ANÊM PHONOLOGY

THE PHONOLOGY OF ANÊM, A NON-AUSTRONESIAN LANGUAGE OF WEST NEW BRITAIN

By

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ABSTRACT

Based on four and a half months of original fieldwork in the village of Karai-ai, the thesis is the first description of the phonology of Anem, a language spoken by about 400 people in the Kaliai and Bariai census divisions of West New Britain, Papua New Guinea. Anem is the only non-Austronesian language in West New Britain and has been heavily influenced by contact with neighbouring Austronesians. The description contains some ethnographic material to account for the effects of intercultural contact on the phonology of Anem.

ACKNOWLEDGEMENTS

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I am also grateful to John Hitchcock, my thesis director, for his valuable criticism throughout the preparation of the paper, and to Peter Steager for hours of helpful discussion. To David and Dorothy Counts, whom I accompanied to West New Britain, I extend my warmest thanks for helping to maintain my sanity.

During my stay in Karai-ai, I was adopted as a son by two men, Pita Bubulunga and Paulus Walaswang. A young man, Leo Sakail, also adopted me as an older brother. By Anem reckoning, my kinship relationships extend to several hundred people, some of them Lusi and Kombe. I am grateful to the Anem for their gemütlich hospitality and for their help in all things including house building, transportation of supplies, providing food and guided tours to places relating to my work.

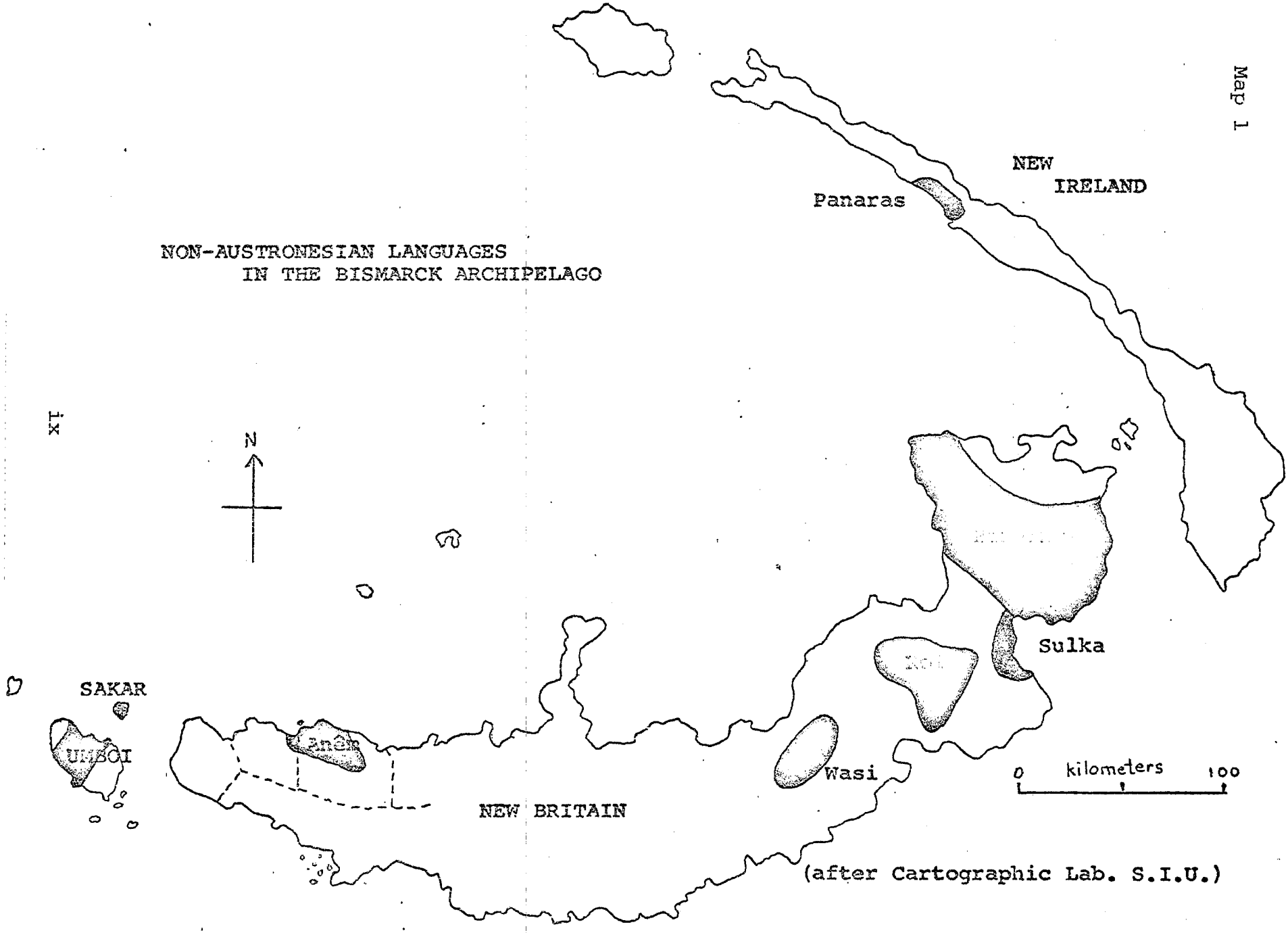
Bubulunga, Walaswang, Sakail and two other young men, Hendrik Sasalo and Paulus Kasianga, were my chief informants and friends, but most of the Anem, including the children, were involved in patiently feeding me information. One of my mothers, a Tolai woman named Iarande, deserves special appreciation for making sure I was always overfed, safe and included in Anem activities.

