Kove and Kabana; and Kabana is slightly more complex than Lusi, which, in turn, is very slightly more complex than Kove. From west to east, then, there is a gradient of increasing simplicity among the Siasi languages on New Britain that indicates both that Maleu has been established there longer than the other Siasi languages and that the Siasi languages have been indigenised from west to east. By the same reasoning, all the languages of the Bibling group have been spoken on New Britain longer than any Siasi language.

Lusi, Kove and Kabana constitute a single group within the Siasi group because they are probably based on the same protolanguage. Much more data are required to establish whether this protolanguage is still spoken elsewhere. Kove has maintained its relatively simple structure because it still has important exoteric functions, while Lusi and Kabana have assumed more esoteric rôles that have resulted in increased complexity. Though based on the same language, they have diverged from one another mainly in the sources of their ectolexica—Lusi has copied from Anêm and Aria, Kabana from Kilenge and Amara, and Kove from the Kimbe languages to the north and east. The three languages are 'dialects of a single language' only at a superficial level. A wider view of the data supports our informants' insistence that these are three separate languages. Where they differ from one another is in their different lexical resources acquired in separate processes of indigenisation. Once fully established, the distinction among the languages has been magnified through further copying from the adjacent languages. This new diversity is a function of a history of interaction with different linguistic groups.

Similarly, the members of the Bibling group differ from one another by virtue of their longstanding relationships with different linguistic groups. Tourai differs from Aria primarily in lexical items copied from Lamogai. The Mouk can set themselves apart linguistically from the Aria by pointing to their use of words copied from Anêm; while, at the same time, they are in no danger of assimilating totally to Anêm, because the Mouk endolexicon continues to be basically Bibling rather than NAN.

In summary, then, there are two processes of linguistic speciation—exoteric and esoteric. Exoteric speciation is a process in which words are taken without

morphophonemic complexities from a target language and mapped onto the phonology,syntax and semantics of a substrate language. The result is what looks like a simplified version of the target language. Esoteric speciation is a process in which the product of exoteric speciation is further subdivided by copying primarily ectolexical resources from different contiguous languages. Esoteric speciation results in languages that look very similar in endolexicon but quite different from one another in ectolexicon. Both processes of speciation involve language contact rather than language isolation; and both can produce great changes in a short period of time.

The two processes of linguistic speciation result in two corresponding kinds of relatedness. For example, Lusi, Kove and Kabana are related by virtue of having a common endolexicon, because the same language has acted as a model in the exoteric speciation that has produced them. This is termed an *endolexical* relationship. Lusi, however, is also related to Anêm and Aria, because both have acted as models from which Lusi has copied most of its ectolexicon. This is termed an *ectolexical* relationship. Endolexical relationships are what are usually understood as genetic (or generic) relationships. More specific terminology is required to emphasise the departure from the usual gradualist interpretations of genetic relationship which assume that such relatedness is the result of continuous and gradual diversification of a homogeneous language into dialects and then into separate languages over a long span of time. Endolexical relationships are salient because pidginisation works first on the endolexicon.

Consequently, lexicostatistics, with its restriction to endolexical lists, is effective to a degree, but not for the reasons usually given by its practitioners. Since endo- and ectolexica are not rigidly discrete, endolexical items can, at times, be copied along with ectolexical items. In any instance of exoteric speciation, the target language as a whole acts as a model. If, for instance, an AN language has copied a NAN word into its endolexicon, any subsequent processes of exoteric speciation in which that language acts as a model will result in the intrusive NAN word being dispersed into derived languages that are still endolexically AN. Hence, the phenomenon of shared innovation. Each process of speciation potentially erodes the inventory of lexical items that allow endolexical relationships to be traced.

5.3 The status of grammar in glottotaxonomy

Most of the work in classifying Melanesian languages so far has been accomplished with short endolexical lists as the only data. As frustrating as this might be, I believe that only more *accurate* and more *appropriate* lists of the morpheme inventories of these languages can make possible any substantial improvement in the current classification schemes. Though some linguists have lamented the lack of grammatical information in making decisions about taxonomy, I believe that grammar, more precisely defined, has absolutely *no* rôle to play in establishing what we normally understand as genetic (i.e. endolexical) relationships among languages. It is important, however, to clarify exactly what is meant by grammar.

Grammar is commonly construed as including such items as inflections and pronouns as well as word order, rules of concord, and so on. I consider this to be unfortunate, because it obscures a distinction that is crucial for both linguists and native speakers in classifying languages. The obligatory distinctions made in a language and

the rules for combining elements in speech are both part of the grammar, while the sequences of phonemes used to encode each morpheme constitute lexical *form*. The people who speak the languages of NWNB contrast their languages with those of others primarily on the basis of lexical form rather than grammar. For the most part, this has also been the practice of linguists. For example, An/*ue*, Mo/*ŋoŋ* and Lu/*viau* 'I/me' are different lexical forms, but each fulfills exactly the same set of grammatical rôles in the different languages. That is, the grammar of the pronouns in these languages is the same; only the sequences of phonemes used to encode the pronouns differ from one language to another. These differences in form, moreover, are the only basis for distinguishing one language in the area from another. In contrast, the pronouns of English differ from those of NWNB languages both in grammar and in form.

This is not to say that grammar cannot be used to classify languages—it can, but the result is a typological classification, rather than a genetic or generic classification. Capell's classification of AN languages on the basis of word order (1969, 1971) results merely in language types, and is at odds with the classifications based on lexical criteria (Lincoln 1977b). On the basis of grammar alone, all the languages of NWNB would be classified together. Anêm would stand out from the other languages only in the greater number of possessive classes, its gender and in its realis/irrealis distinction. An isogloss for the last feature would place Anêm among some of the Siasi languages spoken on New Guinea.

Both grammar and lexical form are inherited in the creation of a new language, but typically from different sources. In the pidginisation process that results in a new language, endolexical forms are inherited from the target language, while most of the phonology, semantics and syntax are inherited from the substrate language(s). Any divergence in grammar from the contiguous languages is levelled later on in the processes of convergence. Consequently, the linguistic resources of any language are inherited from several sources—the two primary sources at the time of creation, and any number of languages that come into contact with it subsequently. To use a Melanesian metaphor, one language provides the bones, the other the meat—a language has at least two parents, one of which may be a sprachbund. The parent from which the endolexical forms are taken is the one linguists normally identify as genetically related; the other language or sprachbund may be said to be substratally related. A substrate relationship is usually the same as an ectolexical relationship, but the latter focusses more specifically on lexical form than on grammar. For example, Tok Pisin is endolexically related to English—therefore, both are Germanic languages. At the same time, Tok Pisin is substratally related to the coastal languages of Melanesia, which constitute a sprachbund (Goulden, in progress). Ectolexically, Tok Pisin has a relationship with Tolai, part of the coastal Melanesian sprachbund which is substratally related to Tok Pisin. Since, in most cases, the direct parent of a language cannot be identified, genetic relationships are treated as sibling relationships unless, as in the case of English and Tok Pisin, there is evidence pointing to one as the parent of the other. In this scheme, a protolanguage is a hypothetical parent language reconstructed on the basis of the lexical forms of languages being treated as though they were metaphorically siblings, even though one of the siblings may, in fact, be the endolexical (genetic) parent of the whole group.

This model of what genetic relationships are and how they come about, I believe, has several advantages over the models currently used in diachronic linguistics. Foremost is that the model proposed here is more congruent with the data. Languages share

grammar most with contiguous languages rather than, necessarily, endolexically related languages. Similar semantic and syntactic structure is more a measure of geographic proximity than of common ancestry as it is currently construed. The proposed model disentangles the concepts of language and other cultural components from that of race. It is hazardous to assume that people who speak endolexically related languages are biologically related. The proposed model also accounts for the apparent differential rate of change among languages, while recognising the source of continuity in lexical form over time despite recurrent transfers into new languages.

5.4 Linguistics and prehistory

Historical linguists and archaeologists use the results of each others' research in prehistory; both groups are typically working with the anachronistic models of evolutionary biology developed in the nineteenth century and with notions derived from the great chain of being that were the foundations of mediaeval philosophy and European imperialism. Bellwood's (1980) summary of Pacific prehistory reflects well the consensus in the literature. It is primarily a reconstruction of the prehistory of AN-speaking peoples focussing on the Polynesians; it is a story in which Melanesia is a constant problem. Though most of the criticism here is directed at Bellwood, it applies equally to much of the current literature on Pacific prehistory, such as May and Nelson, eds (1982) and Kirk and Szathmary, eds. (1985).

To begin with, Bellwood uses the racist taxonomy of humans now discredited by modern biological anthropology. In his Pacific theatre, the players include Austroloids and Mongoloids who have been mixed in varying proportions to produce the modern distribution of genotypes in the Pacific. Bellwood acknowledges that 'human skeletal remains in support of this view have not yet been uncovered' (1980:180); and that 'genetic diversity... is not correlated in any obvious way with linguistic diversity' (183). Nonetheless, he is not discouraged from equating Austroloid with NAN (including Australian) while equating Mongoloid with AN. Contrary to Bellwood's proposition, Melanesian gene frequencies are not the result of interbreeding between original pure strains, but the sort of clinal variation that is found in most species that are distributed over a large geographic area. Pigmentation, the variant most obvious to Europeans and the one with which they have been so highly obsessed, ranges widely from Polynesia to the Solomons, but is also highly variable within any chosen smaller region. In NWNB, there are very dark people and lighter-skinned people; and though black hair is the norm, there are also brunettes, blonds and redheads, some frizzy, others with loose curls. The founder effect and a social organisation with exogamous political units are enough to account for both the local diversity and the clinal variation. Population genetics, however, has nothing to do with linguistic classification—a point often overlooked by prehistorians. Phenotype is limited in range by genotype, but neither alone can be used as an index of the language spoken by an individual or a society.

Just as prehistorians tend to correlate language and genotype, so they attempt to make the untenable inference from artifact type to linguistic taxon:

> ...archaeological and linguistic evidence suggests that Papuan-speaking [=NAN] populations settled the Melanesian islands of New Britain and New Ireland (and perhaps the Solomon Islands) no later than 6,000 years ago and perhaps much earlier.
>
> Bellwood 1980:177)

The linguistic evidence mentioned here is that NAN languages are spoken in the Bismarcks and the Solomons today. This current range may be much narrower or wider than 2,000 years ago. The archaeological evidence demonstrates only that the islands have been inhabited for the last 6,000 years. Bellwood's inference that these earliest inhabitants spoke the languages ancestral to modern Anêm, Kuot and Nasioi is conjecture. Human settlements leave traces, but unless those traces include written documents such as baked clay tablets, there is no way to infer the language spoken from the detritus left behind. (Even written documents can be misleading, but this is another issue.) The fact is that such evidence is neutral on the possibility of such inferences—it neither supports nor refutes the connection between specific remains and any particular language of its hypothesised ancestor. To be sure, given the intrusive nature of the distribution patterns of AN languages, the languages of the earliest inhabitants of Melanesia were probably NAN, but ancestral to which extant NAN languages, if any, is not even hinted at. For all we know, the precursors of Anêm and other NAN languages east of New Guinea may have permeated the area only 500 years ago.

The same argument holds with respect to the Lapita pottery scenario.

> About 3,500 years ago in western Melanesia representatives of the Lapita culture had established themselves, perhaps in the vicinity of the Bismarck Archipelago, where their distinctive stamped and incised pottery has been found.... So far there is no archaeological evidence on the precise point of origin of the Lapita culture, and it may even be that the characteristics that distinguish Lapita pottery actually evolved in Melanesia.
>
> *Whatever its origin, the new population did not make extensive genetic or cultural contact with the neighbouring Melanesians....* Over the next 500 years [they] went on to colonize Tonga and Samoa.... The Polynesians had at last arrived in Polynesia.... *Where archaeological facts are absent.... the linguistic evidence is suggestive.*
>
> (Bellwood 1980:184, emphasis mine)

The Anêm make masks that look remarkably like those made by speakers of Kilenge, an AN language. The Anêm have not given up speaking Anêm as a result of becoming fisherfolk like the Lusi. This is mere cultural diffusion which results from the kind of contact encouraged by Melanesian social systems. Given what is now known about Melanesian social organisation, it is impossible to imagine any plausible scenario that would allow the Polynesians to sneak through Melanesia without coming into contact with Melanesians. Artifacts are the physical expression of technology, which, like language, is cultural—it can be learned and passed on to others wholesale or in pieces. Like language and religion, technology is susceptible to processes akin to pidginisation. Again, the evidence is neutral with respect to what languages were spoken by the makers of Lapita pottery. In any case, the imitation of language and technology is not bound by genetics. The ethnographic and ecological evidence suggests that it is highly unlikely the Proto-Polynesians passed through Melanesia genetically and culturally isolated. The small offshore islands on which the Lapita pottery makers might have lived (like the

modern Kove and Siasi) are too ecologically impoverished for the subsistence of any society without access to the resources of the mainland which was, presumably, already inhabited by Melanesians. The current ethnography suggests that any group living in Melanesia can do so only by establishing contacts with neighbouring groups. To do otherwise, the so-called Lapita people would have to have been both militarily powerful and endogamous, a reconstruction for which there is no evidence whatsoever. By way of explanation for the small impact that the passing Polynesians had on Melanesian societies, Bellwood suggests that malaria kept the more delicate Austronesians from settling and overwhelming the NAN inhabitants with what he considers to be their more advanced culture (1980:180). The people of NWNB, however, maintain that malaria is one of the diseases that arrived with European contact. On the basis of obsidian with a New Britain signature being found in sites 2,600 kilometres away, Bellwood maintains that the Lapita people 'were skilled mariners who were able to maintain some degree of contact between their widely scattered settlements for several hundred years' (1980:184). This is equivalent to saying that, because the Romans wore Chinese silk, the Romans and the Chinese were members of the same ethnic group. Bellwood's requirement is to get the Polynesians, whose feudal-like social organisation has always impressed Europeans, out into the Pacific away from the contaminating effects of Melanesians while keeping intact the Polynesian constellation of genotype, technology and language. A more reasonable hypothesis is that obsidian travelled from group to adjacent group via trading routes of the sort described in Harding (1967).

Bellwood, obviously unfamiliar with Melanesian ethnography, fails to appreciate the complexity and worth of Melanesian political organisation:

> As for prehistoric social and economic developments in Melanesia, if an initial assumption can be made, the records both of archaeology and of recent ethnography provide some guidance. The necessary assumption is that Melanesian societies in prehistory were no more complex, particularly with respect to political integration, than they are today. If this was the case, then I suggest that the initial hunter-gatherer populations of New Guinea were organized into fairly mobile bands, each consisting of a few families.... The next prehistoric phase could have been the initiation of horticulture in New Guinea and perhaps in adjacent islands. Along with horticulture would have come settlement into more or less permanent villages adjacent to garden areas. As mobility became limited, *the Melanesian ethnographic pattern, in which ethnic groups occupy small areas and tend to marry within them*, came into existence.
>
> (Bellwood 1980:183, emphasis mine)

Here, Bellwood makes the same value judgment that pervades the literature—namely, that the hereditary social hierarchies of Polynesia and feudal Europe are more complex, and therefore more sophisticated (not to say more highly evolved), than the system based on individual accomplishments that is the norm in Melanesia and, ideologically at least, in modern Western-style democracies. Keeping track of exchanges in pigs, kinfolk, shell money and other goods which are involved in the operation of Melanesian politics is so complex that it amounts to a lifetime project for social anthropologists and Melanesians alike (see Scaletta 1985). Furthermore, the people of West New Britain would be outraged at Bellwood's summary of their social organisation as a lot of endogamous ethnic groups; in the Melanesian scheme of the world, such an arrangement would be incestuous. Bellwood has merely mapped the great chain of being onto a

misrepresentation of classical evolutionary biology, and used it as a paradigm from which to interpret human prehistory. This paradigm, unfortunately widely shared among prehistorians, including linguists, also underlies the doctrine of migrations.

