

D. VAN MINDE

RIJKSUNIVERSITEIT TE LEIDEN

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1. INTRODUCTION

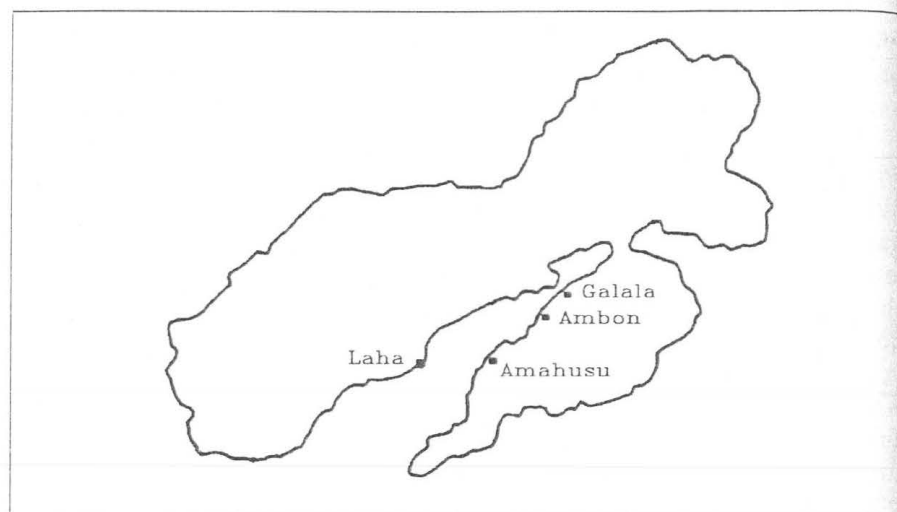
This article deals with the phonology of Ambonese Malay. After the introductory section I will discuss the following topics: stress (2), vowel phonemes (3), vowel sequences (4), consonant phonemes (5), consonant sequences (6), syllable and root structure (7), and elliptic code (8). Lists of abbreviations and symbols, notes, and references follow the text.

The variety of Malay spoken on Ambon Island in the Central Moluccas is referred to by its speakers as Malayu Ambong. Its use as a mother-tongue or interethnic means of communication is not restricted to Ambon, however. More than in any other part of Indonesia, local culture and history cannot be understood without reference to Portuguese and Dutch presence in the area. When the Portuguese were driven out of Ternate in the North Moluccas and withdrew on Ambon and Tidore, the importance of Ambon as a regional center was first established. In 1605 Steven van der Haghen conquered the fort in the town of Ambon from the Portuguese for the Dutch East India Company. Gradually the center-function was strengthened when the cultivation of cloves—one of the natural products besides nutmeg which pulled the Moluccas from anonymity—shifted from the North Moluccas to the Central Moluccas. When in the long run the Dutch proved successful in obtaining a monopoly on nutmeg and cloves, Dutch interests and the fate of many Moluccans became ever more intertwined. Their relationship was not only expressed in a common religion, namely, the Protestant faith, but also in privileges pertaining to schooling, choice of profession, and wages. Within the colonial system the assistant (religious) teachers, low-ranking administrators, and private soldiers were recruited mainly among the Christian Moluccans. These men, together with those active in various sectors of trade and commerce, are the key figures through whom a new culture gradually spread outside the area on which the Dutch could keep a proper and effective control, that is, the area outside Ambon and the Lease (the islands east of Ambon: Haruku, Saparua, and Nusalaui). Therefore we may safely assume that it is mainly from these islands that Ambonese Malay spread to neighboring islands such as Buru and Seram and places further away.

Elsewhere I will go more deeply into the question where the origins of Ambonese Malay lie, its relation to other varieties of Malay and indigenous languages (which are called *basa tana* 'language of the land' in Ambonese Malay), the sociopolitical setting in which it developed, and the sources which we have at our disposal for studying these languages.¹ Here I would only like to stress the fact that the importance of Eastern Indonesian varieties of Malay can hardly be overestimated, and therefore it is warranted to undertake scientific research into these dialects.

The corpus of data on which this article is based was collected in the Bay District of Ambon Island (see Map) among Christian Moluccans.