TABLE OF MAPS

TABLE OF CHARTS

TABLE OF CONTENTS

Map 1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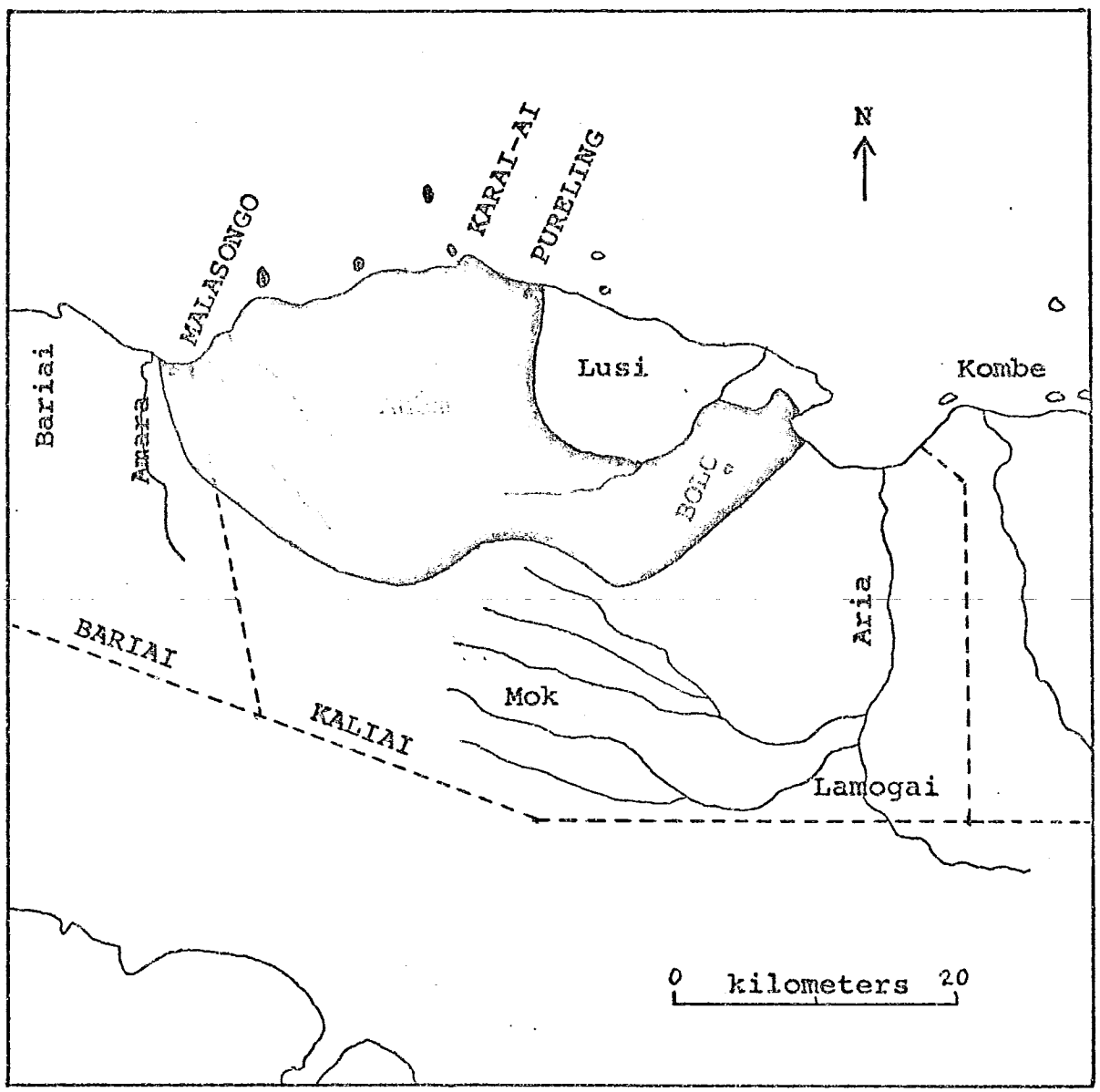
Map 2

ANÊM TERRITORY SHOWING CONTIGUOUS LINGUISTIC GROUPS



1.0 Introduction

This thesis is a description of the phonology of the coastal dialect of Anem, a non-Austronesian language spoken by about 400 people in West New Britain. Except for a word list collected by David Counts in 1967, no other research has been conducted among the Anem, either on their language or on the rest of their culture.

The Anem are not mentioned by Friederici (1912), the only anthropologist to visit the area during the period of German rule (until the First World War). The Anem are not mentioned by Capell (1962).

Data were collected and analysed by the standard linguistic method, with Tok Pisin as a contact language. In the tradition of the Prague School of Linguistics, I use the following definition of the phoneme: Phonetic oppositions which function in a particular language to distinguish utterances are phonological. Each member of a phonological opposition is a phonological unit. The phoneme is a phonological unit that cannot be analysed further into phonological units (Trubetzkoy 1971:31-37).

Since no other research has been conducted among the Anem, relevant ethnographic material is included in section 1.2 to provide a context for the phonology. The phonological description itself is treated in section 2 (Prosody), section 3 (Consonants) and section 4 (Vowels).

Variation between voiced stops and fricatives, and between back unrounded and front vowels was found to correlate with age differences; this is discussed in section 5. The phonemic status of /d/ and /r/, discussed in section 3.7, was found to be based on lexical stratification, which is treated more fully in section 6. Suggestions for further research are included in section 7.

1.1 Classification

The classification of Anem as a non-Austronesian language by Counts (1969:5) and Chowning (1969:20-21) is based on a word list collected by David Counts in 1967 in Pureling. Wurm commented that the word list showed a language that appeared to be non-Austronesian, but was unlike any other he was familiar with.[1]

According to Chowning (1969:20-21), it is unlikely that Anem can be related to the non-Austronesian languages of East New Britain--Baining, Sulka, Kol and Wasi (see map 1). The possibility of establishing a relationship between Anem and the non-Austronesian languages of Umboi and Sakar has not been investigated.

1.2 Ethnographic Context

"Non-Austronesian" is a residual category of languages whose relationships with one another are largely undetermined.

---

[1] personal communication from David Counts

It is often speculated that the ancestors of the non-Austronesian speakers inhabited Melanesia before the Austronesians arrived. A few place names in the Anem vicinity seem to support this. For example, the name of a river in the Lusi territory, /kaini/, has no meaning in Lusi, but further inland, in Anem territory, the same river is called the /ekein/, which means 'cassowary' in Anem. The relevant phonological correspondences, of course, have not yet been worked out.