Just as Europeans see the spread of the Romance languages as resulting from the expansion of the Roman Empire, so they attempt to read migrations into the distribution of AN languages spoken in the Pacific today. The model is not applicable in either case, but because it was originally formulated with a peculiar view of the Roman Empire in mind, it has been almost impossible to avoid making the same interpretations from linguistic data elsewhere, and equally impossible to suggest other ways of looking at the Pacific without addressing the original model itself. The Romans, per se, neither displaced nor exterminated alien populations as they expanded their empire; many of their problems had to do with the administration of numerous ethnically different peoples they did not quite understand. Around much of the Mediterranean, people who found themselves under Roman rule eventually gave up their traditional languages in favour of new lingue franche endolexically derived from Latin. Not all of those empire-building soldiers could have grown up within view of the Tiber. While some actual Latin-speakers were probably involved in the early Roman conquests, by the beginning of the Christian era, the language itself was most likely relegated to literary, bureaucratic and formal functions. Otherwise, it was extinct as a vernacular, having been replaced by a constellation of regional variants collectively called Vulgar Latin.

The received version of the Roman Empire and the family tree model is even less consonant with the situation in the Pacific. At least in Melanesia, there is no evidence whatsoever of imperial social organisation. Pawley (1981) hypothesises the early migration of a homogeneous Oceanic-AN group into the areas of Melanesia where AN languages are now spoken. He further hypothesises that, after settling in, this Oceanic society broke into tiny isolated fragments, each diverging linguistically from others and forming part of the array spoken there today.

The interpretation of the linguistic data through the assumptions of the family tree model is the only evidence that might possibly suggest large-scale social organisation and migration. Indeed, large-scale social organisation must be hypothesised if the linguistic model, as such, is to work in the first place, but all the ethnographic evidence points in the reverse direction. In NWNB, as in most of the rest of Melanesia, until European conquest, people lived in politically autonomous hamlets consisting of a few households. Each hamlet was related to other similarly structured hamlets in a network based on kinship, friendship and trade. This is still the case, and there is no reason to believe that, in gross outline, the region was much different in the past. It is more in keeping with the data to suggest that when Austronesians first arrived in Melanesia, they came in tiny groups whose contribution to the begetting of more Austronesians has less to do with genetics and much more to do with cultural transmission, which, for me, includes technology and language.

The first Austronesians, whatever their biological characteristics, arrived in tiny groups, probably a couple of canoes-full of people, likely from several different areas outside Melanesia, and almost certainly in repeated drips (rather than waves) over time. (The Sahe-Kove described in sections 2.9 and 2.13 are an example of this phenomenon in this century.) Wherever they landed, they found people already living there, and had to make tolerably friendly relations with them as quickly as possible. The stories of initial contacts from New Britain mention exchange of women as one of the first steps in

establishing peaceful settlement. Bringing in trade items, dance, new technology, and new forms of social organisation are also important in allowing the immigrant culture to survive and flourish. Subsequently, new recruits to the culture must come largely from the indigenous population who then, by virtue of shared culture, become Austronesians themselves. After only a few such scenarios, the biological contributions of the original immigrants are insignificant; while the cultural contributions have been reproduced, with modifications, and spread further *by Melanesians* to other Melanesians.

It is unlikely that any single group travelled very far in a single generation and equally improbable that voyages took place consistently in any particular direction. The gradual extension of AN culture to most of the coastal areas of Melanesia could be accomplished in much the same way as dye gradually disperses in water—through random movement in all directions. Since part of AN culture involves seafaring, this accounts for why AN languages are spoken primarily in maritime environments. It is not, however, difficult to imagine only some aspects of a culture being replicated in some cases so that a recipient culture might copy the seafaring technology of the AN donors, but not the language; and, perhaps, vice versa. Consequently, we should expect to find some seafaring peoples who do not speak AN languages, and some AN-speaking groups without maritime technology. Examples of both possibilities are found in NWNB. Whereas the Mouk speak an AN language and dwell in the mountains, the Anêm, who speak a NAN language, have recently become fisherfolk. Much more care must be exercised in the use of linguistic data for the reconstruction of human prehistory. Without proper examination of the assumptions and implications of linguistic models, the inferences made from linguistic data are liable to be mere fiction.

WORDLIST

The following comparative wordlist is provided as support for some of the points made in the text. Some items are annotated, starting at 1 on each page, where additional information seems appropriate. Numbers following arrows (>) refer to a full paradigm given in the main text; sometimes words do not look like cognates until the entire paradigm is available for comparison. Other arrows point to entries elsewhere in the wordlist that should be compared. Null (Ø) indicates that the form was elicited, but that no such word exists in that language. Hyphens (-) indicate a bound form—generally, verbs have a hyphen to the left, while inalienable nouns have a hyphen to the right. Where the English gloss is ambiguous, further specification is given to the right; for example, 'burn' [A__P] is a transitive verb with agent as subject and patient as object, 'burn' [P__] is an intransitive verb with patient as subject, 'fear' [E__P] is a transitive verb with experiencer as subject and patient as object, and 'comb' [N] is a noun rather than a verb. The citation form of Anêm nouns is described in section 3.8. Amara body parts are generally given in *third person singular* form.

	'one'	'two'	'three'
An	*mîdê*	*niak*	*bîk*
Mo	*keine, kaine*[1]	*oxuo*	*etli*
Ar	*kene*[1]	*oruo*	*etlu*
To	*kene*[1]	*oruo*	*etlu*
La	*isa*	*akap*[2]	*etlu*
Lu	*eze*	*rua*	*tolu*
Ko	*eze*	*hua*	*tolu*
Ka	*ede*	*rua*	*tol*
Ki	*tea*	*lua*	*tol*
Am	*kapuk*	*ruo*	*tel*

[1] In these languages, the forms for 'one' are the third person singular of an inalienable noun meaning 'alone' or 'by oneself': Mo/*ke-lsak* by themselves.
[2] Compare La/*-kap*, Mo/*-kap* accompany, with.

	'four'	'five'	'six'
An	*tanol*	*êsî*	*kêmlî*
Mo	*apeinal*[3]	*elme*	*lumakaine*
Ar	*apanal*[3]	*elme*	*lumakene*[5]
To	*apanal*[3]	*elme*	*elmekene*[5]
La	*apanal*[3]	*elme*	*elmeisa*
Lu	*paŋe*	*lima*	*lima ga eze*
Ko	*paŋe*	*lima*	*lima ga eze*
Ka	*paŋe*	*lima*	*lima ga ede*
Ki	*paŋe*	*masa*[4]	*masa me tea*
Am	*paŋ*	*lume*	*lume kapuk*

[3] These forms combine **pa* from POC with **nal* from pre-Anêm.
[4] Possibly from **lima isa.*

	'seven'	'eight'	'nine'
An	*kisa*	*dênil*	*dêmlîk*
Mo	*lumaxuo*	*lumetli*	*lumesnal*
Ar	*lumaruo*[5]	*lumetlu*[5]	*lumesnal*[5]
To	*elmeruo*[5]	*elmetlu*[5]	*elme apanal*[5]
La	*elmeakap*	*elmetlu*	*elme apanal*
Lu	*lima ga rua*	*lima ga tolu*	*lima ga paŋe*
Ko	*lima ga hua*	*lima ga tolu*	*lima ga paŋe*
Ka	*lima ga rua*	*lima ga tol*	*lima ga paŋe*
Ki	*masa me lua*	*masa me tol*	*masa me paŋe*
Am	*lume ruo*	*lume tel*	*lume paŋ*

[5] In the numerals from 'six' to 'nine', the Tourai say that their numerals are more like those of Lamogai, while the Aria claim the set that resembles Mouk as properly their own. They tend to use both sets interchangeably, however.

	'ten'	'twenty'	'one hundred' [1]
An	*lêx*	*leniak*	*buno*
Mo	*soŋotno*	*isoxuo*	*buno*
Ar	*soŋotno*	*isoruo*	*buno*
To	*soŋotno*	*isoruo*	*buno*
La	*soŋotno*	*isoruo*	*buno*
Lu	*saŋaulu*	*saŋa rua*	*vuno*
Ko	*saŋaulu*	*saŋa hua*	*vuno*
Ka	*saŋaul*	*saŋa rua*	*buno*
Ki	*saŋaul*	*saŋaul lua*	
Am	*soŋoul*	*suŋuruo*	*kuvusŋe*

[1] Most of these words appear to be derived from the Bibling word meaning 'knee/joint/knot'. Am/*kuvusŋe* also means 'knee/elbow/knot'.

	'adze (>ax)'	'afternoon'	'again, too'
An	*aziu*	*ol*	*blaŋ*
Mo	*kulaluo, akxa* [2]	*kixui*	*blaŋ*
Ar	*kulaluo, akra* [2]	*kirui*	*blaŋ*
To	*kulaluo, akra* [2]	*maruŋ*	*blaŋ*
La	*kulaluo*	*marmum*	*saŋ*
Lu	*aziu; kulaluo* [2]	*leilei*	*paze*
Ko	*aziu*	*lailai*	*pape*
Ka	*adi; kolaluo* [2]	*lailai*	*pade, pau*
Ki	*kolalu, kila* [2]	*leilei*	*pau*
Am	*okudi*	*reureu*	*pau*

[2] These are different kinds of adzes.

	'algae'	'another'	'appear, happen'
An	*gulumu* [3]	*goblaŋ*	*-i*
Mo	*gulumu*	*silaŋ*	*-polou*
Ar	*gulumu* [3]	*silaŋ*	*-polou*
To	*gulumu* [3]	*silaŋ*	*-polou*
La	*malmal*	*silaŋ*	*-gel*
Lu	*gulumu* [3]	*eze paze*	*-otu* [4]
Ko	*gulumu* [3]	*eze pape*	*-otu*
Ka	*guluŋ* [3]	*ede pade*	*-ot, -uot*
Ki	*lumlum* [3]	*tea pau*	*-pot, -uot*
Am	*olmud* [3]	*sileŋ pau*	*-pod, -uod*

[3] The forms for 'algae' are the same as those for 'moss' in these languages.
[4] Also Lu/*potu* 'outside', a locative adverb.

	'ash'	'ask for'	'at, to, in, with'
An	*goxub*	*-nêŋ-k3-l2r*	*a-x3, a-l2r*[1]
Mo	*gxoup*	*-pmi*	*tan*
Ar	*group*	*-paŋ*	*ke*
To	*obrop*	*-paŋ*	*ge*
La	*obrop*		*pe*
Lu	*kahu*	*-veta*	*pa(ni)*
Ko	*kahu*	*-veta*	*pa(ni)*
Ka	*aupu*	*-gau*	*pan*
Ki	*loa*	*-veta, -sun*	*kŋe*
Am	*okoro*	*-noŋoŋ*	*ne*

[1] An/*a-l2r* is used only with animates. An/*a-x3* is used with either animates or inanimates, especially in simplified Anêm.

	'ax (>adze)'	'back'	'bad'
An	*kebesi*	*blî-g3*	*zîlîk*
Mo	*aige*	*dogux*	*soulu*
Ar	*gitu, selembo*	*odoŋ, dogur-*	*soulu*
To	*gitu*	*otou*	*sasi*
La	*akra*	*tou-*	*soulu*
Lu	*kavasi*	*zugu-, muri-*	*sasi*
Ko	*hezi*	*zugu-, muhi-*	*sasi*
Ka	*kabasi*	*dige-, muri-*	*paeamao, sat*[2]
Ki	*kavasi*	*gunguni-*	*siaŋa-*
Am	*ogugo*	*vine pio*	*gidaŋa*

[2] Ka/*paeamao* is the normal form for 'bad', while 'sat' occurs in formalised phrases. Compare Lu/*poea mao* 'not good'.

	'bamboo'[3]	'banana'	'bandicoot'
An	*osu*	*okuk*	*moum*
Mo	*oxsu, akexne*	*obul*	*melim*
Ar	*akerne*	*obul*	*melim*
To	*akerne*	*obul*	*melim*
La	*akerne*	*obul*	*melim*
Lu	*sasavu*	*puzi*	*maumu*
Ko	*sasapu*	*puzi*	
Ka	*rob*	*pud*	*maumu*
Ki	*rop*	*pur*	*maeva*
Am	*apluk*	*eivul*	*emilim*

[3] These are all responses to TP/*mambu*, but may be either generic or specific depending on the language.

	'barkcloth'	'base, origin, stump'	'basket' (handbasket)
An	*malo*	*bisê-x1*	*sêk*
Mo	*apas*	*batne*	*uasak*
Ar	*molo*	*batne*	*osak, kerka*
To	*molo*	*batne*	*osak, kerka*
La	*kamut tanra*[1]	*bate*	*kidika*
Lu	*malo*	*pu-, ipu-*	*kanika*
Ko	*malo*	*pu-*	*kanika*
Ka	*malo*	*pu-, opu-*	*bisiŋa*
Ki	*malo*	*pu-*	*visiŋa*
Am	*emelo*	*pio*	*aval*

[1] La/*kamut tanra* 'tree bark'.

	'bat, flying fox'	'bathe'	'bean'[4]
An	*abiaŋ*	*-ŋak-îl*	*sel*
Mo	*bleik*	*-xis*	*esel*
Ar	*aiua*[2]	*-ris*	*kliŋo*
To	*aiua*[2]	*-ris*	*kliŋo*
La	*sapaiua*[2]	*-ris*	*kriŋo*
Lu	*viaŋa*	*-liliu*	*voluae*
Ko	*viaŋa*	*-liliu*	*voluae*
Ka	*biaŋa*	*-liliu*	*boluae*
Ki	*viaŋa*	*-ualiu*	*veleu*
Am	*asaurum*[3]	*-ri*	*eveliou*

[2] These forms are possibly from Lu/*sape aiuaha* 'widow's uncle'.
[3] A similar form occurs as An/*sauxum* and Lu/*saurum* referring to another species of bat.
[4] A local cultigen similar to the wingbean grown on New Guinea.

	'bear, give birth'	'bed (>place)'	'belly'
An	*-dîm-d4*	*eig, nan*	*pêl-ŋ2*
Mo	*-kakluk*[5]	*kaba*	*dama-*
Ar	*-dibir*	*koba*	*pele-*
To	*-dibir*	*koba*	*pele-*
La	*-iri*	*opus*	*pele-*
Lu	*-popo*	*muli*	*apo-*
Ko	*-popo*	*muli*	*apo-*
Ka	*-popo*	*muli*	*apa-*
Ki	*-sigi*	*muli*	*apo-*
Am	*-kavo*[5]	*omur*	*kope*

[5] These forms also mean 'carry'.

	'betel' [1]	'betel pepper' [2]	'big'
An	*ezim*	*omot*	*omba*
Mo	*eliep*	*esis*	*omba*
Ar	*bile*	*esis*	*omba, mamil*
To	*bile*	*esis*	*omba, mamil*
La	*bile*	*kadep*	*mamil*
Lu	*vua*	*zogi*	*pazoŋa*
Ko	*vua*	*zogi*	*paka*
Ka	*bua*	*dog*	*kapei*
Ki	*vua*	*rek*	*aiŋa-*
Am	*eilep*	*epto*	*ui*

[1] ***Areca catechu***, the betelnut.
[2] A vine, ***Piper betle***, the leaves or fruit of which are chewed with betel.

	'bird'	'bite'	'black (>charcoal)'
An	*êknîn*	*-ŋai-4*	*kŋîx*
Mo	*monuk*	*-ŋan*[3]	*obox*
Ar	*monuk*	*-ret*	*obor*
To	*monuk*	*-ret*	*obor*
La	*monuk*	*-ŋen*[3]	*obor*
Lu	*manu*	*-ŋotu*	*asosoŋa*
Ko	*manu*	*-ŋotu*	*kasoka*
Ka	*man*	*-ŋot*	*kusuksuk*
Ki	*mon*	*-kala*	*asoaso*
Am	*emen*	*-kere*	*kuksukŋe*

[3] These forms also mean 'eat'.