Ambon Island



Several factors have led to limitations concerning the selected area of research:

1. Most of the Leihitu peninsula (Ambon's northern half) has been excluded because Muslim villages have preserved their indigenous languages (*basa tana*) (Collins 1983).
2. Because Laha (southern part of Leihitu peninsula) has maintained its indigenous language, especially in the older generations, the variety of Malay spoken there is likely to deviate from varieties spoken in areas where Ambonese Malay is the first and only mother-tongue (Collins 1980).
3. The area beyond the village of Amahusu towards Cape Nusaniwe was excluded because the Malay spoken there has distinctly idiosyncratic features. My provisional findings, based on a short field trip, show that the main difference occurs at the phonetic level only: /a/ in unstressed open final syllables of roots is realized as a mid-central vowel schwa.

4. Villages in the mountainous interior of Leitimur such as Ema, Hatalai, and Naku are sufficiently isolated to display dialectal characteristics of their own. Since no research was conducted in these villages, this area has been omitted from the present study.
5. At several places along the bay there are small settlements of people from southern and southeastern Sulawesi (Buginese, people from Buton, Binongko, etc.). Some of these immigrants settled here a long time ago, others only recently. In many cases, Ambonese Malay has replaced their original language; in other cases, it is a second language used in contacts with Moluccans.
6. A final, but very important, point should be mentioned here. Ambon Town houses a highly heterogeneous population, made up from people from all over Indonesia. Ever since it was founded by the Portuguese in 1576, the town has had a diverse social make-up. In the pre-Independence period, many of its inhabitants had quite close contacts with the Dutch. In fact, many members of the older generation are still conversant in Dutch. More than in rural areas, the population experiences intensive exposure to modern culture and its vehicle, the national language, Bahasa Indonesia. Therefore it is not surprising that a good deal of mixing between Bahasa Indonesia and Ambonese Malay takes place; however, among Moluccans, in informal, domestic, and traditional spheres, Ambonese Malay is the preferred medium. These factors yield a complex sociolinguistic situation, in which various languages, dialects, and sociolects interplay in an intricate manner.

This article is not concerned with sociolinguistic variation, and only occasional references to supposed sociolects will be made.²

2. STRESS

Ambonese Malay has phonemic wordstress, by which is meant that the position of stress within a word is unpredictable. Throughout this article wordstress will be indicated (by ') in phonemic and phonetic transcriptions immediately before the vowel which forms the nucleus of the stressed syllable.³ Monosyllables are neutral as regards stress, since it is a relative feature of prominence between syllables. Therefore stress is not indicated in these forms. In what I call lexically duplicated morphemes, both of the roots which together make up the morpheme contain a prominent (i.e., stressed) syllable, or, in the case of duplicated monosyllables, neither of the roots stands out as regards stress.⁴ Each of the accents on these syllables will be indicated, even if the morpheme consists of a duplicated monosyllable. This is done to distinguish them from those morphemes which are—synchronically at least—also monomorphemic, but where one of two segmentally identical syllables is prominent. Examples of the latter kind are:

/g'igi/ 'tooth; to bite'; /pomp'om/ in: /s'agu pomp'om/ 'k.o. sago-cake roasted in cartridge-cases'; /poKp'oK/ 'k.o. low-speed diesel engine used on boats'.

Compare these with:

/eleK'eleK/ 'oil-lamp made from glass jar'; /t'omit'omi/ 'k.o. cherry-like fruit'; /s'ibus'ibu/ in: /a'niŋ s'ibus'ibu/ 'a light breeze'; /c'uPc'uP/ onomatopoeia suggestive of fast movement; /tw'ɪntw'ɪŋ/ in: /ikaŋ tw'ɪntw'ɪŋ/ 'flying fish'; /tr'itri/ in: /b'uruŋ tr'itri/ 'k.o. bird'.