My Anem informants tell me that their ancestors used to live in fortified hamlets scattered along the crest of mountain ridges. From there, sentinels could note movements of men in the vincinity. The Anem say that at that time (probably in the mid-nineteenth century) their territory was so densely populated that their ancestors engaged in chronic warfare to protect garden space. Although the Anem have always seen themselves as a coherent group, different from the Lusi, Kombe and other Austronesians, they were, themselves, divided into seven warring sub-groups of allied hamlets, each with a named sub-territory of its own. Exchange of women helped to maintain peace with enemy Anem groups, but failure to deliver a promised wife was an additional cause for war.

Not only do the Anem speak of war with other Anem, but also with the Kombe, who apparently conducted raids along the coast. Since the Kombe made the beach dangerous, the

the Anem had no tradition of canoe building or off-shore fishing. When saltwater or shellfish were wanted, armed men accompanied the expedition to the beach in the morning and back to the hamlet before dusk.

Taro and root crops planted in slash-and-burn gardens were (and still are) the staples for the Anem. Coconut, wild nuts and hunting supplemented the diet. In 1888, the explosion of Ritter Island (Harding 1967:146) deposited volcanic ash over much of West New Britain, destroying the gardens. Shortly afterwards, according to the Anem, epidemics, probably diseases of European origin, brought the Anem very close to extinction. My informants could enumerate only twelve /alualu/--men old enough to have families--who survived the catastrophe. Even if each of these twelve men had an average of 4 children and 1 wife, the total population during that period was still fewer than 100.

Germany administered New Guinea as a colony until the end of the First World War; Australia administered it as a trust territory until 1975. The Anem attribute the termination of warfare to interference from both Germans and Australians. It was during the colonial period that Tok Pisin, the English-based creole, became widely used as an auxiliary language throughout New Guinea.

In the mid-1950's, the Anem say they abandoned their mountain hamlets and settled in permanent villages on the coast. They say that Australian patrol officers suggested

the move to facilitate administration, to provide access to the food resources of the ocean and to establish a means of transport for selling copra, their only access to cash. Bolo is now the only interior Anem village.

Anem is now spoken by some 400 people in West New Britain. There are three Anem villages in the Kaliai census division--Bolo, Pureling and Karai-ai. Another Anem village, Malasongo, is in the contiguous area of the Bariai census division (see map 2).

Although there is mutual intelligibility among all Anem speakers, a major isogloss bundle divides the interior village, Bolo, from the three coastal villages. The speech of Bolo, called /omuai omba/'big language' by the Anem, will be referred to as Bolo Anem; while the speech of Pureling, Karai-ai and Malasongo, called /omuai boid/'little language', will be referred to as Coastal Anem here.

Although the Anem, Lusi and Aria still consider Bolo an Anem village, I noted that Anem is now little used there. My informant, about 30 years old, claimed to be the youngest speaker of Bolo Anem. Most of the young people of Bolo now speak Aria.

In the Coastal Anem villages, although children grow up speaking Anem as their first language, they also become fluent in Tok Pisin and Lusi-Kombe[2] in their first five years. Except for a few very old people, all the

[2]Lusi and Kombe are dialects of one language.

Coastal Anem are trilingual in Anem, Tok Pisin and Lusi-Kombe; many also speak Mok and Bariai.

Anem is the language used among the Anem in most mundane situations. If the Anem know the language of a visitor, that language is used to entertain him; the Anem display great pride in being able to do so, while the visitors constantly comment on the effort taken by the Anem to acquire foreign languages. When visiting a Lusi or Kombe village, the Anem speak the appropriate language. Lusi is also the language of worship in the Roman Catholic church; the liturgy has not been translated into Anem, a fact that some Anem mildly resent.

Tok Pisin is used to speak to visitors with whom the Anem have no other language in common and to make public announcements. Marital disputes that develop into fights become public events; in the height of anger, the language of abuse is Tok Pisin.

Although English is taught at the mission school, the level of exposure is extremely superficial and the children quickly forget English when they return to the village. Only a few Anem, those who have worked on ships, understand some English; consequently, English is never as effective for communication as Tok Pisin.

Lusi speakers say, "Tok Anem i hevi long nek bilong mipela"--The Anem language is heavy in our necks. Along with the Kombe, Aria, Mok, Amara, Lamogai and Bariai, the

Lusi believe that Anem is far too difficult to learn; at all levels--phonological, lexical, morphological and syntactic--Anem is perceived as very different from their languages. They ridicule the sound of Anem and equate it with the sound of German spoken at the mission.

The Anem, then, are able to converse in most of the languages of their neighbours, while few of their neighbours can cope with even the simplest sentences in Anem. Although Anem say that they would like their neighbours to learn Anem, they also enjoy being able to use their virtually secret language in front of non-Anem speakers.

1.3 Field Techniques

In August 1975, I moved into an abandoned village house in Karai-ai, on invitation from the people of Karai-ai. The Anem immediately made me part of a system of mutual gift giving which provided me with food, both raw and cooked, and the Anem with tobacco, tools and food that I had brought with me. While walking or fishing or sitting around an evening fire, we exchanged information, the Anem asking as many questions of the anthropologist as the other way around.

Except for the last month, when I had acquired some speaking ability in Anem, Tok Pisin was my only contact

language. Since the Anem are outgoing, friendly and talkative, I seldom needed to go out of my way to find informants. Most of my elicitation sessions were held with a dozen or so people present.

Because formal, controlled elicitation sessions were nearly impossible to organize, most of my data were gathered informally while the Anem taught me their language as they teach foreign languages to their children: it is a common form of entertainment for older people to teach children to repeat sentences in other languages. This is the method the Anem used with me.

I found it most useful to listen to conversations until my ear was attuned enough to be able to pick out a phrase or sentence and ask what it meant. This often generated a dozen or so related sentences, or a list of names for a particular class of objects. For instance, a discussion about trees led to everyone's contributing the names of all the trees he could think of. In subsequent weeks, people provided other tree names as they thought of them. This procedure made it possible to collect data on subjects the Anem actually talk about, even subjects that the Anem were initially embarrassed to discuss with me--obscene humour, for example.

In addition to lists of names for plants and animals, my data consist of paradigms of nouns and verbs and short sentences taken from conversations and narratives.

I have recorded approximately 1000 morphemes, both in isolated words and in sentences.