	'blood' (>red)	'blow ' (onto fire)	'boa constrictor'
An	*esin*	*-kil-ag3*	*binigaia*[4]
Mo	*maxau*	*-upi*	*mepex*
Ar	*marau*	*-ipu*	*moro, meper*
To	*marau*	*-ipu*	*maruk*
La	*morou*	*-ip*	*maruk, meper*
Lu	*siŋi-*	*-pupu*	*vinigaea*[4]
Ko	*siŋi-*	*-pupu*	
Ka	*siŋi-*	*-uso*	*mararaiapala*
Ki	*tepo-*	*-so*	
Am	*otopo*	*-usok*	*ovoire mekle*

[4] Related to Lu/*-vi-ni* 'swell' and Lu/*-vivi* 'squeeze', in conjunction with Lu/*gaea* 'pig'.

	'body'	'bone'	'bow (& arrow)'[2]
An	*pala-m4*	*exi-k3,exe-g3*	*tîxgo*
Mo	*taxna*[1]	*exi-*	*tixgok*
Ar	*tarna*[1]	*eri-*	*malel*
To	*tarna*[1]	*eri-*	*malel*
La	*kana-*	*kaka-*	*malel*
Lu	*tini-*	*tuatua-*	*kŋen*
Ko	*tini-*	*tuatua-*	*napaniŋa*
Ka	*tini-*	*tuatua-*	*pandeŋa*
Ki	*tini-*	*volvoli-*	*panaŋa*
Am	*tinio*	*gigio*	*amalel*

[1] These forms also mean 'skin'.
[2] Primarily toys used by boys who sometimes hunt birds with them. The word for 'arrow' is the same as 'spear'.

	'brains'	'breadfruit'[4]	'breast'[5]
An	*ênîŋ-l2r*	*êtêlîm*	*i-4*
Mo	*eski*[3]	*pelim*	*sisi-*
Ar	*sisil-*	*pelim*	*sisu-*
To	*sisil-*	*pelim*	*sisu-*
La	*sisil-*	*brane*	*osu-*
Lu	*uto*	*unu*	*tuzu-*
Ko	*uto*	*unu*	*tuzu-*
Ka	*utouto*	*un*	*tudu-*
Ki	*uto*	*kun*	*su-*
Am	*tevelio*	*epelim*	*nemŋe*

[3] Also the word for 'taro'.
[4] ***Artocarpus altilis***, also commonly used to make barkcloth.
[5] Used either alone or with 'juice' these forms also mean 'milk'.

	'burn' [A__P]	'burn' [P__]	bush hen'
An	*-pma-d4*	*-tîtîm, -kau*	*keiau*
Mo	*-buk*	*bublo*	*keiau*
Ar	*-tin*	*bublo*	*keiau*
To	*-tin*	*bublo*	*keiau*
La	*-tin*	*bublo*	*keiau*
Lu	*-tunu*	*-kau*	*kaiau*
Ko	*-tunu*	*-esi*	*keneo*
Ka	*-tun*	*-ean*[6]	*kaiau*
Ki	*-tun(i)*	*-kan*[6]	*kaiau*
Am	*-tin*	*-ken*[6]	*okoiou*

[6] These forms also mean 'eat'. An/*-tîtîm* is a reduplicated reflexive, probably also related to *-4* eat, which usually has the form *-t*.

	'butterfly'	*Canarium*	'canoe'
An	*sael*	*aŋaxi*	*êudêl, êgîm*[2]
Mo	*bakuak*	*aŋaxi*	*gomot*[3]
Ar	*bakuok*	*aŋari*	*gomot*[3]
To	*bakuok*	*aŋari*	*gomot*[3]
La	*kalaplap*	*aŋaul*	*gomot*[3]
Lu	*vovo*	*aŋari*	*oaga*
Ko	*vovo*	*aŋahi*	*oaga*
Ka	*bobo*	*aŋal*	*oaga*
Ki	*lvovo*[1]	*aŋal*	*oga*
Am	*ovovo*	*ovruŋo*	*ogomod*[3]

[1] This seemingly odd initial consonant cluster always follows the noun-marking prefix *na-*.
[2] An/*êudêl*, Ak/*êgîm*.
[3] Possibly from POC **waŋkaŋ* 'canoe' + **motu* 'island'.

	'carry'	'carry on head'	'cassowary'
An	*-kal-ax3*	*-ia-d4*	*tabu, ekein*[4]
Mo	*-kakluk*	*-sun*	*alau*[5]
Ar	*-kalke*	*-sin*	*alau*[5]
To	*-kakuk*	*-sin*	*alau*[5]
La	*-lolo*	*-sun*	*lau*[5]
Lu	*-visi*	*-uzu*	*soko*
Ko	*-poga*	*-uzu*	*soko*
Ka	*-bisi*	*-ud*	*kaini*
Ki	*-ig*	*-kuri*	*rurum*
Am	*-kavo*	*-gud*	*akaiuor*[5]

[4] An/*tabu*, possibly from POC **tampu*; Ak/*ekein*.
[5] Possibly from a form meaning 'leaves', reflecting a hunting taboo. The Lusi use *tavu*, from An/*tabu*, while hunting or butchering cassowaries to avoid uttering *soko*, which would cause the meat to be tough.

	Casuarina	'catch'	'cave, rock shelter'
An	*lale, ialu*	*-sau-d4*	*nil*[6]
Mo	*elei*	*-sau*	*omus*
Ar	*ialu*	*-sau*	*omus*
To	*ialu*	*-kapak*	*omus*
La	*ialu*	*-kapak*	*momus*
Lu	*ealu*	*-sau*	*omus*
Ko	*ealu*	*-sau*	
Ka	*eal*	*-sau*	*omus, parpari*
Ki	*au*	*-sau, -sipi*	
Am	*elei*	*-sau*	*omus*

[6] An/*pêlŋêm nil* 'sky' (LIT: 'belly of the cave').

	'charcoal'	'chest'	'chew betel'
An	*sîsîx*	*pom-k3*	*-kîn*
Mo	*asiŋix, asoŋ*	*omun*[2]	*-ŋas*
Ar	*asiŋir, soŋoso*	*omuŋ*[2]	*-ŋes*
To	*asiŋir, soŋoso*	*oŋgup*[3]	*-ŋes*
La	*asiŋir, asoŋ*	*oŋgup*[3]	*-ŋes*
Lu	*oaso, matmata*	*gogo-*	*-soŋo*
Ko	*eai aitahe*[1]	*gogo-*	*-soŋo*
Ka	*asaso*	*gogo-*	*-soŋo*
Ki	*asoaso*	*ati-, pokpoki*	*-soŋo*
Am	*asoŋ*	*kosio*	*-ŋas*

[1] This form may be the same as Lu/*ziŋa aitahe* and Ka/*diŋa itae*, all of which mean 'fire shit', referring to either ashes or charcoal.
[2] Compare An/*êmîŋ* 'song' and *êmîŋ-g3* 'breath/lung'.
[3] This form also means 'coconut'.

	'chicken'	'child'	'chop down, fell'
An	*texik*	*kekele*	*-lie-4*
Mo	*kuako*	*enen*	*-gusip*
Ar	*kuako*	*mimi*	*-gusip*
To	*kuako*	*mimi*	*-gusip*
La	*kuako*	*mimi*	*-gusip*
Lu	*kokoako, kokako*	*kekele*	*-hezi*
Ko	*kokoako, kokako*	*kekele*	*-hezi*
Ka	*kokako*	*gergeo*	
Ki	*koako*	*melamela*	*-tal*
Am	*otorokok*	*emim*	*-tele*

	'clam/freshwater'[4]	'clam/giant'	'claw, fingernail, toenail'
An	*tu*	*golomada*	*gis-1r*
Mo	*baiu*	*golomada, kaiaŋan*	*talpes*
Ar	*ebiak*	*golomada*	*talpes*
To	*ebiak*	*golomada*	*talpes*
La	*ebiak*	*golomada*	*katalpis*
Lu	*tue*	*golomaza*	*tai-*
Ko	*tue*	*golomaza*	*tai-*
Ka	*tue*	*golomada*	*temia-*[6]
Ki	*tue*	*olol*	*temi-*
Am	*etiue*	*akunkun, oruor*[5]	*vlisio*

[4] Generic for freshwater and mangrove clams.
[5] Am/*akunkun* is generic for giant clams, while *oruor* and *golomada* (from Kabana) refer to the largest which are used for pig plates.
[6] Copied with 3s suffix from Kilenge.

	'clay pot'	'cloud'	'cockatoo'
An	*ulo*	*olok*	*moxus*
Mo	*ulo, kixdau*	*saxaba*	*aplau*[3]
Ar	*ulo*	*sirba*	*aplau*[3]
To	*ulo*	*sirba*	*aplau*[3]
La	*ulo*	*sirba*	*aplau*[3]
Lu	*ulo*	*vuvuri, buburi*	*elea*
Ko	*ulo*	*bubu, bubuhi*	*elea*
Ka	*ulo*	*laulau*[1]	*elea*
Ki	*kulo*	*pano taea*[2]	*ataka*
Am	*ekirau*	*eiuek*[1]	*aplau*[3]

[1] Refer to the leaves used in the rain magic to generate clouds.
[2] Means 'sky shit'. This idiom is also used in the Siasi islands.
[3] Derive from forms meaning 'head + leaf/feather'.

	'coconut'	'cold'	'comb' [A__P]
An	*êdîŋ*	*epen*	*-ti*[4]
Mo	*oŋgup*	*epen*	*-sex*
Ar	*oŋgup*	*epen*	*-ser*
To	*oŋgup*	*epen*	*-ser*
La	*oŋgup*	*epen*	*-ser*
Lu	*niu*	*pulpuli*	*-pele*
Ko	*niu*	*pulipuli*	*-pele*
Ka	*niu*	*memeda*	*-pele*
Ki	*niu*	*rogaŋa-*	*-silpei*
Am	*oŋgup*	*penpenio*	*-sir*

[4] Means 'extract, pull out'.

	'comb' [N]	'come'	'cook' [A__P]
An	*lêlîk*	*-mên*	*-têpm-ag*[6]
Mo	*uensik*	*-max*	*-kamlu*
Ar	*emsik*	*-me*	*-kamlu*
To	*emsik*	*-me*	*-kamlu*
La	*emsik*	*-me*	*-kamlu*
Lu	*peleŋa*	*-nama*	*-nono*
Ko	*peleŋa*	*-nama*	*-nono*
Ka	*peleŋa*	*-nam*	*-nono*
Ki	*giu*[5]	*-mai*	*-saman, -samo*
Am	*emensik*	*-me*	*-peiou*[6], *-some*

[5] Compare Lu/*giu*, the species of bamboo used to make combs.
[6] These forms consist of an unidentified form plus 'fire'. Am/*itêpmagî* 'they cooked it' derives from **i-tê-kmî-a-g-î*, a marginal form rejected by all speakers, because it is 'too drawn out and does not sound good'.

	'cooked'	'copulate'	*Cordyline*
An	*-nînîk*	*-n-1r*	*esip*
Mo	*lipma*	*-isu*	*anuŋ*
Ar	*lipma*	*-isu*	*anuŋ*
To	*lipma*	*-isu*	*kaduk*
La	*insak, lipma*	*-is*	*kaduk, anuŋ*
Lu	*misi*[1]	*-gare*	*more, molmolo*
Ko	*gazegaze*	*-gahe*	*mohe*
Ka	*misi*[1]	*-eat*	*more, molomolo*
Ki	*-mis*[1]	*-paiti*	*molomolo*
Am	*-monei*[1]	*-sai*	*ainuŋ*

[1] Also mean 'dried out'.

	'count' [2]	'crab/mangrove'	'crab/river'[3]
An	*-tik*	*amlaŋo*	*klakîx, kŋaxe*
Mo	*-tik*	*aŋgis*	*takalou*
Ar	*-tik*	*aŋgis*	*taklou*
To	*-tik*	*aŋgis*	*taklou*
La	*-titik*	*aŋgis*	*taklou*
Lu	*-uaze*	*amlaŋo*	*kalakir, kŋare*
Ko	*-uaze*	*alimaŋo*	*kalakiri*
Ka	*-uade*	*amlaŋo*	*kakaroka*
Ki	*-nini*	*almaŋo*	*kakaroka*
Am	*-tit*	*kaudama*	*kakaroka*

[2] These forms are in response to TP/*kaunim* which also means 'distribute'.
[3] The taxonomy of river crabs is problematic. An/*klakîx* (Lu/*kalakir*) differs from An/*kŋaxe* (Lu/*kŋare*), but it has not clear whether the other items in the list represent different species from these.

	'crab/generic'	'crawl'	'crazy'[5]
An	*kaxauki*	*-xaxai*	*maŋamaŋa*
Mo	*Ø, kaxoki*[4]	*-xaxai*	*maŋamaŋa*
Ar	*Ø*	*-didara*	*maŋamaŋa*
To	*Ø*	*-didara*	*kaka-*
La	*kaso*	*-diraga*	*maŋamaŋa, gara*
Lu	*karoki, karauki*	*-rarai*	*maŋamaŋa*
Ko	*karoki*	*-hahai*	*maŋamaŋa*
Ka	*eso*	*-rarai*	*maŋamaŋa*
Ki	*goga*	*-rara*	*gara*
Am	*okoso*	*-rarar*	*kakakaŋo*

[4] Salkei-Mouk uses this, but other groups claim there is no generic in Mouk.
[5] Also means 'deaf', 'physically handicapped'.

	'crocodile'	'crow'	'cuscus'
An	*poea*	*kokxak*	*atêm*
Mo	*apua*	*kokxak*	*kxaŋap*
Ar	*aki tna*[1]	*kokrak*	*kraŋip*
To	*aki tna*[1]	*kokrak*	*kaukaui*
La	*aki tna*[1], *poka*	*kakroŋ*	*kaukaui*
Lu	*puaea*	*karo*	*salakiu*
Ko	*puaea, vagele*[2]	*karo*	*sahakiu*
Ka	*puaea, bagele*[2]	*akrok*	*nabaimar*
Ki	*pua*	*akor*	*aiplaka*
Am	*apua*	*akrok*	*akŋarap*

[1] Means 'river mother', possibly reflecting hunting taboo.
[2] Alternate terms used to avoid the name of an in-law if it is the same.

	'cut'	*Cycas*	'dance'
An	*-kŋ-1*	*uau*	*-iu*
Mo	*-blou*	*matalo*	*-tixie*
Ar	*-blou*	*matalo*	*-tirie*
To	*-blou*	*matalo*	*-tirie*
La	*-rap*	*matalo*	*-de sakul*[3]
Lu	*-keti*	*vavaka*	*-tori*
Ko	*-keti*	*vavaka, matolo*	*-tohi*
Ka	*-ket*	*babaka*	*-tol*
Ki	*-tal*	*patolo*	*-gale*
Am	*-suput*	*epetoro*	*-tere*

[3] Means 'do song'.

	'deep'	'defaecate'	'die'[5]
An	*io*	*-têbîl*	*-zik/-lkîl*
Mo	*olu*	*-use*	*-mete*
Ar	*olu*	*-use*	*-mete*
To	*olu*	*-use*	*-mete*
La	*olu*	*-pipre*	*-uren*
Lu	*lamani*	*-vevea*	*-mate*
Ko	*sili*[4]	*-vevea*	*-mate*
Ka	*sil*	*-bebea*	*-mate*
Ki	*lama-*	*-veve*	*-mate*
Am	*eli*	*-paikai*	*-mo*

[4] Compare Lu/*sili* 'high tide'.
[5] These forms mean 'die' only with the completive, otherwise, they mean 'faint', 'be unconscious', 'numb'.