Word stress is the only differentiating feature in a number of minimal pairs:

/b'acaŋ/ 'Bacan (island)' - /bac'aŋ/ 'k.o. fruit'; /b'ale/ 'to return' - /ba'le/ 'to coil s.t.'; /b'ali/ 'Bali (island)' - /bal'i/ 'to buy s.t.'; /b'araT/ 'west' - /bar'aT/ 'heavy'; /b'obo/ '(children's language) to sleep' - /bob'o/ 'to smell'; /c'aka/ short for: /sakar'ias/ Zachary (personal name) - /cak'a/ 'to strangle s.o.'; /g'ali/ 'to dig' - /gal'i/ 'to have a strong distaste for s.t.'; /g'ata/ in: /g'atag'ata/ 'k.o. bamboo pincers' - /gat'a/ 'sap (from tree or fruit)'; /k'ataŋ/ in: /k'ataŋk'ataŋ/ 'k.o. tree' - /kat'aŋ/ 'crab'; /m'asiŋ/ 'salty' - /mas'iŋ/ 'engine, machine'; /p'araŋ/ 'machete' - /par'aŋ/ 'war'; /s'alaK/ 'k.o. fruit' - /sa'laK/ 'at once, immediately'; /t'alaŋ/ '(black) fish-eagle' - /tal'aŋ/ 'to swallow'; /t'are/ 'to attract s.t.' - /tar'e/ 'tight'.

The data do not show cases where alternative stress-placement yields synonymous forms. Historically derived forms with (nonproductive) affixes *-an, *ke-...-an, and *pe-...-an show regular stress on the penultimate syllable, which in some cases involves a stress-shift as compared with their unaffixed counterpart:

/aNbur/ 'to strew, scatter'	- /talaNb'uraŋ/ 'disorderly, scattered'
/atur/ 'to arrange'	- /at'oraŋ/ 'rules of conduct'
/b'agi/ 'to divide'	- /bag'iaŋ/ 'share'
/b'unjus/ 'to pack'	- /bun'kusaŋ/ 'packet'
/iŋa/ 'to remember'	- /iŋ'ataŋ/ 'Watch out! Remember!'
/j'ahaT/ 'bad, wicked'	- /kajah'ataŋ/ 'very bad character'
/jumur/ 'to dry in the sun'	- /paNjum'uraŋ/ 'clothes-horse'
/kar'iŋ/ 'dry'	- /kakar'iŋaŋ/ 'dried up'
/k'ukur/ 'to grate s.t.'	- /kuk'uraŋ/ 'grater, rasp'
/k'ukus/ 'to steam food'	- /kuk'usaŋ/ 'steamer (for rice)'
/l'ia/ 'to look; see'	- /kali'ataŋ/ 'visible'
/m'akaŋ/ 'to eat'	- /mak'anaŋ/ 'food'
/p'ake/ 'to wear'	- /pak'eaŋ/ 'clothes'
/p'anas/ 'hot; warm'	- /kapan'asaŋ/ 'to suffer from the heat'

The only exception I recorded is:

/l'aU/ 'sea' - /l'aUtaŋ/ 'deep-sea'

3. VOWEL PHONEMES

Ambonese Malay has five vowel phonemes which are charted as follows according to place and manner of articulation:

TABLE 1: Vowel System

	Front	Central	Back
High:	i		u
Nonhigh:			
Mid	e		o
Low		a	
	Unrounded		Rounded

Two archiphonemes, /I/ and /U/, are not represented in Table 1; they will be dealt with after the regular vowels.

Before discussing the vowels and the system they constitute, I will first deal with two subphonemic phenomena.

Ambonese Malay has no phonemic glottal stop /ʔ/ (see Section 5); however, a phonetic glottal stop is realized word-initially, morpheme-initially after a vowel, and morpheme-medially between like vowels in morphemes which are obviously loans from indigenous languages. Examples:

/ose/ [ʔose] 'you'; /ana/ [ʔana] 'child'; /ba'ero/ [baʔʔero] 'to twist and turn'; /ta'ure/ [taʔʔure] 'loose, undone'; /baku'atur/ [bakuʔatur] 'to arrange with one another'; /ma'ano/ [maʔano] 'to put the harvest out to contract'; /w'aa/ [w'aʔa] 'trunk of sago-palm from which pith has been taken'; /sa'aru/ [saʔaru] 'sandbank'; /t'uu/ [t'uʔu] 'k.o. fish'; /he'eni/ [heʔeni] exclamatory particle; /pamun'aa/ [pamun'aʔa] in: /m'ulu pamun'aa/ 'glutton, gorging'.