1.4 Phonemic Inventory

Coastal Anem has seven vowels, fourteen consonants, one juncture, three degrees of stress and at least five intonation contours. Prosody is treated in section 2, immediately following, consonants in section 3 and vowels in section 4.

2.0 Prosody

2.1 The Syllable

The canonic form of the Anem syllable is (C_1) V (C_2). The brackets indicate optional occurrence. C represents a single consonant phoneme, a non-syllabic vowel phoneme or a consonant cluster of the type described in 3.6. Consonant clusters occur in C_1 but not in C_2. V represents a single syllabic vowel phoneme. The possible syllable shapes are V, CV, VC and CVC.

2.2 Word Boundaries

An utterance is divided into words on the basis of where a juncture [+] may occur, whether or not it occurs in every pronunciation of a particular utterance. The potential juncture is indicated by a space in the phonemic transcription. Anem words are bare stems, stems with affixes or particles.

2.3 Stress

Three degrees of stress are recognized in Anem: primary /ˈ/, secondary /ˌ/, and non-stress, the latter unmarked in the transcription. Secondary stress is apparent only in long utterances, where one or more of several stressed vowels is more prominent that the others.

Words spoken in isolation seem to have a

characteristic accentuation which is not predictable:

/ˈkomu/	'water'
/goxˈup/	'ash'
/ˈandeua/	'Mt. Andewa'
/asˈiax/	'jungle'
/aˈluˈalu/	'bigmen'

Stress does not appear to differentiate lexical items, however. The accentuation of words in isolation often differs from their accentuation when they occur with affixes or in a sentence:

/zˈauli/	'village name'
/ˈabêl/	'mountain ridge'
/zauˈli ˈusîk axî ˈabêl/	'Zauli is on the mountain ridge.'
/ˈaba/	'pig'
/abˈaeat/	'my pork'
/nˈêbî aba ˈok·/	'Hit the pig so it'll go.'
/ˈia/	'fish'
/iˈanis/	'our (incl.) fish'

Probably, accentuation is morphological or syntactic; more research is required. Stress is indicated here only in citing specific utterances; forms transcribed without stress have been elicited at different times with different accentuation.

2.4 Intonation Contours

There are at least five intonation contours in Anem, each characterized by a particular sequence of phonetic pitches. Each contour is indicated in the phonemic transcription by a symbol at the end of the contour. For illustrative purposes only, the segmental phonemes are typed above the line to indicate high pitch and below the line to indicate low pitch.

Period contour /./ occurs with most mundane statements. The utterance starts on mid pitch, rises to high and falls to mid pitch on the last syllable or two. The voice fades with falling pitch at the end.

/a$^{l\hat{}}$ $^{i\hat{}}$ $^{i\hat{}}$ ^{l} igo ko$_{mu}$·/ 'The women went to fetch water.'

Comma contour /,/ indicates that the speaker intends to continue speaking. The utterance starts on mid pitch, rises to high and remains level or rises slightly.

/ma$^{lak\hat{e}}$, u$^{s\hat{}}$k$_{ao}$·/ 'Your bark cloth, where is it?'

Question contour/?/ indicates a question requiring a yes-no answer. The utterance starts low and rises to very high on the last syllable where the voice fades while dropping sharply in pitch.

/$_{a}$g$\hat{}$m$^{k\hat{}r}$ $^{s\hat{}}$$_{s}$?/ 'Does your neck hurt?'

Confirmation contour /ˇ/ indicates a positive answer to a question or approval of a statement. It occurs either with /ê/'yes' or sentences with the suffix /-da/'confirmation marker'. The utterance starts at mid pitch and rises to high pitch on the final syllable; the voice fades at high pitch.

/ê$^{\hat{e}\check{}}$ enneat$^{da\check{}}$/ 'Yes, it's my house.'

The fifth contour /ˆ/ indicates the answer "not yet" to a question. It occurs with /o/'no', /pmaga/ 'not yet' or sentences ending with /pmaga/. The utterance starts at very high pitch and drops to mid pitch where the voice fades.

o pma
/ oˆ ga ˆ/ 'No, not yet.'

One further intonation contour appears to be restricted to narrative style. Either a single vowel of a word is lengthened or an entire verb is repeated several times. The lengthened vowel or the repeated verb is spoken at a uniform high pitch. This contour indicates duration, intensity or great distance. The length of the contour corresponds with the duration or intensity of the activity or the distance covered by the character in the narrative. The meaning conveyed by this contour is difficult to translate smoothly into English.

/eni idamkî a uk a uk a uk a uk a ukezikaxî aŋ·/

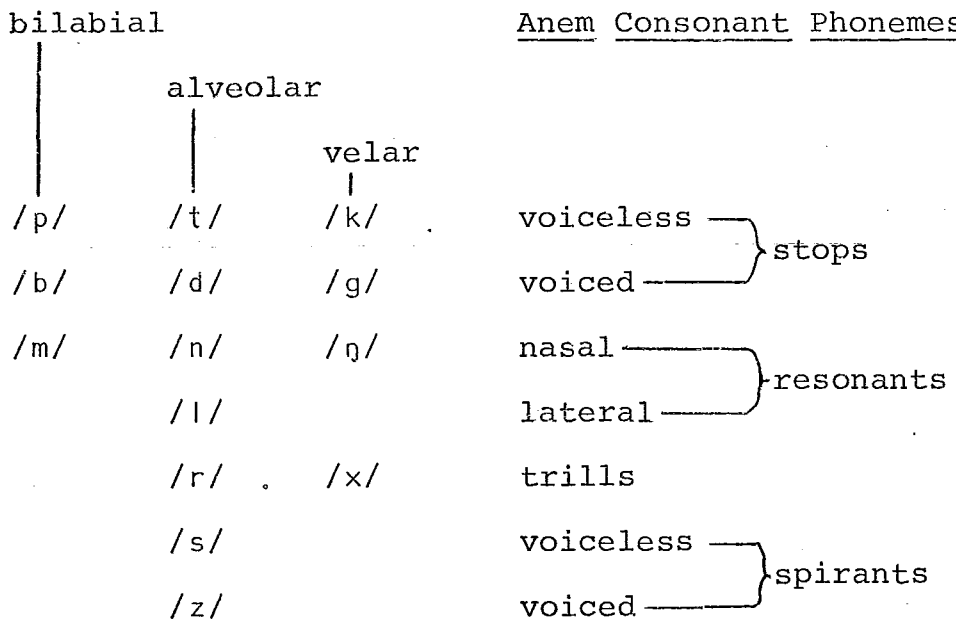
'The spirit woman chased him and he went and went a long way and climbed up a tree.'