	'dig'	'dirty'	'do, make'
An	*-ies*	*oxou*	*-gên(-4)*
Mo	*-ias*	*amum*	*-due, -de*
Ar	*-ias*	*amum*	*-due, -de*
To	*-ias*	*amum*	*-due, -de*
La	*-ias*	*amum*	*-de*
Lu	*-lei*	*ŋaraŋa*	*-kazo*
Ko	*-lei*	*ŋahaŋa*	*-kazo*
Ka	*-lei*	*ŋaraŋa*	*-kado*
Ki	*-kel*	*ŋaraŋa*	*-kep, -kiv*
Am	*-kel*	*mukmukŋe*	*-kama, -kep, -kapin*

	'dog'	'dove'	'down'
An	*kaua*	*ugîm*	*-gêx-îl*
Mo	*oulei, gemle*[1]	*belis*	*-duxu*
Ar	*gemle*	*belis*	*-duru*
To	*gemle*	*belis*	*-duru*
La	*oulei*	*belis*	*-kai*
Lu	*kaua*	*velis*	*-zio*
Ko	*kaua*	*vazuhi*	*-zio*
Ka	*kaua*	*barur*	*-sulug*
Ki	*gaune*	*avol*	*-raun*
Am	*ogoune*	*arvu*	*-tutuk*

[1] The Mouk use *gemle* more frequently than *oulei* but claim only the latter as truly Mouk.

	'drink'	'drum'	'dry'
An	*-ik-îl*	*buamu*	*pît*
Mo	*-inim*	*kude*	*epis, kakxak*
Ar	*-inim*	*kude*	*epis, kakrak*
To	*-inim*	*kude*	*epis, kakrak*
La	*-in*	*kobom*	*popok, kakrak*
Lu	*-unu*	*avomu*	*mamasa*
Ko	*-unu*	*kuze*	*mamasa*
Ka	*-un*	*abam*	*mamasa*
Ki	*-va*	*pariua*	*-gol*
Am	*-in*	*esiran*	*-par, -posaŋa*

	'dull' (eg. knife)	'ear' (>3.7e)	'earth'
An	*tux, tul*	*gêt-3*	*eidî*
Mo	*pom*	*slaŋa*	*ebes*
Ar	*pom*	*tala*	*ebes*
To	*put*	*tala*	*tatlak*
La	*put*	*beine*	*titlak*
Lu	*tura, tula*	*taŋa-*	*tano*
Ko	*tula*	*taliŋa-*	*tano*
Ka	*tula*	*taŋa-*	*tano*
Ki	*mate eavo*[1]	*taŋa-*	*tatano*
Am	*pumpumŋe*	*telŋe*	*epes*

[1] Literally, 'eye-its not'. The cutting edge of a blade is construed as its eye in all these languages. Consequently, it is possible to have similar constructions for 'it is dull' in all these languages: An/*eilîm mantu*, Lu/*aimata mao*.

	'earthquake'	'eat'	'eel'[2]
An	*uun*	*-4*	*tuna*
Mo	*uexgi*	*-ŋan*	*bleten*
Ar	*orgi*	*-ŋen*	*aidaŋ*
To	*orgi*	*-ŋen*	*aidaŋ*
La	*ano*	*-ŋen*	*aidaŋ*
Lu	*nauregi, naurigi*	*-ani*	*tuna*
Ko	*nahuge*	*-ani*	*tuna*
Ka	*nauruge*	*-ean*	*tuna*
Ki	*tiutiu*	*-kan(i)*	*tuna*
Am	*etiti*	*-ken*	*evlei*

[2] Generic, but in the interior languages, usually referring to freshwater eels.

	'egg'	'enough'	'enter, in'
An	*nil-ŋ2*	*didi*	*-kei-l*
Mo	*dobutno*	*iagos*	*-sep*
Ar	*tobutno*	*iagos*	*-sep*
To	*tobutno*	*iabos*	*-sep*
La	*tubutno*	*nokrus, sou*	*-sep*
Lu	*kakatolu*	*karaŋa*	*-loŋa*
Ko	*kaka*	*kahaŋa*	*-loŋa*
Ka	*kakatol*	*karaŋa*	*-duduŋa*
Ki	*ŋalo-*	*-sou*	*-lu*
Am	*otolio*	*-sou*	*-ru*

	Eucalyptus	'extract, pull out, dig up'	'eye' (>3.7d)
An	*obuŋobuŋ*	*-ti*	*eil-1r*
Mo	*opon*	*-pi*	*bitna*
Ar	*opon*	*-pi*	*bitna*
To	*opon*	*-pi, -put*	*bitna*
La	*opon*	*-put*	*anta*
Lu	*ovuŋovuŋ*	*-pasu*	*mata-*
Ko		*-pasu*	*mata-*
Ka		*-pasu*	*mata-*
Ki		*-kule*	*mata-*
Am		*-reg*	*mete*

	'faeces'	'fall'	'far'
An	*pîk*	*-pêg-îl*	*suê, kiê, maua*
Mo	*ata*	*-gone*	*maua*
Ar	*ata*	*-gene*	*emia, maua*
To	*ata*	*-gene*	*emia, maua*
La	*ata*	*-mlu*	*emia*
Lu	*tahe-*	*-tapu*	*mamaza, mazaza*
Ko	*tahe-*	*-tapu*	*mamaza, avahi*
Ka	*tae-*	*-tap*	*aluae*
Ki	*tae-*	*-mol, -top*	*aluae*
Am	*ata*	*-makluk*	*melak*

	'fat', 'obese'	'father' (>3.7j)	'fear' [E__P]
An	*poŋ*	*tita-n1, ai-n1*	*-kî-4*
Mo	*-xum*	*ilau*[1]	*-lou*
Ar	*-rim*	*timla*	*-lim*
To	*-rim*	*timla*	*-lim*
La	*mamil*	*tumla*	*-lim*
Lu	*veve-*	*tama-*	*-matauzi*
Ko	*veve-*	*tama-*	*-matauzi*
Ka	*-tub*	*tama-*	*-mataud*
Ki	*-tup*	*tama-*	*-motau*
Am	*-rum*	*areŋ teme*[2]	*-motou*

[1] A fused form <**ila au*, where *ila* is the 3s neutral possessive and *au* means 'father'.
[2] The form *areŋ* usually accompanies singular forms of 'father', but not in the plural.

	'fence'	***Ficus***	'fire'
An	*aka*	*oxon,oxên*	*kmî*
Mo	*axi*	*tamaxa*	*eiou*
Ar	*ari*	*tamara*	*eiou*
To	*ari*	*namaiŋo*	*eiou*
La	*ade, ari, maŋo*	*namaiŋo*	*ei*
Lu	*ala*	*oren*	*ziŋa*
Ko	*ala*	*laoani, logane*	*eai*
Ka	*ala*	*oren*	*diŋa*
Ki	*sira*	*kaio*	*riŋa*
Am	*odo*	*akao*	*eiou*

	'fish'	'float'	'flood'
An	*ia*	*-monmono*	*oŋon*
Mo	*aŋua*[1]	*-maxo, -ples*	*oŋon*
Ar	*lodu*[1]	*-maro*	*oŋon*
To	*lodu*[1]	*-maro*	*oŋon*
La	*oŋua*	*-maro, -ples*	*oŋon*
Lu	*iha*	*-monmono*	*oaŋa*
Ko	*iha*	*-momono*	*oaŋa*
Ka	*ia*	*-momono, -patpat*	*oaŋa*
Ki	*ia*	*-sul*	*oŋa*
Am	*ouŋa*	*-padpad*	*edgim*

[1] Mo/*lodi* is a specific freshwater fish, while Ar/*oŋua* means 'wild food' or 'game', as in Ar/*obar oŋua* 'wild pig'.

	'flower'	'fly' [A__]	'fly' (insect)
An	*eipuxu-g3*	*-iê*	*laŋlaŋo*
Mo	*doxoŋen*[2]	*-uxok*	*loŋo*
Ar	*roroŋon*[2]	*-kei*	*loŋo*
To	*roroŋon*[2]	*-kei*	*loŋo*
La	*roroŋon*[2]	*-kei*	*loŋo*
Lu	*puru-*	*-roro*	*laŋlaŋo*
Ko	*puhu-*	*-hoho*	*laŋolaŋo*
Ka	*pur-*	*-roro*	*laŋolaŋo*
Ki	*ruaŋa-*	*-lolo*	*laŋo*
Am	*dukŋe*	*-rourou*	*oloŋo*

[2] Derived from verbs meaning sprout 'new growth'.

	'fog'	'fold'	'follow'
An	*ŋoulup*	*-ko-4, -polu-ag3*	*-lêxêm-1*
Mo	*ŋolip*	*-mol*	*-didi*
Ar	*gaugau, gaup*	*-pol*	*-didi*
To	*apare ila eiou*[1]	*-pol*	*-pupru*
La	*gaugau*	*-lom*	*-pupru*
Lu	*gauku*	*-polu*	*-nasi*
Ko	*gaugau*	*-polu*	*-nasi, -tani*
Ka	*gagau*	*-pol*	*-nasi*
Ki	*ŋaŋau*	*-ruki*	*-kirim, -oata*
Am	*agaugau*	*-kop*	*-nasi*

[1] Literally, 'a wallaby's fire'.

	'foot', 'leg' (>3.7i)	'forest'	'frog'
An	*tî-g3*	*asiax*	*kalo*
Mo	*kamla*	*omoŋ*	*bael*
Ar	*kamla*	*omoŋ*	*bael*
To	*kamla*	*omoŋ*	*kala*
La	*kamla*	*omoŋ, bubla*	*matao*
Lu	*ahe-*	*saru*	*kalo*
Ko	*ahe-*	*sahu*	*kalo*
Ka	*ae-*	*tibur*	*kalo*
Ki	*ae-*	*uroura*	*gou*
Am	*ka ruo*	*eivur*	*aval, amkik*[2]

[2] These are specific names referring to a large and small variety respectively. There is no generic.

	'fruit'	'full'[4]	'fuzz, barbs'
An	*êbêl-g3*	*êpêx*	*êmkîs*
Mo	*uatna*	*apax*	*omsoŋ*
Ar	*otna*	*bon*	*omsoŋ*
To	*otna*	*bon*	*omsoŋ*
La	*ota*	*bon*	*kisisleŋ*[5]
Lu	*puapua-*	*-onu*	*asile*
Ko	*puapua-*	*-onu*	*asile*
Ka	*puapua-*	*-on, -uon*	*asile*
Ki	*molemole*[3]	*ano-*	*momosa*
Am	*kane*	*-pon*	*asile*

[3] Probably a reduplicated form from **molamola-* with the 3s suffix.

[4] The rection sometimes differs from English: An/*karasin êpêx axî lam* 'The lamp is full of kerosine'. An/*lam êpêx* would mean 'It is full of lamps'. Compare, however, Am/*ekirau ipon ne eiki* 'The pot is full of water'.

[5] Compare the forms for 'hurt', especially An/*sis* and La/*kisis*.

	'gall bladder'	'garden' (>place, bed)	'ginger'/***Alpinia*** [3]
An	*eni-k3*	*nan, pên, ai*	*êŋgîx*
Mo	*onu-*	*iage,*[1] *omux*	*agiau*
Ar	*onu-*	*iage,*[1] *omur*	*egiau*
To	*onu-*	*iage,*[1] *omur*	*dabol*
La	*onu-*	iage[1]	*egiau*
Lu	*oasu-*	*zazaŋa*	*agia*
Ko	*asu-*	*moŋa*	*zozoni*
Ka	*asu-*	*dadaŋa*	*palam*
Ki	*osi-*	*kumo,*[2] *pano*	*peteŋa*
Am	*osio*	*okmoŋo*[2]	*orgur*

[1] *iage* also means 'industrious'. Compare Mo/*iage kobok* 'he's lazy ' or 'he has no garden'.

[2] These forms are probably cognate: Am/*okmoŋo <*a-kumo-ŋo.*

[3] Both specific and generic for plants whose leaves are used for wrapping food, butchering platforms and makeshift beds.

	'ginger'/***Zingiber*** [4]	'give'	'go'
An	*êudîk, emles*	*-sn-1r, -soŋ-k3*	*-k/-ul*
Mo	*emles*	*-kax*	*-la*
Ar	*emles*	*-kar*	*-la*
To	*emles*	*-karou*	*-la*
La	*emles, saŋger*	*-karou*	*-la*
Lu	*haia*	*-pani*	*-la*
Ko	*haia*	*-pani*	*-la*
Ka	*laia*	*-pani*	*-la*
Ki	*gena*	*-kiv*	*-la*
Am	*emles*	*-suŋ*	*-la*

[4] Generic for ginger whose rootstock is used for medicinal/magical procedures.

	'good'	'grate'	'greasy'[4]
An	*leim*	*-ŋi-d4*	*-zêk*
Mo	*itau*	*-nou*	*dikŋen*
Ar	*itau*	*-nou*	*dikŋen*
To	*itau*	*-nou*	*dikŋen*
La	*itau*	*-nei*	*doko*
Lu	*poea*	*-nau*	*mona-*
Ko	*doko*	*-nau*	*mona-*
Ka	*kemi*	*-nau*	*mona-*
Ki	*papua-*	*-nau*	*mona-*
Am	*ŋaraŋe*	*-nou*	*-mimis*

[4] Used to compliment food.

	'green, blue'	'hair, leaf, feather'	'hand, arm' (>3.7h)
An	*biê*	*ki-l2r*	*tîm-n1*
Mo	*ebix*	*uole*	*limla*
Ar	*ebir*	*elilo*	*limla*
To	*ebir*	*elilo*	*limla*
La	*ebir*	*kolouna*	*meila*[2]
Lu	*viviriŋa*	*launi-*	*lima-*
Ko	*vivihiŋa*	*launi-*	*lima-*
Ka	*birbiriaŋa*	*launi-*	*bage-*
Ki	*vilviliaŋa*	*loulou-, laulau-*	*vage-*
Am	*virviriaŋa*	*uore, uoruore*	*lume*

	'hard'	'hawk'	'head' (>3.7f)
An	*kêxês*	*ui*	*og-l2r*
Mo	*nagax*	*ŋamxi*	*apna*
Ar	*nagar*	*ŋamri*	*apna*
To	*adar*	*akom*	*apna*
La	*kairak, koklo*ŋ	*akom*	*apna*
Lu	*matua*	*ui*	*zava-*
Ko	*vohu*	*lago*	*vola-*
Ka	*matua*	*uloto*	*labora-*
Ki	*volvoli-*	*kamo kiue*[3]	*kuri-*
Am	*kakrakŋe*	*kamo kiue*[3]	*gura*

[2] Probably with metathesis.
[3] Ki/*kiue*, Am/*ekiue* 'rat'.

	'hear'	'heavy'	'help'
An	*-degiŋ-k3*	*mî*	*-lua-d4*
Mo	*-kliŋen*	*talu*	*-lua*
Ar	*-kliŋen*	*kodu*	*-lua*
To	*-tliŋen*	*anit*	*-lua*
La	*-roŋon*	*anit, kadu*	*-lua*
Lu	*-loŋoni*	*kulupu*	*-lua*
Ko	*-loŋoni*	*kua*	*-lua*
Ka	*-loŋo*	*kulupu*	*-lua*
Ki	*-loŋo*	*pataŋa-*	*--pulai*
Am	*-loŋo*	*pataŋe*	*-koro*

	Hibiscus [1]	'hide [A__P]'	'hip'
An	*amsexe, palu*	*-ki-1r*	*omtu-g3*
Mo	*amsexe, palu*	*-kukep*	*omtu*
Ar	*palu*	*-lun*	*omtu*
To	*palu*	*-kukuop*	*omtu*
La	*palu*	*-kukop*	*omtu*
Lu	*amsere*	*-muzani*	*omtu,uvu-*
Ko	*ansehe, napolpol*	*-posi*	*vu-*
Ka	*ansere*	*-mudan*	*ubu-*
Ki	*polpol*	*-totolŋa*	*sapeŋa-*
Am	*opuru*	*-volkou*	*gelio*

[1] Used for wrapping tobacco. Compare the forms 'for fold'.