In the following words, which are probably also loans from indigenous languages, there is individual variation, and [ʔ] is occasionally heard:

/pa'isi/ [paʔisi] ~ [pa'isi] 'naked'; /pa'isal/ [paʔisal] ~ [pa'isal] 'k.o. small proa'; /la'ia/ [laʔiya] ~ [la'ia] 'to clamber up'; /n'oul/ [n'oʔul] ~ [n'oul] 'k.o. fish'; /ta'uli/ [taʔuli] ~ [ta'uli] 'wife-giver group'.

Nasalized vowels occur predictably before nasal consonants belonging to the same syllable (see Section 7 for syllable structure). Therefore I regard nasalization as a phonetic phenomenon. Examples:

/aNbur/ [ʔām.bur] 'to strew, scatter'; /aNboŋ/ [ʔām.bōŋ] 'Ambon; Ambonese'; /kaNp'iNjaŋ/ [kām.pʰĩ.jāŋ] 'churchbell'; /aNp'oK/ [ʔām.p'ok-] 'to swell up'.

Nasalization is not operative beyond syllable boundaries. Witness for example:

/an'ioŋ/ [ʔa.ni.yōŋ] (not *[ā.ni.yōŋ]) 'rolled up cloth to support load carried on head'; /tal'aŋ/ [ta.l'āŋ] 'to swallow'; /ba'aNbur/ [ba.ʔāmbur] 'to strew, scatter (repeatedly)'.

The HIGH FRONT UNROUNDED VOWEL /i/ occurs in nonfinal and final closed and open syllables. It is always realized as [i]. In certain polysyllabic morphemes, /i/ in final unstressed syllables—be they open or closed—can always be replaced by /e/. Since it is not the case that every /e/ in that position and environment can be replaced by /i/, we cannot say that the opposition between these two phonemes is neutralized. The alternation /i ~ e/ in final unstressed syllables of polysyllabic morphemes is not attested in:

PR1 - syllables ending in /s/.

PR2 - open final syllables when the penultimate syllable contains /u/ or /i/.

Following Ebeling, I shall term /i/ a "heavy phoneme" wherever there is an alternation /i ~ e/, that is, in environments differing from those defined by PR1 and PR2. A heavy phoneme consists of one or more optional distinctive features in addition to the basic distinctive features, whereas a basic phoneme consists of basic distinctive features only (Ebeling 1967:135; Stokhof 1975, 1979). The procedure for registering an optional feature (or features) is as follows:

1. The suppression of an optional feature does not lead to a misinterpretation by the hearer. The resulting (basic) form is accepted as identical to the heavy form, e.g. <p'eti> /p'eti/ [p'eti] (heavy form) ~ <p'ete> /p'ete/ [p'ete] (basic form) 'packing-case'.
2. Conversely, if we add optional features to a basic phoneme then there are two possibilities. Either the hearer will interpret the resulting form as identical with the original, or the hearer will fail to interpret the resulting form because it is a nonexistent form or an impossible realization of the original, e.g., <p'ete> /p'ete/ [p'ete] (not *[p'eti]) 'to pluck'.

From this I conclude that /i/ is a heavy phoneme in environments excluded by PR1 and PR2; /e/ is its basic phoneme, and [relative highness] is an optional feature. Examples:

/idoŋ/ [ʔidōŋ] 'nose'; /ihur/ [ʔihur] 'k.o. sago-palm'; /ilo/ [ʔilo] 'to carry s.t. in cloth hanging from head or shoulder'; /ir/ [ʔir] 'drunk'; /ariŋaŋ/ [ʔar'īŋāŋ] 'light, not heavy'; /k'iNtal/ [k'īntal] 'yard'; /bliNblaŋ/ [bl'īmblāŋ] 'be gaudily dressed'; /katiNd'isaŋ/ [kat'ind'isāŋ] 'to talk or rave while asleep'; /skiT/ [skit-] name of a neighbourhood in Ambon Town; /rim/ [rīm] 'sentence-intonation; dialect'.