Pending further research, this description of Anem intonation contours must be considered tentative.

3.0 Consonants

Anem has fourteen consonants classified below according to distinctive features. There are three distinctive positions--bilabial, alveolar and velar. The alveolars range phonetically from alveolar to palatal; the velars range phonetically from velar to post-velar.

The stops, both voiceless and voiced, and the nasals are articulated at the bilabial, alveolar and velar positions. The trills have both voiced and voiceless allophones; /x/ is articulated in the post-velar position. The spirants are articulated in the alveolar to palatal positions.



All consonants occur in C_1 positions; all but /z/ occur in C_2 positions. Clusters of two consonants occur in C_1 positions with stops as the first member and resonants or trills as the second member.

A non-phonemic glottal stop [ʔ] occurs frequently in the data in the following environments:

1. before an utterance-initial vowel
2. before a word-initial vowel after juncture
3. after an utterance-final vowel
4. after a word-final vowel before juncture.

/abake ü bɨ́·/ 'My pig killed it.'

[ʔabakeʔ+ʔubɯʔ∼ʔabakewbɯʔ]

3.1 Voiced Stops /b d g/

In initial position and after consonants, /b d g/ are lax, voiced and characterized by complete occlusion. After vowels, /b g/ have fricative allophones, [β] and [ɣ] respectively, in free variation with the stop allophones. There is a tendency among young people to favour the stop allophone.

/mogebo/ 'shark'

[mogeboʔ∼moɣeβoʔ]

In certain words, /d/ alternates freely with /r/, yielding what appears to be congruent patterning for the voiced stops. This problem is discussed in section 3.7 and further in 6.

3.2 Voiceless Stops /p t k/

/p t k/ are tense, voiceless and unaspirated. They contrast with the voiced stops initially:

/poxe/	'snail sp.'
/boxi/	'pig's molar'
/tak/	'snake sp.'
/dak/	'I will go'
/kî/	'mushroom sp.'
/gî/	'vine sp.'

intervocalically:

/aba/	'pig'
/apanae/	'my heel'
/ata/	'unripe'
/ada/	'grandfather, grandson'
/loki/	'fish sp.'
/logi/	'their teeth'

and finally:

/kasêp/	'parrot'
/silbêb/	'insect sp.'
/did/	'insect sp.'
/nandit/	'his bed'
/sêk/	'basket'
/sêg/	'rope'

Before the voiced stops /b d g/ and /z/, the voiceless stops often, but not always, assimilate in

voice to the following consonant and assume the allophonic range of the corresponding voiced stops. When a juncture intervenes, however, the contrast between voiced and voiceless stops in maintained:

/dak dasêm·/ 'I'm going to lie down'

[dak dasɤm~dagdasɤm~daɣdasɤm]

/enneatdaˠ/ 'Yes, it's my house.'

[ʔenneatdaʔ~ ʔenneaddaʔ]

3.3 Resonants /m n ŋ l/

The nasal resonants /m n ŋ/ are voiced and contrast with one another in all consonantal positions:

/mêl/ 'we will sing'

/nêl/ 'you (sg.) will sing'

/ŋêl/ 'you (pl.) will sing'

/êmîŋ/ 'song'

/ênîk/ 'ant sp.'

/êŋîl/ 'hot'

/giŋêm/ 'her child'

/giŋên/ 'our (excl.) child'

/giŋêŋ/ 'your (pl.) child'

/l/ is a voiced lateral alveolar resonant which occurs in all consonantal positions:

/lil/ 'smooth'

/eli/ 'my shadow'

3.4 Trills /r x/

/r/ is an apical tap or trill with two allophones, voiced [r] and voiceless [ɽ]. The voiceless allophone [ɽ] occurs before voiceless consonants and finally:

/ogler sis / 'Do you have a headache?'

[?ogleɽsis]

/boŋgr̂/ 'your mouth'

[boŋgwɽ]

The voiced allophone [r] occurs initially, after a consonant, intervocalically and before voiced consonants:

/rukme/ 'insect sp.'

[rukme?]

/krek/ 'black seagull'

[krek]

/pore/ 'paddle'

[pore?]

/br̂rgr̂/ 'branch'

[bwrgw?]

/x/ is a post-velar fricative with frequent uvular involvement. Since it patters somewhat congruently with /r/, it is treated here. Like /r/. /x/ has two allophones--voiced [χ̬] and voiceless [χ̥]. The voiceless allophone [χ̥] occurs initially, before voiceless consonants and finally:

/xoŋo/ 'fish sp.'

[χ̥oŋo?]

/napaxpax/ 'wall'

[napaχ̣paχ̣]

The voiced allophone [ɣ̬] occurs after consonants and before voiced consonants:

/gxaŋ/ 'dry season'

[gɣ̬aŋ]

/ugêxdaˠ/ 'Yes, it went down.'

[ʔugˠɣ̬daʔ]

Intervocalically, /x/ varies freely between its voiced and voiceless allophones with a preference for [ɣ̬]:

/poxe/ 'snail sp.'

[poɣ̬eʔ~poχ̣eʔ]

3.5 Spirants /s z/

/s/ is a voiceless pre-palatal to alveolar groove fricative which occurs initially, medially and finally:

/kasêp/ 'parrot'

/palamoeat sis·/ 'My skin hurts.'

/sis mantu·/ 'It doesn't hurt.'

/z/ is a voiced pre-palatal to palatal groove fricative, which occurs initially, medially, but not finally. In initial position, /z/ has an affricate allophone [ʃ́] in free variation with the fricative allophone [ź]:

/zei/ 'wallaby sp.'