	'hit, kill'	'hold'	'hole'
An	*-b-3/-pel-4*	*-kisi-ax3*	*êbîk*
Mo	*-mluk*	*-kis*	*obuk*
Ar	*-mluk*	*-kisi*	*obuk*
To	*-mluk*	*-gisi*	*obuk*
La	*-mluk*	*-gis*	*obuk*
Lu	*-rau*	*-kisi*	*vovo*
Ko	*-hau*	*-kisi*	*vovo*
Ka	*-rau*	*-kisi*	*baba*
Ki	*-lau*	*-toko, -kisi*	*riŋe*
Am	*-pun*	*-kiskis*	*orur,vre*

	Homalium	'honeycomb'1 [2]	'honeycomb' 2 [3]
An	*maxda*	*uame*	*aŋlêg*
Mo	*boi*	*uame*	*aŋlek*
Ar	*boi*	*uame*	*aŋlek*
To	*boi*	*uame*	*aŋlek*
La	*boi*	*uame*	*aŋlek*
Lu	*marara*	*oame*	*aŋlek*
Ko	*mahaha*	*oame*	*Ø*
Ka	*marara*	*bon*	*Ø*
Ki			*Ø*
Am	*ovoire*	*epimuk, ovon*	*Ø*

[2] Refers to both the wax and honey made by a non-stinging bee about the size of a housefly, called An/*eidenîm uame*, Mo/*uame ilaide*, Ar/*uame tna*, Lu/*oame aitna*, Ka/*bon itna*, Am/*epimuk tne* all meaning 'mother of honeycomb'. Ka/*bon* and Am/*ovon* refer to the wax made by this bee and used for tuning drums. Ki/*latia sulia* means 'honey': *sulia* means 'its juice', but the meaning of latia is unknown.

[3] Made by a large stinging wasp that makes paper nests in trees.

	'hornbill'	'hot'	'house/woman's'[1]
An	*mexiaŋ*	*êŋîl*	*ene*
Mo	*mexiaŋ*	*eŋil*	*ninu*
Ar	*meriaŋ*	*eŋil*	*ninu*
To	*meriaŋ*	*eŋil*	*ninu*
La	*meriaŋ*	*eŋil*	*itar*[2]
Lu	*meriaŋ*	*oanana*	*luma*
Ko	*meriaŋ, bea*	*oanaoana*	*luma*
Ka	*oroŋon*	*oanaoana*	*luma*
Ki	*akŋok*	*-nounou*	*nia*[2]
Am	*akŋok*	*menene*	*eivin*[2]

[1] Traditionally houses for women and their children. Men lived apart in the men's lodge. Married men now live in their wife's house.
[2] Also means 'village'.

	'house/men's lodge'[3]	'how many'	'hunt with net'[4]
An	*êuziê*	*mîgê*	*-gla*
Mo	*oxmun*	*sesue*	*-bax*
Ar	*ormun*	*sesue*	*-bar*
To	*ormun*	*sesue*	*-bar*
La	*odiep*	*aisen*	*-bar*
Lu	*lumu*	*piza*	*-ere*
Ko	*lumu*	*piza*	*-ehe*
Ka	*lum*	*pida*	*-ere*
Ki	*ulum*	*pia*	
Am	*ourum*	*usei*	*-ele*

[3] The men's lodge was traditionally the spirit house and cemetery associated with each patriclan. Now it functions mainly as a dormitory for bachelors and widowers.
[4] That is, to drive pigs and cassowaries into nets with a lot of noise.

	'hurt, pain'	***Inocarpus***	***Imperata*** [5]
An	*sis*	*uaŋge*	*odo*
Mo	*nisi*	*uaŋge, iou, amsi*	*ogu*
Ar	*doro*	*eiui*	*ogu*
To	*doro*	*eiui*	*ogu*
La	*kisis*	*kamrip*	*ogu,ougu*
Lu	*-aiai, -eiei*	*ua*	*ugu*
Ko	*-aiai*	*ua*	*ugu*
Ka	*-eiei*	*ua*	*gupa*
Ki	*-karkar*	*ip*	*gu*
Am	*-pid*	*eip*	*ogu*

[5] Either specifically ***Imperata*** or generic for open patches of grassland.

	'inside'	'intestines'	'ironwood'
An	*emkei-k3, eilo-x3*	*lis-k3*	*buanê*
Mo	*aitno*	*mogolu*	*bana*
Ar	*aitno*	*mogolu*	*bana*
To	*aitno*	*mogolu*	*bana*
La	*anto*	*mogolu*	*bana*
Lu	*lolo-*	*mogari-*	*vona*
Ko	*lolo-*	*mogali-*	*bona*
Ka	*lolo-*	*mogali-*	*bana*
Ki	*remo-*	*mogali-*	*vona*
Am	*gorio*	*gorgorio*	*ovono*

	'island'	'itchy'	'jaw'
An	*nu*	*adi*	*gîm-g3*
Mo	*omot, nu*	*kaklak*	*baxŋa*
Ar	*omot, nu*	*kaklak*	*baŋa*
To	*omot*	*kaklak*	*baŋa*
La	*omot*	*kaklak*	*baŋne*
Lu	*nu*	*-tuntun, -akala*	*azeze-, balbalu-*
Ko	*nu*	*-akala*	*azeze-*
Ka	*inu*	*-tuntun*	*adade-, balubalu-*
Ki	*motmot*	*-tuntun*	*givasi-*
Am	*omod*	*-tuntun*	*para*

	'juice'	'knee' (>joint, 100)	'knife'
An	*komu-k3*	*bols-1r*	*te*
Mo	*olune*	*bunene*	*elil*
Ar	*olune*	*buno*	*elil*
To	*olune*	*buno*	*udage*
La	*adaine*	*buno*	*udage, luŋai*
Lu	*suru-, suri-, sulu-*	*volvolu-*	*uzage*
Ko	*suhu-*	*volvolu-*	*hai*
Ka	*sulu-*	*kubal*	*dídid*
Ki	*suli-*	*suki-*	*pul*
Am	*sirio*	*kuvusŋe*	*eseve*

	'know'	'ladder, bridge'	'later'
An	*-pun-lr*	*tete*	*mesi, adidi*
Mo	*-ile*	*siŋen*	*batne*
Ar	*-ile*	*saŋga*	*batne, mase*
To	*-ile*	*saŋga*	*batne*
La	*-rek*[1]	*saŋga*	*roŋ ... no*
Lu	*-oatai*	*tete*	*muriai*[2]
Ko	*-oatai*	*tete*	*muhiai*[2]
Ka	*-oatai*	*tete*	*muriai*[2]
Ki	*-otai*	*tete*	*aimul*
Am	*-klele*	*atataŋo*	*gidmeiŋo*

[1] Also means 'see'. This form elicited with great difficulty (see 2.15).
[2] Derived from 'back' with a locative suffix.

	'laugh'	'leaf wrapper'[3]	'leech'[4]
An	*-bazê-l*	*iîk*	*kŋal*
Mo	*-dibel*	*eiuk*	*kŋal, dipman*
Ar	*-ibel*	*eiuk*	*Ø*
To	*-ibel*	*eiuk*	*Ø*
La	*-debel*	*eiuk, orou*	*agol*
Lu	*-ŋiŋi*	*laulau*	*dikman*
Ko	*-ŋiŋi*	*laulau*	*Ø*
Ka	*-ŋiŋ*	*laulau*	*naroma*
Ki	*-ŋiŋ*	*laulau*	*roma*
Am	*-ŋiŋ*	*eiuek*	*edidmen*

[3] *Alpinia*, banana or banana-like leaves used to cover food for cooking in stone ovens or for storage.
[4] Found clinging to leaves in the damp rainforest at higher altitudes.

	'lefthand'	'lie, false'[5]	'lightweight'
An	*gala*	*-pape-l*	*iêxîk*
Mo	*gala*	*-iak*	*maxkan*
Ar	*gala*	*-iak*	*markan*
To	*gala*	*-katkatu*	*markan*
La	*gala*	*-katu*	*markan*
Lu	*gagala*	*-dumu*	*malmalani*
Ko	*gagala*	*-bulobulo*	*mal(a)malani*
Ka	*gagala, aŋas*	*-pakaka*	*malmalan*
Ki	*ŋas*	*-pokaka*	*makeleŋa-*
Am	*ŋas*	*-pagara*	*koposŋe*

[5] Also used for 'tease', 'fool', 'trick', 'unreal'.

	'lime powder'[1]	'little'	'liver (>lungs)'
An	*glîm*	*boid, kuke klaŋ*[2]	*êl-k3*
Mo	*akau*	*magit ono*[2], *otno*	*atna*
Ar	*okou*	*daudeŋ*	*bomso*
To	*okou*	*daudeŋ*	*pupu*
La	*oglum*	*sadi*	*pupu-*
Lu	*eaoa*	*kahaku*	*atete-*
Ko	*eaoa*	*kahaku*	*atete-, atate-*
Ka	*eaoa*	*kakau ede*	*atate-*
Ki	*au*	*kapori-*	*ate-*
Am	*okou*	*kapora se*[2]	*katkate*

[1] Calcium oxide, a white caustic powder, made by heating clam shells, coral or limestone, and used for chewing with betel, for making paints and for medicinal/magical procedures. Compare the forms for 'white.'

[2] Obligatory diminutive particle occurs as second element.

	'long'	'lose ' [A__P]	'lost' [P__]
An	*sêgêl*	*-tis-k3*	*-tis*
Mo	*kos*		*-dno*
Ar	*alaŋ*	*-soŋon*	*-mina*
To	*alaŋ*	*-soŋon*	*-popmo*
La	*malkat*	*-paip*	*-popmo*
Lu	*voru*	*-kinani*	*-susu*
Ko	*zaezae*	*-kinani,-kininani*	*-susu*
Ka	*mamarae*		*-susu*
Ki	*moloŋa-*	*-pasoli*	*-solia*
Am	*muntukŋe*		*-usis*

	'louse'	'lungs'[3] (>liver)	'magic'[4]
An	*seim*	*popxos-g3, pa-n1*	*molo*
Mo	*otu*	*popxos*	*logle*
Ar	*otu*	*popros*	*borou*
To	*otu*	*popros*	*borou*
La	*otu*	*bomse, bose*	*berou*
Lu	*tuma*	*popros*	*vorou*
Ko	*tuma*	*malmalani*	*vorou*
Ka	*tuma*	*boroeo-*	*borou*
Ki	*gine*	*pisopiso-*	*vorou*
Am	*ekid*	*vovse*	*ovorou*

[3] Referred to as 'the second liver' and often confused with it. Consequently, the form for 'lungs' in one language is often related to 'liver' in another.

[4] Generic for magic excluding 'sorcery'.

	'malay apple'	'male'	'man'
An	*poi*	*axaŋ*	*dokam*
Mo	*puai*	*axaŋ*	*gute*
Ar	*puai*	*araŋ*	*gute*
To	*bekei*	*araŋ*	*ute*
La	*iarup*	*aŋgraŋ*	*tou*
Lu	*puai*	*tomone*	*tanta*
Ko	*puai*	*tamone*	*ava*
Ka	*poai*	*araŋa*	*eaba*
Ki	*pokai*	*tamta*	*tamta, vola*
Am	*opokai*	*adan, tamane*	*otogou*

	'mango'	'mangrove'	'many, all (>100, knee)'
An	*korae*	*bal*	*buno*
Mo	*kadai*	*bale*	*buno*
Ar	*kadai*	*bale*	*buno*
To	*kadai*	*bale*	*puda*
La	*kadai*	*bale*	*puda*
Lu	*kozae*	*vale*	*vuno, salai*
Ko	*kozae*	*vale, bale*	*salai*
Ka	*kodae*	*bare*	*busa*
Ki	*uoe*	*goro*	*aiŋur, aiuol*
Am	*oglis*	*arŋom*	*vuturu*

	'marry'	'meat, flesh'	'monitor lizard'
An	*-il-4, -gên amlak*	*ki-g3*	*pîxdêm, paxia*
Mo	*-gi*	*okux*	*pixdem, paxia*
Ar	*-gi*	*okur*	*paria*
To	*-gi*	*okur*	*paria*
La	*-ul*		*paria*
Lu	*-oai*	*mezameza-*	*paria*
Ko	*-oai*	*mezameza-*	*pahia*
Ka	*-oai*	*medameda-*	*paria*
Ki	*-ole*	*meramera-*	*palo*[1]
Am	*-uole*	*kurio*	*epero*

[1] Compare Ki/*pariua* 'drum'. The tympanum of an hourglass drum is made from the skin of a monitor lizard.

	'moon'	'morning'	'mosquito' [4]
An	*klîŋ*	*ugê sêksêk*[1]	*kneili*
Mo	*taiko*	*nasaksak,*[1] *gotu*[2]	*lomuk*
Ar	*taiko*	*kotkotu*[2]	*nomuk*
To	*taiko*	*kotkotu*[2]	*nomuk*
La	*saiko*	*kotkotu*[2]	*nomuk*
Lu	*taiko*	*boŋboŋi*[3]	*kikilamo*
Ko	*taiko*	*voŋvoŋi*[3]	*makinkini*
Ka	*taiko*	*gaisala*	*makinkin*
Ki	*top*	*utue*	*mugingin*
Am	*ognumur*	*diŋdiŋo*	*ovunkin*

[1] The forms are complete verb phrases.
[2] Compare the forms for 'tomorrow'.
[3] Compare the forms for 'night'.
[4] Compare the forms for 'sandfly'.

	'moss'	'mother' (>3.7k)	'mountain'
An	*gulumu*[5]	*aia-n1, eide-n1*	*êbêt*
Mo	*olmut*	*ilaide <*ila ide*	*ebet*
Ar	*gulumu*[5]	*tna*	*muruŋ,*[7] *gigri*
To	*gulumu*[5]	*tna*	*muruŋ,*[7] *gigri*
La	*olmut*	*kina*	*gime*
Lu	*gulumu*[5]	*tna-*	*lusi*
Ko	*gulumu*[5]	*tina-*	*lusi*
Ka	*guluŋ*[5]	*tna-*	*lusi*
Ki	*lumlum*[5]	*tna-*	*lolo*
Am	*olmud*[5]	*akmareŋ tne*[6]	*olusi*

[5] The forms for 'moss ' are the same as those for 'algae' in these languages.
[6] Am/*akmareŋ* 'old woman' occurs with singulars but not plurals.
[7] Compare Ak/*mîŋ* 'mountain', An/*mîŋ* 'steep grade'.

	'mountain crest'	'mouth' (>3.7g)	'mushroom'
An	*abêl*	*boŋ-g3*	*kî*
Mo	*obxou*	*aine*	*makue*
Ar	*obrou*	*ene*	*makue*
To	*obrou*	*ene*	*makue*
La	*obrou*	*aona*	*makue*
Lu	*vereo*	*aoa-*	*tataliŋa*[8]
Ko		*aoa-*	
Ka	*bereo*	*aoa-*	*tataluŋa*[8]
Ki	*olo-*	*ao-*	*taluŋa*[8]
Am	*akamele*	*na kane vre*	*euil*

[8] Compare the forms for 'ear'.

	'name'	'near'	'neck'
An	*eŋi-1r*	*lêk*	*agîm-k3*
Mo	*lagŋa*	*uanuk*	*agum*
Ar	*aŋan-*	*luo*	*agun*
To	*aŋan-*	*luo*	*agun*
La	*an-*	*oluo,reit*	*agu-*
Lu	*eza-*	*siomoli*	*gali-,gagali-*
Ko	*eza-*	*siomoli*	*gagalu-*
Ka	*eda-*	*boloma*	*gagali-*
Ki	*pasis*	*tauoi*	*goli-*
Am	*serio*	*teuei*	*adeŋe*

	'nest'	'net'	'new'
An	*enik*	*opu*	*masîk*
Mo	*onuk*	*omdu*	*uoku*
Ar	*onuk*	*omdu*	*oku*
To	*onuk*	*omdu*	*oku*
La	*onuk*	*aŋkal*	*taŋan*
Lu	*enik*	*puo*	*pau*
Ko	*giniu*	*puo, kuba*	*pau*
Ka	*giniu*	*puo*	*pau*
Ki	*giniu*	*puo*	*pau-*
Am	*onuk*	*opuo*	*uakŋe*

	'night'	'nose'	'obsidian'
An	*nib*	*piŋi-1r*	*êtîk*
Mo	*epmes*	*epxiŋ*	*odloŋ*
Ar	*epmes*	*topur-*	*egloŋ*
To	*epmes*	*topur-*	*omos*
La	*opmos*	*dor-*	*omos*
Lu	*voŋi*[1]	*nuzu-*	*aliali*
Ko	*voŋi*[1]	*nuzu-*	*aliali*
Ka	*boŋ*[1]	*nunu-,nudu-*	*adial*
Ki	*voŋ*[1]	*vani-*	*elŋa*
Am	*vilŋoŋ*	*sŋoreka*	*eirer*

[1] Compare the forms for 'morning'.

	Octomeles	'old' (thing)	'paddle'
An	*odoga*	*adîgî*	*pore*
Mo	*koxdo*	*ŋamen ina*[2]	*melba*
Ar	*kordo*	*oglou ina*[2]	*melba*
To	*kordo*	*oglou ina*[2]	*melba*
La	*okiom*	*aliŋgo*	*melba, pue, pode*
Lu	*oagatau*[1]	*momoho*	*poze*
Ko	*oagatau*[1]	*mohomoho*	*poze*
Ka	*oaga*[1]	*mugamuga*	*pode*
Ki	*kilmo*	*mugaŋa-*	*pe*
Am	*ogororo*	*vugoŋ ka*[2]	*opoi*

[1] Compare the forms for 'canoe'. This tree is favoured for canoe building.
[2] Literally: 'from before'. The second element is the edible 3s possessive.

	Pandanus 1, 'mat'[3]	*Pandanus* 2[4]	'parrot'
An	*mîk*	*parpara*	*kasêp*
Mo	*omoi*	*padapada*	*kalaŋa*
Ar	*omoi*	*banda*	*kalaŋa*
To	*omoi*	*banda*	*kalaŋa*
La	*parak*	*parpara*	*kalaŋa*
Lu	*moe*	*pazpaza*	*karaŋani*
Ko	*moe*	*pada*	*kahaŋani*
Ka	*moe*	*padapada*	*kalaŋan*
Ki	*matuk*	*para*	*aikalaŋa*
Am	*omoi*	*apadapada*	*akalaŋa*

[3] Has leaves 10-20 cm wide which are sewn together to make sleeping mats. Interior people claim this to be a recent introduction from the coast.
[4] Has leaves 6-10 cm wide, formerly used by interior people for mats. Bears a large fibrous segmented fruit. Possibly ***Nypa fruticans***.

	'path'	'penis'	'people'
An	*luŋ*	*êl-ŋ2*	*onu*
Mo	*ienim*	*uetne*	*osep*
Ar	*ekreŋ*	*otne, merge*	*osep*
To	*ekreŋ*	*otne, merge*	*osep*
La	*sukuna, osou*	*is-*	*oduk*
Lu	*ezapu*	*uti-*	*pana*
Ko	*ezapu*	*uti-*	*pana*
Ka	*edap*	*uti-*	*panua*
Ki	*roro*	*kuti-*	*tamtamaol*
Am	*ekreŋ*	*kutio*	*otodgoio*

	'phlegm'	'pig/generic'	'pig/black'
An	*ŋoŋ-k3*	*aba*	*ziziŋ*
Mo	*oŋxus*	*abax*	*nakum*
Ar	*eŋris*	*obar*	*nakum*
To	*eŋris*	*obar*	*nakum*
La	*eŋris*	*kanem*	*nakum, moroŋ*
Lu	*ŋoŋo-*	*gaea*	*oasaso*
Ko	*ŋoŋo-*	*gaea*	*kasoka*
Ka	*ŋoŋo-*	*gaea*	*kosuksuk*
Ki	*muli-*	*ga*	*asoaso*
Am	*oŋur*	*esŋei*	*aŋakum*

	'pig/brown'[1]	'pig/hairless'	'pig/spotted'[2]
An	*malîlîŋ*	*gelet*	*loŋgoloŋgo*
Mo	*mexden*	*gelet*	*loŋgoloŋgo*
Ar	*merden*	*gelet*	*loŋgoloŋgo*
To	*merden*	*gelet*	*loŋgoloŋgo*
La	*maraiden*	*galat*	*tultuli*
Lu	*ururi*	*zagi*	*loqoloqo*
Ko	*uhuzi*	*zagi*	*loqoloqo*
Ka	*urur*	*dag*	*loŋgoloŋgo*
Ki	*oleoleŋa-*	*gelet*	*simbombom*
Am	*amarakai*	*egeled*	*kaloŋge*

[1] Young have horizontal stripes which disappear with age.
[2] White with large black spots.

	'pig/white'	'pig tusks'[3]	'pillow'[4]
An	*ogu*	*puti*	*san*
Mo	*ogu, paulik*	*bole*	*uelŋen*
Ar	*paulik*	*bole*	*elio*
To	*paulik*	*bole*	*elio*
La	*ogu, pailuk*	*paidala*	*kakloŋ*
Lu	*suku*	*vole*	*alio*
Ko	*kaŋkaŋa*	*oakioaki*	*alio*
Ka	*bodebode*	*doŋa*	*nakuluŋa*
Ki	*vore-*	*roŋa*	*kuluŋa*
Am	*osuk*	*evid*	*okulŋo*

[3] Upper canines of hogs are removed to allow lower canines to grow continuously in an arc that may form a complete circle. After butchering, these are retrieved and bound together in a pair which is worn around the neck or held between the teeth during dancing or warfare.
[4] Traditionally carved from the midrib of a sago frond.

	'pitpit'[1]	'place (>bed, garden)'	'plant' [A__P]
An	*gak*	*nan*	*-kên-ag3*
Mo	*tobox*	*omux*	*-uasak*
Ar	*tobor*	*omur*	*-usak*
To	*tobor*	*omur*	*-usak*
La	*lopu*		*-uasek*
Lu	*tauari*	*tuvuru*	*-zoa*
Ko	*tavuahi, tabuka*	*tuvuhu*	*-zoa*
Ka	*tabual*	*tibur*[2]	*-earum*
Ki	*pas*	*nia, pano*[2]	*-kumo,-guni*
Am	*ogoroŋo*	*epeno*	*-se*

[1] A cultigen resembling sugarcane. Numerous varieties are grown for their edible seedstalk. Possibly ***Saccharum spontaneum***. Compare with the forms for 'sugarcane'.
[2] Ka/*tibur* also means 'forest'; Ki/*nia* 'house', 'village'; Ki/pano 'ground'.

	'play'	***Poinciana***	***Pometia***
An	*-page-l*	*lag, amoxu*	*nuaŋ*
Mo	*-kole*	*daga*	*emliŋ*
Ar	*-kole*	*daga*	*emliŋ*
To	*-kole*	*daga*	*adada*
La	*-kole*	*daga*	*aulop*
Lu	*-kaliaŋa*	*amoru*	*noaŋ*
Ko	*-kavaŋahi*	*amoru*	*naulpili*
Ka	*-titiau*	*amoru*	*gaual*
Ki	*-rikarika*		
Am	*-lovlovo*	*edege*	*emliŋ*

	'pond' (in river)	'post'	'prawn'[4]
An	*koboxiu, obubu*	*kêl*	*agî*
Mo	*bubu, olu*[3]		*agen*
Ar	*bubu*	*kadaŋa*	*agen*
To	*bubu*	*kadaŋa*	*agen*
La	*tilu*	*kadaŋa*	*geil*
Lu	*ililii*	*kazaŋa*	*gelema*
Ko		*kazaŋa*	*gelema*
Ka	*liuliu*	*kadaŋa*	*gelema*
Ki		*sil*	*gelema*
Am	*eli volio*[3]	*opuŋ*	*eigin*

[3] Compare with the forms for 'deep'.
[4] Generic for 'prawn', 'lobster', and 'shrimp', but 'freshwater prawn' is the focal meaning, especially in the interior languages.

	'pregnant'	'pull'	'punting pole'
An	*peni*	*-nînî-k3*	*toa*
Mo	*somogu*	*-xixi*	*otou*
Ar	*somogu*	*-riri*	*otou*
To	*somogu*	*-riri*	*otou*
La	*sumugu*	*-nak,-riri*	*otou*
Lu	*apo-*[1]	*-zaza*	*toa*
Ko	*apo-*[1]	*-zaza*	*toa*
Ka	*apa-*[1]	*-dada*	*toa*
Ki	*apo-*[1]	*-sarie,-uleke*	*to*
Am	*kope*[1]	*-it, -dada*	*otou*

[1] These forms mean 'belly'.

	'pus'[2]	'push'	'python'
An	*ênîŋ-k3*	*-d4*	*tiel*
Mo	*anak*	*-tapul, -baluk*	*aulas*[3]
Ar	*anak*	*-pul*	*emei*
To	*anak*	*-pul*	*emei*
La	*anak*	*-sapul*	*amat*[3]
Lu	*nanai*	*-suku(lani)*	*tiele*
Ko	*nanai*	*-sukulani*	
Ka	*nanai*	*-susuran*	*motanŋa*
Ki	*nana-*	*-patila*	
Am	*enene*	*-tilak*	*akanŋo*

[2] Also refers to the viscid sap of some plants.
[3] Also generic for 'snake'.

	'quickly'	'rain'	'rapids'[4]
An	*paide*	*luo*	*zizil*
Mo	*paide*	*axagu*	*didli*
Ar	*-bale, paide*	*arugu*	*diglu*
To	*-bale, paide*	*arigu*	*diglu*
La	*-bale*	*oruon,erei*	*didlu*
Lu	*samoreani*	*aoara*	*zizil*
Ko	*samehani*	*aoaha*	
Ka	*manamana*	*aoara*	*salia*
Ki	*kairik*	*sava*	
Am	*nigrik*	*asal*	*kurio*

[4] A place where a river could be forded with little danger from crocodiles.

	'rat'	'rattan' 1[1]	'rattan' 2[2]
An	*kuruke*	*kexi*	*axila*
Mo	*kiue*	*etikex*	*kixia*
Ar	*kiue*	*aber*	*kiria, nalia*
To	*kiue*	*aber*	*lilou*
La	*abi*	*teker*	*lilou*
Lu	*kuzuke*	*keri*	*arila, ahila, nalia*
Ko	*kuzuke*	*kehi*	*ahila*
Ka	*kuduke*	*keri*	*aria*
Ki	*kiue*	*kora*	*alia*
Am	*ekiue*	*akloun*	*aria*

[1] Large-leafed rattan used for roofing on temporary shelters.
[2] Small-leafed rattan used for hafting and making pubic aprons. Ar/Lu/*nalia* is copied from Ki/*na-alia*. Lu/*ahila* is from Kove.

	'raw' (>unripe)	'red' (>blood)	'reef' (>shallow)
An	*-na*	*êxiêk*	*sia*
Mo	*akat*	*eibmox*	*asax*
Ar	*akat*	*dimor*	*asar*
To	*akat*	*dimor*	*asar*
La	*akat*	*dimor, dimotmot*	*asar*
Lu	*kasiki*	*siŋsiŋia*	*sia*
Ko	*pau*	*siŋsiŋia*	*sia*
Ka	*kasiki*	*siŋsiŋia*	*sia*
Ki	*vita-*	*kilkiluŋa-*	*kur*
Am	*naŋrikŋe*	*toptopaŋa*	*okur, asar*

	'return'	'ridgepole'	'righthand'[4]
An	*-sim-îl*	*ududu*	*seim*
Mo	*-bauluk*[3]	*komduŋo*	*lokono*
Ar	*-diŋ*	*komduŋo*	*oduŋ*
To	*-diŋ*	*komduŋo*	*oduŋ*
La	*-uris*	*komduŋo*	*oduŋ*
Lu	*-lua-*	*uzuzu*	*tau*
Ko	*-lua-*	*uzuzu*	*tau*
Ka	*-lua-*	*udud*	*uatai*
Ki	*-mule*[3]	*ano-*	*ono*
Am	*-mle*[3]	*ovnipŋo*	*togou*

[3] Mo/*bauluk* 'turn'. Compare Ki/*puli*, Am/*pul* 'turn', both of which have corresponding oral grade onset.
[4] Compare Mo/*oduŋ*, To/*otou* 'straight'; La/*tou*, Am/*otogou* 'man'; and Mo/Ar/*lokono*, To/La/*loŋono*, Lu/Ko/Ka/*tau* 'true'.

	'ringworm'[1]	'ripe'	'root'
An	*pelpel*	*osu*	*zilŋên-2*
Mo	*pelpel*	*osou*	*dimolo*
Ar	*eper*	*sisiou*	*gitno*[2]
To	*eper*	*sisiou*	*gitno*[2]
La	*eper*	*sisiou*	*gitno, gito*[2]
Lu	*pelpel*	*vulavula*	*oaoari-*[3]
Ko	*kezikezi*	*vini*	*oaoahi-*[3]
Ka	*pelpel*	*blabla*	*oaroari-*[3]
Ki	*pelpeleŋa-*	*-kis*	*oka-*
Am	*epelpelŋo*	*sosou*	*remte*

[1] Compare with the forms for 'monitor lizard'. The disease makes the skin look like that of the lizard.
[2] Also mean 'tail'.
[3] Compare the forms for 'vine'.

	'rotten' (>wet)	'run'	'sago'
An	*êkîs*	*-gxîg-îl*	*kaxabo*
Mo	*okus*	*-suoŋ*	*txaŋan*
Ar	*okus*	*-suaŋ*	*taŋan*
To	*okus*	*-noplu*	*taŋan*
La	*meia*	*-noplu, -soŋ*	*taŋan*
Lu	*-vuza*	*-laguzi*	*momo*
Ko	*-vuza, -vuga, -vusa*	*-lazo*	*momo*
Ka	*-buda*	*-lado*	*mama*
Ki	*-vua*	*-ut*	*momo*
Am	*-morop*	*-ud*	*ataraŋo*

	'sago hammer'	'saltash'[4]	'salty, sweet'
An	*ualu*	*lêsîŋ*	*masmasi*
Mo	*okoli*	*sedik*	*galo*
Ar	*koli*	*sedik*	*galo*
To	*koli*	*sedik*	*galo*
La	*koli, kolia*	*sedik*	*galo*
Lu	*ualu*	*lesin*	*masmasi*
Ko	*ualu*	Ø	*mas(i)masi*
Ka	*ual*	Ø	*masmasi*
Ki	*guvaŋa*	Ø	*taitaiaŋa-*
Am	*aualŋo*		*papakŋe*

[4] Formerly made by interior people by burning driftwood.