[ǰey∼źey]

/ezim/ 'betel'

[ʔeźim]

3.6 Consonant Clusters

Numerous medial clusters occur in the form -VCCV- where the consonants belong to different syllables. No consonant clusters occur in C_2 positions, but several occur in C_1 positions. These pattern like single consonants and occur in the sequence stop plus resonant or trill.

/kmî/ 'fire'

/kneiii/ 'mosquito'

/kŋîx/ 'black'

/pmaga/ 'not yet'

/kiîŋ/ 'moon'

/biîga/ 'my back'

/piîŋe/ 'my waist'

/giîm/ 'lime powder'

/gxaŋ/ 'dry season'

/krek/ 'black seagull'

Some examples occur with medial clusters of three consonants. In these, the first member of the cluster belongs to the preceding syllable and the second and third belong to

the following syllable:

/elkŋe/ 'my children'

/einiŋ klaŋ/ 'our (incl.) poor father'

/êxiêknîm blîk/ 'muddy brown'

In some examples with a reduplicated syllable, a medial cluster of two consonants is interpreted as belonging to the C_1 position of the following syllable:

/kxokxomase/ 'snake sp.'

Not all possible sequences of stop plus resonant or trill are attested in the data, notably clusters with /t d/ and the sequence voiced stop plus nasal.

3.7 Alternation of /d/ and /r/

As shown by the following sub-minimal pairs, /d/ contrasts with /r/:

/rukme/ 'insect sp.'

/dumenae/ 'my outer ankle bone'

/marasin/ 'medicine'

/ada/ 'grandfather, grandson'

/taŋir/ 'fish sp.'

/did/ 'insect sp.'

Nevertheless, /d/ appears to alternate freely with /r/ after vowels in numerous common words:

/udamka∿uramka/ 'He's chasing me.'

/asamadit∿asamarit/ 'I'm looking for it.'

/usaudit∿usaurit/ 'He caught it.'

/muadu~muaru/ 'banana sp.'

/uasatled~uasatler/ 'This is my tobacco.'

/mamêd~mamêr/ 'today'

/mîdê~mîrê/ 'one'

The phonemic alternation of /d/ and /r/ has a distribution identical to the allophonic variation of the other two voiced stops /b g/. Were it not for the contrasts between /d/ and /r/, [r] could be classified as an allophone of /d/ after vowels, yielding congruent patterning for the set of voiced stops in this list of words.

Further investigation reveals, however, that the Anem lexicon is layered in three strata (see 6.0). The alternation of /d/ and /r/ occurs only in some words in the non-Austronesian base. In the Austronesian and Tok Pisin strata, which consist of borrowed items, /d/ and /r/ always contrast. These items form a large portion of the Anem lexicon and are in common use, their phonology altered to conform with Anem. Often, there are no equivalents in the non-Austronesian base. Moreover, the Anem people regard the borrowed items as true Anem words, even though they recognize the cognates in Lusi-Kombe and Tok Pisin. For these reasons, the borrowed items cannot be ignored in the phonology of Anem as it is now spoken. /d/ and /r/ must be considered separate phonemes.

4.0 Vowels

Anem has seven vowel phonemes /a e i ê î o u/. They contrast in tongue height--high, mid or low; tongue position--front or back; and rounding--rounded or unrounded. The seven vowels fit into a symmetrical three-class triangular system with three degrees of aperture.

Anem Vowel Phonemes

	front unrounded	back unrounded	back rounded
high	/i/	/î/	/u/
mid	/e/	/ê/	/o/
low	/a/		

All 21 possible vowel contrasts are attested in the following minimal sets:

/êsî/	'five'
/asî/	'I gathered'
/isî/	'she gathered'
/usî/	'he gathered'
/usu/	'leaf thatch'
/osu/	'bamboo sp.'
/mên/	'who'
/mîn/	'we (excl.)'

/pelŋe/ 'my belly'

/pêlŋê/ 'your belly'

/polŋo/ 'his belly'

/tiga/ 'my foot'

/tigî/ 'his foot'

/tigi/ 'their feet'

/lala/ 'fish sp.'

/lale/ 'tree sp.'

/kiki/ 'crab sp.'

/kîkî/ 'sandfly sp.'

/koko/ 'mushroom sp.'

/te/ 'knife'

/tu/ 'clam sp.'

/ge/ 'scorpion'

/gî/ 'vine sp.'

/dat/ 'I will eat'

/dot/ 'he will eat'

/net/ 'you will eat'

/nit/ 'you ate'

All vowels occur in word-final position; all but /ɨ̂/ occur in word-initial position. All sequences of vowels occur across morpheme boundaries.

4.1 Vowel Allophones

4.1.1 High Vowels /i ɨ̂ u/

High vowels vary in tongue height freely from high to lower high; the phonetic transcription used here ignores this variation. The position of high vowels, front or back, is conditioned by assimilation to vowels in the contiguous syllables. /i/ is slightly back in the environment of back vowels; /ɨ̂ u/ are as far forward as central position in the environment of front vowels:

/eɨlu zɨlɨ̂k/ 'his eyes are bad'

[ʔeyɭʉźɨ̂ɭɨ̟k]

Unstressed high vowels have non-syllabic allophones before or after vowels:

/zaulˈi ˈusɨ̂k axɨ̂ ˈabêɭ·/ 'Zauli is on the ridge.'

[ʃawɭˈiʔ+ʔˈusɯkaˈy̯ˈw̯abɤɭ]

/uˈas/ 'tobacco'

[wˈas]

/laxˈa ubɨ̂ tˈaŋguxi·/ 'He's playing a jew's-harp.'

[laˈy̯awbɯʔ+taŋgʉˈy̯iʔ]

/iˈaŋo/ 'yellow'

[yˈaŋoʔ]

Vowels with stress are syllabic:

/ˈia/	'fish'
[ʔˈiaʔ]	
/iˈanis/	'our (incl.) fish'
[yanis]	
/bonkˈî êdˌîŋ/	'coconut sprout'
[bonkˈɯɤdˌɯŋ]	

4.1.2 Mid Vowels /e é o/ and Low Vowel /a/

Mid vowels are usually pronounced with the tongue at mean mid position, but the observed deviation is from low mid to high mid in free variation. This variation is ignored in the phonetic transcription.

/a/ is a low central unrounded vowel.

4.2 Vowel Harmony

Although all combinations of vowels occur in words of two or more syllables, there is a statistical tendency toward vowel harmony: 1. Vowels tend to be followed in subsequent syllables by the same vowels. 2. Mid vowels also tend to be followed by high vowels of the same class; that is, by high vowels with the same rounding and tongue position front or back. The sequence /ê...î/ is the most frequent vowel sequence in Anem. Mid vowels occur least frequently after mid vowels of a

different class. 3. Except that /a/ is most frequent after /a/, it does not participate in vowel harmony as do the high and mid vowels.

The chart below shows the pattern of vowels in 500 two-syllable words. Numbers below the phonemes are the total occurrences of that phoneme in that position.

Anem Vowel Sequences in Two-Syllable Words

first vowel	second vowel							total occurrences
	/a/ 86	/e/ 49	/i/ 78	/ê/ 54	/î/ 113	/o/ 58	/u/ 62	
/a/ 136	37	13	22	12	16	16	20	222
/e/ 50	8	16	15	1	7	2	1	99
/i/ 69	12	8	18	8	11	6	6	147
/ê/ 82	5	2	3	23	46	1	2	136
/î/ 37	2	2	3	5	20	2	3	150
/o/ 88	17	5	12	3	8	27	16	146
/u/ 38	5	3	5	2	5	4	14	100
								1000

Many of the low-frequency sequences occur only when the two vowels belong to separate morphemes. For example, the sequence /u...ê/:

/u-gêx/ 'He - went down.'

Because the morphology of Anem has not yet been sufficiently analysed, it impossible to refine this statement further.

The tendency toward vowel harmony accounts for the existence of certain paradigms:

/elk-ŋe/ 'my children'

/êlk-ŋê/ 'your children'

/olk-ŋo/ 'his children'

/êlk-ŋêm/ 'her children'

/pel-ŋe/ 'my belly'

/pêl-ŋê/ 'your belly'

/pol-ŋo/ 'his belly'

/pêl-ŋêm/ 'her belly'

In this noun class, stems having a mid vowel assimilate it to the vowel of the suffix. Nouns in this noun class with a high or low vowel, however, have stems with only one allomorph:

/gi-ŋe/ 'my child'

/gi-ŋê/ 'your child'

/gi-ŋo/ 'his child'

/gi-ŋêm/ 'her child'

Vowel harmony in Anem is not automatic, however; most noun classes do not exhibit vowel harmony:

/kom-i/	'my water'
/kom-î/	'your water'
/kom-u/	'his water'
/kom-îm/	'her water'

5.0 Idiolectic Variation

The Anem have a high tolerance for deviations in pronunciation. People often have their own peculiar pronunciations of certain words, and little fuss is made about it. Other deviations in pronunciation seem to be shared by a minority of the population, and may be stylistic differences. Individual peculiarities are ignored here, because they do not represent the community; the more widely spread differences are dealt with under the subject of Sporadic Variation.

Another type of variation involves systematic language change. See section 5.2.

5.1 Sporadic Variation

In the speech of some individuals, in some words, the phoneme /x/ occurs where /k/ would occur in the speech of most people. Both alternatives are considered acceptable; sometimes both are used by the same person. This alternation does not extend to all occurrences of /k/, however. Some examples:

/dêk∿dêx/ 'thing, something'

/dokam∿doxam/ 'someone'

/ugêsêksêk∿ugêsêxsêx/ 'morning'

/nak∿nax/ 'go away'

/nêmên gak∿nêmên gax/ 'just come here'

/malakê~malaxê/ 'your bark cloth'

In the same way, the sequence /ai/ is substituted for /ei/:

/meim~maim/ 'true'

/ieinae~iainae/ 'my grandmother'

/deik~daik/ 'I'll drink it'

Both these substitutions may be evidence for a certain amount of dialect mixture between Bolo Anem and Coastal Anem. Bolo Anem /k/ sometimes corresponds with Coastal Anem /x/, and Bolo Anem /ai/ sometimes corresponds with Coastal Anem /ei/:

	Bolo Anem	/le uk akî nan·/
	Coastal Anem	/laxa uk axî nan·/
		'He went to the garden.'
Bolo	Bolo Anem	/ainu/
	Coastal Anem	/einu/
		'his father'

It is also possible that in Coastal Anem, /ai/ has changed to /ei/ in certain environments. As evidence for this, I give the following form pronounced with and without the juncture between words:

/sia itim./ 'The reef is dry.'

[sˈiaʔ+ʔitˈim]

[sˌieytim]

Sporadic variation is observed in all age groups.

5.2 Substitution of /e i/ for /ê î/

There is a marked tendency for front vowels to occur in the speech of young people where back unrounded vowels occur in the speech of older people. The division between young and old is uneven, however, since some older people, particularly those who identify with young people, use the speech traits of young people, while some youths favour the more classical forms of their elders.

The following is a list of substitutions observed in the data so far:

old	young	
/adêl/	/adel/	'outside'
/glîknae/	/gliknae/	'my armpit'
/bîs/	/bis/	'no'
/blîga/	/bliga/	'my back'
/êlka/	/elka/	'my liver'
/êkîs/	/ekis/	'rotten'
/êmkîs/	/emkis/	'thorn'
/ênîŋle/	/êniŋle/	'my brains'
/gêta/	/geta/	'my ear'
/gîmsîk/	/gîmsik/	'insect sp.'
/klîŋ/	/kliŋ/	'moon'
/lêlêŋ/	/lelêŋ/	'tree sp.'
/lêlîk/	/lelîk/	'comb'

/lîŋîs/	/liŋis/	'vine sp.'
/masîk/	/masik/	'new'
/pîlîs/	/pilis/	'bamboo sp.'
/plîŋe/	/pliŋe/	'my waist'
/tîmnae/	/timnae/	'my hand'
/zilîk/	/zilik/	'bad'
/zîxêŋka/	/zixeŋka/	'my veins'
/ugênît/	/ugenit/	'he built it'
/dalîk/	/dalik/	'I'll stand'
/dasîk/	/dasik/	'I'll sit'