	'sand'	'sandfly'[1]	'scar'[2]
An	*labu*	*kîkî,xemxemo*	*esik-m4*
Mo	*labu*	*moxomo*	*amal, asuk*
Ar	*labu*	*moromo*	*amal*
To	*labu*	*moromo*	*amal*
La	*labu*	*marama*	*amal*
Lu	*lavu*	*kemkemo, moromo*	*gil*
Ko	*lavu*	*nimnimu, kemkemo*	*muli-*
Ka	*ririŋa*	*nimnim, kikiramo*	*gil*
Ki	*maga*	*kikiramo*	*rava-*
Am	*olov, omoge*	*omromo*	*vagalgalŋe*

[1] Various species.
[2] Compare An/*esik* used to refer to the skin colour of Europeans, and Am/*osuk* 'white', 'albino'. Mo/Ar/To/*amal* also refers to designs and the colour of European skin as well as to scars.

	'sea eagle'	'sea, saltwater'	'see'
An	*bogi*	*pesia*	*-kê-l2r*
Mo	*bogi*	*misuon*	*-xik,-uluŋ*
Ar	*bogi*	*misuon*	*-erke, -pati*
To	*bogi*	*musien*	*-rik*
La	*biso*	*musien*	*-rik,-rek*
Lu	*vogi*	*tazi*	*-kona*
Ko	*vogi*	*tazi*	*-kona*
Ka	*bogi*	*tad*	*-gera*
Ki	*saumoi*	*tai*	*-li*
Am	*saumoi*	*emeo*	*-rei*

	'seed'	'sew'	'shallow' (>reef)
An	*lali-k3*	*-dîmili-ag3*	*tat*
Mo	*londo*	*-sisix*	*taxtax, asax*
Ar	*otna*[3]	*-mter*[4]	*tortor, asar*
To	*otna*[3]	*-mter*[4]	*tortor, asar*
La	*ota*[3]	*-sisir*	*toto*
Lu	*puapua-*[3]	*-zizi*	*sia*
Ko	*puapua-*[3]	*-zizi*	*sia*
Ka	*puapua-*[3]	*-saisai*	*sia*
Ki	*naroŋaro-*	*-sai*	*kanresŋa-*
Am	*pagilio*	*-seisei*	*moko*

[3] Also means 'fruit'.
[4] Also means 'stab', 'spear'.

	'shell money'	'shell trumpet'[2]	'shield'[3]
An	*matabu*[1]	*koni*	*asia*
Mo	*teli*	*kuliep*	*asua*
Ar	*teli*	*kuliep*	*osua*
To	*teli*	*kuliep*	*osua*
La	*teli*	*kuliep*	*osua*
Lu	*vula*	*taule*	*gariu*
Ko	*vula*		*gahiau*
Ka	*bula*	*taule*	*gariau*
Ki	*matavup*[1]	*taule*	*gariau, siŋel*
Am	*amatavu*[1]	*okulep*	*egeliou*

[1] Possibly from POC**tampu*.
[2] Made from ***Triton*** sp.
[3] Not traditional among coastal groups.

	'shiver'	'short'	'shoulder'
An	*-gîg-îl*	*pîtîk*	*pol-g3*
Mo	*-negigik*	*babit, bolbolo*	*opol*
Ar	*-nakarkar*	*bolbolo*	*opol, eriak*
To	*-nakarkar*	*bolbolo*	*opol, eriak*
La	*-nakarkar*	*eket, bolbolo*	*riak*
Lu	*-ligligi*	*volvolo*	*oala-*
Ko	*-ligligi*	*volvolo*	*oala-*
Ka	*-samimi*	*bolobolo*	*pol*
Ki	*-samimi*	*moro-, tuktuki*	*alo-*
Am	*-samimi*	*kmusŋe*	*galaŋa*

	'Siasi dish'	'sick'	'sister' (>3.7m)[4]
An	*tebila*	*-peia*	*sial-1r*
Mo	*tumxo, tabila*	*-paia*	*lutno*
Ar	*tumoro, tabila*	*daŋon*	*lutno*
To	*tumoro, tabila*	*daŋon*	*lutno*
La	*tumro, tabila*	*-sar, daŋon*	*luto*
Lu	*tavila*	*-zivali*	*liu-*
Ko	*tavila*	*-zivali, -zivazi*	*liu-*
Ka	*tabla*	*-dibal*	*liu-*
Ki	*tavila*	*-rival*	*liu-*
Am	*otovro*	*-sago*	*lio*

[4] Sibling or parallel cousin of opposite sex: Lu/*ailiu* 'his sister' or 'her brother'. Am/*luk se* 'my brother' (female speaking), Am/*luk maŋ se* 'my sister' (male speaking), both forms with Am/*se* 'diminutive'.

	'sit'	'skin, bark, shell'	'skinny'
An	*-sîk/-sul*[1]	*a-m4, palau-g3*	*toxtox*
Mo	*-doŋ*[1]	*taxna*	*toxtox*
Ar	*-doŋ*[1]	*tarna*	*andar*
To	*-doŋ*[1]	*tanra*	*andar*
La	*-ma*	*tanra*	*roria*
Lu	*-zoa-*	*kukuli-*	*-pegpege*
Ko	*-zo-*	*kulkuli-*	*-pegpege*
Ka	*-mado*	*kukuli-*	*-pegepege*
Ki	*-mate*	*kulkuli-*	*-vokvok*
Am	*-meiteŋ*[1]	*kulkulio*	*perperŋe*

[1] Also means 'stay', 'remain', 'be located'; equivalent to TP/*stap*.

	'skirt'[2]	'sleep', 'lie'	'slippery' (>smooth)
An	*didu*	*-sêm/-tel*	*-gê klot*
Mo	*kokxei*	*-munu*	*daglik*
Ar	*koro*	*-munu*	*diglik*
To	*koro*	*-munu*	*diglik*
La	*koro*	*-makaduk, -mlok*	*didlik*
Lu	*ozoa*	*-eno*	*sakeke*
Ko	*ozoa*	*-eno*	*momoli, sakekeŋa*
Ka	*odoa*	*-eno*	*kles*
Ki	*mul*	*-kono*	*kirikkirik*
Am	*osoro*	*-kono*	*didlikŋe*

[2] Traditional women's clothing woven from shredded rattan leaves into flat fringed bundles which are held in place, front and back, with a barkcloth belt. Undecorated skirts are now part of mourning dress for women.

	'slit gong'	'slow, carefully'	'smell' [E__P]
An	*gilamo*	*son-ax3*	*-sêŋ-k3*
Mo	*akoloŋ*	*molil*	*-kun*
Ar	*gilamo*	*molil*	*-kun*
To	*Ø*	*epis*	*-kun*
La	*Ø*	*-penpen*	*-kun*
Lu	*gilamo*	*misilani*	*-nuzi*
Ko	*gilamo*	*misilani*	*-nuzi*
Ka	*kude*	*kemi* = 'good'	*-nud*
Ki	*kure*	*mosmos*	*-toŋe kuni-*[3]
Am	*edge*	*omos*	*-duŋ kio*[3]

[3] Ki/*na-toŋe kuni-a* 'I smell its smell'; Am/*o-duŋ kio* 'I smell its smell'.

	'smell' [N]	'smoke'[1]	'smooth' (>slippery)
An	*tomo-i4*	*bîl*	*lil*
Mo	*mna*	*asi*	*kelil*
Ar	*amna*	*asu*	*kelil*
To	*amna*	*asu*	*kelil*
La	*miaŋan*	*asi*	*kelil*
Lu	*uazi-*	*vosu*	*sakeke*
Ko	*uazi-*	*vosu*	*sakekeŋa, momoli*
Ka	*uadi-*	*basu*	*kles*
Ki	*kuni-*	*vuŋa-*	*kirikkirik*
Am	*kio*	*omuŋo, omŋo*	*didlikŋe*

[1] Compare with forms for 'tobacco'.

	'snail' (river snails)	'snake'	'sneeze'
An	*poxe*	*mota*	*-ŋsia*
Mo	*somoxo*	*aulas* = 'python'	*-gisŋi*
Ar	*somoro*	*mota*	*-gisŋi*
To	*somoro*	*uan sasi* = 'bad thing'	*-kisŋi*
La	*somoro*	*amat* = 'python'	*-kisŋi*
Lu	*zuzue*	*mota*	*-kapusia*
Ko	*zupzupi*	*mota*	*-kapuse*
Ka	*dudue*	*mota*	*-kapisia*
Ki	*Ø*[2]	*mota*	*-kasine*
Am	*opogor*	*omoto*	*-kasŋi*

[2] No generic elicited in Kilenge. Varieties include: Ki/*palala, siuasiua,* and *ulsusu.* All other languages also have an array of different types.

	'soft'	'son, daughter' (>3.7l)	'song'[4]
An	*-niêk*	*gi-ŋ2*	*êmîŋ*
Mo	*omuk*	*otno, enen*	*sakul*
Ar	*omuk*	*otno*	*sakul*
To	*omuk*	*otno*	*sakul*
La	*babia*	*ginou*	*sakul*
Lu	*marumu*	*natu-*	*voŋa*
Ko	*mahumu*	*natu-*	*vouŋa*
Ka	*marum*	*natu-*	*bauŋa*
Ki	*maruma, vesa-*	*tu-*	*vauŋa*
Am	*mulumŋe*	*etio se*[3]	*ovouŋo*

[3] Am/*otuk se* 'my son', Am/*otuk maŋ se* 'my daughter', both with *se* 'diminutive'.

[4] To sing in all languages is the equivalent of 'do song'; eg. An/*u-l êmîŋ* 'he sang', Mo/*ti-due sakul* 'they sang a song'. An/*êmîŋ-g3* 'breath'.

	'soon'	'sore, ulcer'	'speak, talk'
An	*bêlêm, klaŋ kxîk*	*beta-m4*	*-uai*
Mo	*ono blaŋ ono*	*egle*	*-uai*
Ar	*masalaŋ*	*egle*	*-uai*
To	*masilaŋ*	*egle*	*-pelio*
La	*masilaŋ*	*egle*	*-kanes*
Lu	*tepaze, teta paze*	*voto-*	*-posa*
Ko	*kahaku teta*	*voto-*	*-posa*
Ka	*teta pade*	*boto-*	*-posa*
Ki	*moleeavo*	*kankaŋa-*[1]	*-ŋoŋo,-vul*
Am	*sebleŋ se*	*ekenkenŋo*[1]	*-kole*

[1] Compare forms for 'eat'.

	'spear' [N]	'spear, stab, pierce'	'spirit' 1, 'masalai'[2]
An	*obul*	*-tl-1*	*ŋaŋe, ebli*[3]
Mo	*uala*	*-mtex*	*logle*
Ar	*ola*	*-mter*	*egle* = 'sore'
To	*ola*	*-mter*	*barau*
La	*beliŋ, biliŋ*	*-grai*	*barau*
Lu	*izo*	*-gali*	*iriau*[3]
Ko	*izo*	*-gali*	*ihiau*[3]
Ka	*ido*	*-gal*	*iriau*[3]
Ki	*io*	*-gali*	*ruk*
Am	*eila*	*-se*	*ovorou* = 'magic'

[2] A lonely spirit associated with specific places. Causes illness by capturing the souls of the living to keep it company.
[3] Also means 'young unmarried man'.

	'spirit' 2, 'tambaran'[4]	'spirit' 3, 'soul'[5]	'spit', 'saliva'
An	*eni*	*êl-1r*	*boid*
Mo	*maxba*	*an-*	*omsok*
Ar	*malilu*	*an-*	*omsok*
To	*malilu*	*an-*	*omsok*
La	*toptop*	*an-*	*omsok*
Lu	*antu*	*anunu-*	*mou-*
Ko	*anitu*	*anunu-*	*mou-*
Ka	*antu*	*anunu-*	*mau-*
Ki	*aitu*	*anuni-*	*ŋao-*
Am	*okunid*	*kanio*	*epsok*

[4] Spirit that changes form, often between bird and human, and eats people.
[5] Also means 'shadow', 'image' or 'reflection'.

	'stand'	'star'	'steal'
An	*-lîk/-lul*	*eilî*	*-bulo-d4*
Mo	*-mxi*	*biku*	*-kubu*
Ar	*-bri*	*biku*	*-panako*
To	*-bri*	*gigimo*	*-panako*
La	*-tir*	*gigimo*	*-gam*
Lu	*-gunu*	*gigimo, motala*	*-pahano*
Ko	*-gunu*	*motala*	*-pahano, -panako*
Ka	*-madid*	*gigima*	*-lub*
Ki	*-mari*	*ltoto*	*-kop*
Am	*-mid*	*epituk*	*-kov*

	'stick 1/carrying'[1]	'stick 2/digging'	'stick 3/walking'
An	*sigi*	*bî*	*oto*
Mo	*sigi*	*apma, namŋan*	*otou, matu*
Ar	*sigi*	*apma*	*matu*
To	*sigi*	*namŋan*	*matu*
La	*sigi*	*namŋen*	*matu*
Lu	*sigi*	*azo*	*atoko*
Ko	*sigi*	*oazo*	*atoko*
Ka	*sigi*	*eado*	*toto*
Ki	*varaŋa*	*ai*	*toto*
Am	*esik*	*egete*	*opukpuk*

[1] Used by two men to share the weight of a heavy load on their shoulders. Also any stick supported at both ends with something in the middle, for example, a pot over a fire.

	'stone'	'straight'	'sugarcane' (>pitpit)
An	*pa*	*tîn, -gê plis*	*zoŋa*
Mo	*opmu*	*osuk, oduŋ*	*amxa*
Ar	*opmu*	*osuk*	*amra*
To	*opmu*	*otou*	*amra*
La	*taŋo*	*oduŋ*	*auau*
Lu	*patu*	*-tutui*	*tou*
Ko	*patu*	*-tutui*	*tou*
Ka	*pat*	*-tutui*	*tou*
Ki	*pot*	*motŋa-*	*tou*
Am	*okum*	*nalŋe*	*elgo*

	'sun'	'swamp, mud'	'sweet potato'
An	*ado*	*paŋpaŋa*	*saxabatne*
Mo	*oklou*	*dogox*	*saxabatne*
Ar	*oklou*	*digor*	*serebatne*
To	*oklou*	*digor*	*serebatne*
La	*oklou*	*digor*	*kirimpak*
Lu	*azo*	*paŋpaŋa*	*saravatne*
Ko	*oazo*	*paŋapaŋa*	
Ka	*ado*	*paŋapaŋa*	*serembat*
Ki	*iualo*	*papaŋa*	*serembat*
Am	*eniŋid*	*ovul*	*eseremvad*

	'swim'	'swollen'	'tail'
An	*-dêlîm*	*-lî*	*taba-, git-lêx1*
Mo	*-delim*	*-xes*	*gitno*
Ar	*-delim*	*-soŋ*	*gitno*
To	*-dolim*	*-soŋ*	*gitno*
La	*-buria*	*-soŋ*	*gito*
Lu	*-oaoali, -oalali*	*-vini*	*hihiu-*
Ko	*-oaoali*		*hihiu-*
Ka	*-eaoal*	*-uui*	*uui-*
Ki	*-suk, -suguk*	*-uiui*	*vovo-*
Am	*-kultip*	*-rumrum*	*egidue, egudio*

	'tame'	'taro'	***Terminalia***
An	*mudu*	*moi*	*tande*
Mo	*mudu*	*eski*	*talde*
Ar	*aim*	*esi*	*talde*
To	*aim*	*esi*	*talde*
La	*aim*	*esin*	*Ø*
Lu	*muzu*	*moi*	*tade*
Ko	*muzu*	*moi*	*talize*
Ka	*mud*	*moi*	*salke*
Ki	*namui*	*mo*	
Am	*eivin le* = 'of house'	*ama*	*asalke*

	'testicle'	'that'	'thing'
An	*nil-ŋ2* = 'egg'	*lan, san*[1]	*dêk*
Mo	*lasna*	*to*	*uon, on*
Ar	*lesna*	*are*	*uan*
To	*lesna*	*are*	*uan*
La	*losa*	*ore*	*ŋan*
Lu	*lavlave-*	*na*	*zaŋa*
Ko	*lavlave-*	*na*	*zaŋa*
Ka	*labe-*	*na*	*daŋa*
Ki	*lave-*	*io*	*vulŋa*
Am	*kovure kane*	*adi*	*ovolo,eveiŋo*

[1] An/*lan, ler* after masculine nouns, *san, ser* after feminine nouns.