No speaker of Anem uses a five-vowel system. This would be impossible without a major overhaul of the morphology, because the phonemic contrast between front and back unrounded vowels has a high functional load. The personal suffixes of Anem are quite frequently distinguished by the contrasts /ê : e/ and /î : i/:

/tigî/	'his foot'
/tigi/	'their feet'
/eili/	'my eyes'
/eilî/	'their eyes'
/giŋe/	'my child'
/giŋê/	'your child'
/komi/	'my water'
/komî/	'your water'

In these noun classes, the distinction between persons

is made by the vowel contrast. There are, however, noun classes in which the vowel contrasts do not make the distinctions between persons. On several occasions, I observed that a young person had shifted a noun from one class to another, avoiding, in the process, a back unrounded vowel in the second person singular suffix:

standard	innovative	
/tîmnae/	/timnae/	'my hand'
/tîmnî/	/timnir/	'your hand'
/giŋe/	/giŋe/	'my child'
/giŋê/	/giŋer/	'your child'
/sîsîxle/	/sîsîxle/	'my grey hair'
/sîsîxlê/	/sîsîxler/	'your grey hair'

Usually, if an older person were there, he would correct the form given to me by the younger person, saying that I should not write grammatical errors. He might complain that young people do not know how to speak the language, but no attempt would then be made to correct the youth.

6.0 Lexical Stratification

As stated in section 3.7, the Anem lexicon is layered. On the basis of cognates in other languages, three strata can be identified: 1. a non-Austronesian base consisting of all unidentifiable etyma. 2. an Austronesian stratum consisting of all words obviously borrowed from Austronesian languages. Since only word lists are available for Aria, Mok and Amara[3], and since the direction of borrowing is sometimes impossible to determine, the classification of individual etyma must be considered tentative. 3. a Tok Pisin statum consisting of all words borrowed from Tok Pisin.

The non-Austronesian base includes the items for body parts, kin, mountain plants and animals and many common verbs. The Austronesian stratum includes most of the words for ocean phenomena--fish and mollusk names, canoe parts, 'island', 'wave', 'reef' and so on. It also includes words for trees and architecture. Items in the Austronesian stratum are identified here on the basis of cognates in Lusi. The Tok Pisin stratum includes words for items of Western culture--boats, government, medicine, western clothing, food and furniture.

The alternation of /d/ and /r/, described in 3.7,

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[3]Word lists were collected for Mok and Aria by David Counts in 1967, and for Amara by me in 1975.

occurs only in the non-Austronesian base. This may represent an archaic allophonic pattern in Anem before the intense intercultural contact characteristic of Anem culture today. It is possible that the events described in section 1.2 have had an effect on the Anem language analogous to the effects of historic events on the English language. Under the impact of the Norman conquest, English /v/ and /f/, formerly allophones of a single phoneme, split into separate phonemes. In an analogous manner, under the impact of Austronesian and European cultures, Anem [d] and [r] may have split into separate phonemes.

Except for the single item /rukme/'insect sp.' (which may have been borrowed from Mok or another Austronesian language), word-initial /r/ occurs only in the Tok Pisin stratum of Anem. Initial /x/ occurs only in the Austronesian stratum. Back unrounded vowels and consonant clusters of the type described in 3.6 occur only in the non-Austronesian base.

6.1 Tok Pisin Cognates

Since Tok Pisin is a creole derived from Pidgin English, many English cognates are recognizable in the Anem items:

Anem		Tok Pisin
/sipidbot/	'motor boat'	/sipidbot/
/lam/	'lamp'	/lam/
/aussik/	'hospital'	/haus sik/
/taŋir/	'fish sp.'	/taŋir/
/ais/	'refrigerator'	/bokis ais/
/siŋlis/	'T-shirt'	/siŋlis/
/uraitimdit bizaŋ/	'He's already written it"	/em i raitim pinis/

6.2 Lusi Cognates

Early in the investigation, it became obvious that numerous Anem words, especially those for ocean phenomena, were similar to the corresponding Lusi words that I knew at the time. I postulated that the items in question had been borrowed from Lusi and found that the differences appeared to be patterned. To check my hypothesis, I elicited the bulk of the words on my file cards from two Lusi speakers (via Tok Pisin) who knew little or no Anem. The regularity of the correspondences proved to be greater than I had expected.

Lusi /β ɣ/ correspond with Anem /b g/. Lusi /ř/ and /h/ correspond with Kombe /h/ and Anem /x/; in a few words, Lusi /ř/ corresponds with Anem /r/:

Anem	Lusi
/amoxu/	/amořu/
/bagaxe/	/βaɣaře/
/moigagaxa/	/moiɣaɣařa/
/tux/	/tuř/
/xaŋxaŋo/	/řaŋřaŋo/
/kuaxo/	/kuaho/
/pixoxo/	/pihoho/
/pore/	/poře/

Lusi /r/ often corresponds with Anem /d/, sometimes with Anem /r/:

Anem		Lusi
/moxadi/	'fish sp.'	/mohari/
/dadamuxi/	'fish sp.'	/raramuhi/
/ududu/	'ridge pole'	/ururu/
/perperu/	'clam sp.'	/perperu/

7.0 Conclusion

Few things are as disappointing and frustrating as trying to learn about the language and culture of an area and finding that the material is either superficial and inadequate or non-existent. In the next few years, I intend to return to the Anem to collect enough data to be able to write a grammar and dictionary that accounts for both Coastal and Bolo Anem. To be able to check for even a remote relationship between Anem and any other language, reliable grammars and dictionaries are required for the following non-Austronesian languages: Baining, Kol, Panaras, Sulka, Wasi and the languages of Umboi and Sakar. To complete the linguistic information for the Kaliai and Bariai census divisions alone, grammars and dictionaries are required for the following Austronesian languages: Amara, Aria, Bariai, Lamogai and Mok.

There are opportunities for research for archaeologists and social anthropologists in this area; a full recording of Anem oral tradition should be very suggestive for the archaeology of the interior of West New Britain.

The problems touched on in sections 5 and 6, the maintainance and stratification of Anem (clearly a threatened language), demand a full ethnographic treatment of these people who even superficially are very different from their Austronesian neighbours.

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