	'this'	'throw'	'tie'
An	*ler, ser*[1]	*-ŋo-4*	*-daŋo-4*
Mo	*ka*	*-uxi,-tapxe*	*-pou*
Ar	*ane*	*-uri*	*-pou*
To	*ane*	*-uri*	*-pou*
La	*oge*	*-taper*	*-pou*
Lu	*ne*	*-tazo*	*-lauzi*
Ko	*ne*	*-tazo, -talo*	*-lauzi*
Ka	*ne*	*-tado*	*-kaukau*
Ki	*ko*	*-parue*	*-pasi, -kaukau*
Am	*ane*	*-ur*	*-kaukau*

	'tobacco'[2]	'today, now'	'tomorrow'
An	*uas*	*mamêd*	*emkizi*[3]
Mo	*uas*	*etnika*	*masil*
Ar	*uasi*	*etnikane*	*kotu*[3]
To	*uasi*	*okuane*	*kotu*[3]
La	*uasi, ombos*	*karban*	*kotu*[3]
Lu	*uasi*	*lovone*	*savale*
Ko	*uasi*	*lavonene*	*savalele*
Ka	*guas*	*labone*	*sabale*
Ki	*guas, vuas*	*alavoko*	*aule*
Am	*aguas*	*tnigane*	*koudok*[4]

[2] Compare with forms for 'smoke'.
[3] Compare An/*-kizi* 'get up before dawn', and Ar,To,La/kotkotu 'morning'.
[4] Compare An/*kaudêk*, 'a bird that cries just before dawn'.

	'tomorrow/day after'	'tongs'	'tongue'
An	*omŋolo*	*keida, kaida*	*êlêŋ-g3*
Mo	*gasak*	*diglou, kaida*	*lime-*
Ar	*kasak*	*kaida*	*blene*
To	*kasak*	*kaida*	*blene*
La	*kasak*	*kapiŋen, kaida*	*blene*
Lu	*voŋrua*	*kaiza*	*mae-*
Ko	*voŋohua*	*kaiza*	*mae-*
Ka	*boŋrua*	*kaida*	*mae-*
Ki	*voŋa*	*aira*	*mae-*
Am	*voŋo ruo*	*ankap*	*meme gudio*
	'tree', 'wood', 'stick'	***Trochus***, 'armband'	'true, very'
An	*aŋ*	*mase*	*meim*
Mo	*akai*	*mese*	*lokono*
Ar	*akai*	*mese*	*lokono*
To	*akai*	*mese*	*loŋono*
La	*kamut*	*mese*	*loŋono*
Lu	*avei*	*mase*	*aoatau, tau*
Ko	*avei*	*mase*	*aoatau, tau*
Ka	*abei*	*mase*	*tautauŋa, tau*
Ki	*ai*		*onaona*
Am	*akai*	*emese*	*molmol, tau*
	'trunk' (of tree)	'turn' [A__P]	'turtle'
An	*plî-ŋ2* = 'waist'	*-ŋi-1r*	*ponu*
Mo	*palma*	*-bauluk*	*ponu*
Ar	*palma* = 'thigh'	*-bauluk*	*ponu*
To	*palma* = 'thigh'	*-bauluk*	*punu*
La	*leina*	*-bauluk*	*punu, kounan*
Lu	*lua-*	*-puli*	*ponu*
Ko	*luo-*	*-puli*	*ponu*
Ka	*lua-*	*-pul*	*pon*
Ki	*mani-*	*-puli*	*pon*
Am	maganio = 'neck, thigh'	*-pul*	*opon*

	'unripe'	'up, ascend'	'urinate'
An	*ata*[1]	*-kezik-îl*	*-kezi-îl*
Mo	*akat*[1]	*-dite, -deite*	*-duxie*
Ar	*akat*[1]	*-tito*	*-durie*
To	*akat*[1]	*-tito*	*-durie*
La	*akat*[1]	*-pane, -sae*	*-duriep*
Lu	*kaiaka*	*-zae*	*-meme*
Ko	*galigali, kaiaka*	*-zae*	*-meme*
Ka	*gargar*	*-dae*	*-meme*
Ki		*-se*	*-mail*
Am	*naŋrikŋe*[1]	*-paid*	*-liŋliŋ*

[1] Also means 'raw'.

	'urine'	'veins, tendons'	'village'
An	*zi-ŋ2*	*zîxên-k3*	*agonu*
Mo	*moxduk*	*uaxana*	*axmok*
Ar	*marai*	*arnau*	*armok*
To	*marai*	*arnau*	*amrok*
La	*marai*	*kanil*	*itar*[2]
Lu	*meme-*	*oararo-*	*tuaŋa*
Ko	*meme-*	*oaoaho-*	*tuaŋa*
Ka	*meme-*	*uaruari-*	*tuaŋa*
Ki	*mailu-*	*alislisi-*	*nia*[2]
Am	*eŋliŋo*	*alislisio*	*eivin*[2]

[2] Also means 'house'.

	'vine'	'vomit'	'vulva'
An	*sêg*	*-glîk-îl*	*bi-ŋ2*
Mo	*galou*	*-mtoko*	*epit*
Ar	*kedue*	*-mteke*	*epit, paio*
To	*kedue*	*-mteke*	*epit, paio*
La	*imle*	*-pugiok*	*kuku-*
Lu	*oaro*	*-lualua*	*keze-*
Ko	*oaho*	*-lualua*	*keze-*
Ka	*oaro*	*-ruarua*	*kede-*
Ki	*olo*	*-malalua*	*pui-*
Am	*ouro*	*-memto*	*piokane*

	'walk'	'wall'	'wallaby'
An	*-li*	*baboxo*	*apose, agxoŋ...*
Mo	*-li'la*	*baboxo*	*apose, natus...*
Ar	*-lila*	*babro*	*apose*
To	*-lila*	*babro*	*apare*
La	*-lilia*	*babro*	*apare, airok, keneŋ*
Lu	*-lalao*	*vavoro*	*kuta*
Ko	*-lalao*	*vavoho*	*kuta*
Ka	*-lalala*	*didŋa*	*duadua*
Ki	*-lala*	*ririŋa*	*ruarua*
Am	*-leila*	*aver*[1]	*kope kio*[2]

[1] Compare the forms for 'rattan' in the Bibling languages.
[2] This form means 'its belly stinks'.

	'want'[3]	'wash' [A__P]	'water, river'
An	*-gê*	*-kŋib-1*	*komu*
Mo	*-aise*	*-gxoŋ*	*aki*
Ar	*-uaike*	*-groŋ*	*aki*
To	*-uaike*	*-groŋ*	*aki*
La	*-kei*	*-groŋ*	*ouri,uri*
Lu	*-zega*	*-sigiri*	*eau*
Ko	*-vaga*	*-sagihi*	*eau*
Ka	*-kim*	*-men*	*eau*
Ki	*-voli*	*-meni-*	*eako*
Am	*-kole*	*-pus*	*eiki*

[3] Compare the forms for 'speak'.

	'waterfalls'	'weep, cry'	wet (>rotten)
An	*les*	*-ki-l*	*êkîs*
Mo	*aki nosux, silmei*	*-siŋit*	*okus*
Ar	*aki nosur, silmei*	*-kŋis*	*epis*
To	*aki kepiuk*	*-tŋis*	*epi*
La	*ouri kopiuk*	*-kirpin*	*epi, eplik*
Lu	*les*	*-taŋi*	*kua*
Ko		*-taŋi*	*petaka*
Ka	*napiso*	*-taŋ*	*budisiŋa*
Ki		*-taŋ*	*vusavusa-*
Am	*opso*	*-taŋ*	*dokdokŋe*

	'what'	'when'	'where'
An	*gîmên*	*emige*	*au*
Mo	*sua*	*aloge*	*ge*
Ar	*sua*	*lesen*	*ge*
To	*sua*	*lesen*	*ge*
La	*sana*	*naisen*	*kaino, no*
Lu	*saoa*	*ŋeza*	*soza*
Ko	*saoa*	*ŋeza*	*soza*
Ka	*saoa*	*ŋeda*	*sida, siane*
Ki	*sae*	*niaŋ*	*siaŋ*
Am	*saga*	*naŋame*	*ŋai, naŋai*

	'white' [1]	'who'	'wild'
An	*lagu*	*mên*	*sagsagi*
Mo	*eglim, akau*	*segi*	*sagsagi*
Ar	*okou*	*sei*	*oŋua*[3], *kebena*
To	*okou*	*sei*	*oŋua*[3], *kebena*
La	*eglim, kaŋalŋal*	*gina, egina*[2]	*oŋua*[3], *kebena*
Lu	*kaŋkaŋa, vozvoze*	*sei, sapaza*[2]	*sagsagi*
Ko	*kaŋakaŋa*	*sei, sapaza*[2]	*sagisagi*
Ka	*bodebode*	*sai, sapad*[2]	*sagsag*
Ki	*vore-*	*sie, sime*[2]	*valauta*
Am	*plaulauŋe*	*sei, seiŋa*[2]	*asaksak*

[1] Compare the forms for 'lime powder'.
[2] The second of these forms is plural.
[3] Compare the forms for 'fish'.

	'wind'	'wing'	'with, accompany'
An	*pên*	*ke-nl*	*-kan*
Mo	*ieŋen*	*pena*	*-kap*
Ar	*eŋen*	*pena*	*-kap*
To	*eŋen*	*pena*	*-kap*
La	*ue*	*pena*	*-kap*[5]
Lu	*namule<Ki*	*vagvage-*	*tomoŋani, -ŋeza*
Ko	*namule<Ki*	*vagvage-*	*tomaŋani*
Ka	*namule<Ki*	*bagbage-*[4]	*toman, -ŋeda*
Ki	*mule*	*vani-*	*-ŋere*
Am	*akauliŋ*	*vaivaio*	

[4] Compare Ka/*bage-* 'hand'.
[5] Compare La/*akap* 'two'.

	'woman', 'female'	'yam'1 (=TP/yam)	'yam' 2 (=TP/mami)
An	*dobalîŋ*	*êgîn*	*bidi*
Mo	*apmaŋ*	*uada*	*bidi*
Ar	*apmaŋ*	*oda*	*bidi, mamim*
To	*apmaŋ*	*oda*	*bidi, mamim*
La	*elim*	*nanaŋ*	*mamim*
Lu	*tamine*	*amezo*	*vizi*
Ko	*tamine*	*amezo*	*vizi*
Ka	*taine*	*kiu*	*bid*
Ki	*iua-*	*kiu*	*vir*
Am	*akmaŋ, maŋ*[1]	*oudo*	*argin*

[1] Am/*maŋ* has very narrow collocational restrictions.

	'yellow'	'yesterday'	'yesterday/day before'
An	*iaŋo*[2]	*koxub*	*teniak*
Mo	*iaŋou*[2]	*ŋaxep*	*ninuox*
Ar	*gaol*	*narep*	*ninuor*
To	*gaol*	*narep*	*ninuor*
La	*gaol, gaguak*	*nanropino*	*nuŋgo*
Lu	*eaŋoŋa*	*nora*	*oazira*
Ko	*eaŋoeaŋo*	*noha*	*oahiza*
Ka	*eaŋoŋa*	*nora*	*oadla*
Ki	*ŋaŋoŋa-*	*nola*	*olia*
Am	*aiŋo*	*noro*	*uerio*

[2] Also the name of a type of ginger with many of the qualities of turmeric.

NOTES

[1] Except in the acknowledgments, the names of informants have been changed to protect privacy.

[2] On the map, a full circle indicates the approximate site of a village whose location has been verified. The names of Kilenge villages are not given because we have not actually conducted research there. An empty circle indicates a village whose location is unknown; other maps and the verbal descriptions of informants have been used as a guide in these cases. Empty squares indicate the sites of villages outside the study area; these are given only to place the other languages in context. Language boundaries, indicated by broken lines, merely enclose those villages speaking the same language; they are not intended to reflect land claims.

GLOSSARY

Because several new terms are introduced in the text, and because several conventional terms are used in slightly unconventional ways, this brief glossary is included as an aid to the reader. The arrow (>) points to sections in the main text where the term is discussed more fully.

Auxiliary noun refers to an inflectional base for the head noun of a noun phrase, for example: *le-* in Lu/*le-gu gaea* 'my pig' (>3.7).

Complex language refers to a language with a relatively high degree of allophony, allomorphy, and suppletion. Complex languages have large vocabularies with many near-synonyms and many opaque idioms. Complex languages also make numerous obligatory grammatical distinctions and are relatively difficult for adults to learn to speak well (>3.4). Complex languages are generally associated with esoteric functions.

Copy refers to what is usually termed 'borrow' in the literature. I prefer 'copy' because it reflects more accurately one of the processes by which people add resources to their language, technology or other domains of culture.

Creolisation is a process in which normative rules are established for the use of a new lingua franca. The end product of creolisation is not necessarily what others authors call a creole. There are no firm criteria to distinguish 'creoles' from so-called 'natural languages'. Creolisation and pidginisation are overlapping processes (>3.2, 5.2).

Dual-lingualism, a term coined by Lincoln (1975, 1979), is "the pattern of language use such that in conversations between speakers of two different languages each consistently speaks one language in response to utterances in the other language" (Lincoln 1979:65).

Ectolexicon refers to the body of lexemes in a language that have low frequencies of occurrence in mundane conversation and which are usually learned after most of the endolexicon has been mastered. Ectolexical items are similar to non-core vocabulary items (>4.3). Two languages are said to have an ectolexical relationship if they share much of their ectolexica (5.2).

Endolexicon refers to the body of lexemes in a language that have high frequencies of occurrence in mundane conversation and which are usually among the first forms mastered in a language. Full control over the endolexicon of a language is one of the minimal requirements for speaking a language. Endolexical items are similar to core vocabulary items, but also include functors such as pronouns, demonstratives, and all inflectional affixes (>4.3). Two languages are said to have an endolexical relationship if they share much of their endolexica (5.2).

Esoteric languages function primarily as codes of communication among people of the same social group. Esoterogeny (>3.2) is a process that adds structural compexity to a language and makes it more efficient as a medium of communication among people of the same social group, while making it more difficult for outsiders to learn to speak well. Esoteric speciation (>5.2) is a process in which two or more endolexically-related languages are differentiated by copying resources (primarily ectolexical) from different sources.

Exoteric languages have, as one of their important functions, use as a lingua franca between people of different social groups. Exoteric languages tend to be structurally simple, because they must be easily learned by adults with different linguistic backgrounds. Exoterogeny is the process of simplifying an esoteric language to create a register that is more easily acquired by outsiders. Exoteric speciation (>5.2), like pidginisation, is a process in which endolexical items are taken, without complexity, from one language and mapped onto the phonology, syntax and semantics of a substrate language to create a new language.

Indigenisation is the process in which a lingua franca becomes the language by which a group of people identifies itself (>3.2). This is similar to the way in which creolisation is used by some authors.

Pidginisation is the process of copying lexical forms from another, not well-known language and mapping them onto the phonology, syntax and semantics of a substrate language to create a new lingua franca (>3.2). Pidginisation is an alternate name for exoteric speciation (5.2).

Simple language refers to a language with a relatively high degree of regularity in all forms and a small morpheme inventory that can be combined freely using straightforward analogy to derive a larger lexicon (>3.4). Adults can easily learn to speak simple languages well. Simple languages are generally associated with exoteric functions.

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