Closed final syllables:

/aNjiŋ ~ 'aNjeŋ/ 'dog'; /p'asir ~ p'aser/ 'sand'; /b'ikiŋ ~ b'ikeŋ/ 'to make'; /g'iliŋ ~ g'ileŋ/ 'to mill; run over (vehicle)'; /t'iNbiŋ ~ t'iNbeŋ/ 'k.o. basket'; /p'usiŋ ~ p'useŋ/ 'dizzy'; /j'ariŋ ~ j'areŋ/ 'fishing-net'. But: /abis/ [abis *'abes] 'finished, used up'; /k'ukiŋ/ [k'ukis *k'ukes] 'biscuit'; /k'ikiŋ/ [k'ikis *k'ikes] 'to scrape off, scale'; /k'umiŋ/ [k'umis *k'umes] 'moustache'; /man'aŋis/ [man'aŋis *man'aŋes] 'to cry, weep'; /kac'il/ [kac'il *kac'el] 'small'; /bars'iŋ/ [bars'iŋ *bars'eŋ] 'to sneeze'; /jarn'iŋ/ [jarn'iŋ *jarn'eŋ] 'clear, bright'; /pals'ir/ [pals'ir *pals'er] 'to make, have fun'; /kob'iK/ [kob'ik- *kob'ek-] 'cubic meter'.

Open final syllables:

/k'asi ~ k'ase/ 'to give'; /h'ari ~ h'are/ 'day'; /may'ari ~ may'are/ 'to wander about courting girls'; /d'aŋki ~ d'aŋke/ 'thank you'; /t'omit'omi ~ t'omet'ome/ 'k.o. cherry-like fruit'; /sl'oki ~ sl'oke/ 'tot of liquor; liquor glass'. But: /pol'isi/ [pol'isi *pol'ise] 'police'; /par'igi/ [par'igi *par'ige] '(water)well'; /ini/ [ʔini *ʔine] 'this; these'; /p'uti/ [p'uti *p'ute] 'white'; /usi/ [ʔusi *ʔuse] 'older sister'.

The MID FRONT UNROUNDED VOWEL /e/ is realized as [e] in all positions. Examples:

/ekor/ [ʔekor] 'tail'; /ela/ [ʔela] 'pith from sago-palm'; /ena/ [ʔena] 'tasty, delicious'; /eleK'eleK/ [ʔelek-ʔelek-] 'oil-lamp made from glass jar'; /gos'epa/ [gos'epa] 'raft'; /aNt'eru/ [ʔānt'eru] 'completely'; /b'esi/ [b'esi] 'iron; steel'; /b'erkaT/ [b'erkaT-] 'divine blessing'; /d'eNdaŋ/ [d'ēndāŋ] 'to sing traditional pantun-poetry'; /h'ela/ [h'ela] 'to pull'; /penat'ua/ [penat'uwa] 'church-elder'; /bal'eK/ [bal'ek-] 'tin(can)'; /areŋ'areŋ/ [ʔar'ēŋʔar'ēŋ] in: /te'areŋ'areŋ/ 'tea without biscuit or cake'; /c'eŋeŋ/ [c'ēŋēŋ] 'to whine, be tearful'; /eNsel/ [ʔēŋsel] 'hinge'; /c'eŋke/ [c'ēŋke] 'clove'; /ale/ [ʔale] 'you'; /ame/ [ʔame] 'to take'; /mask'e/ [mask'e] 'although'; /k'olek'ole/ [k'olek'ole] 'k.o. small proa'.

The phonemic status of /e/ versus /i/ is attested in the following minimal pairs:

/ina/ 'mother' - /ena/ 'tasty, delicious'; /b'ilaŋ/ 'to say' - /b'elaŋ/ in: /aruNb'aI b'elaŋ/ 'k.o. big proa'; /b'isi/ 'to whisper' - /b'esi/ 'iron; steel'; /l'ima/ 'five' - /l'ema/ 'k.o. fish'; /p'ici/ 'to peel' - /p'eci/ 'mud'; /s'iraŋ/ 'to pour' - /s'eraŋ/ 'Seram (island)'; /bal'i/ 'to buy' - /bal'e/ 'to wind (thread)'; /l'obi/ in: /l'obil'obi/ 'k.o. fruit' - /l'obe/ 'torch made of leaves'; /m'aki/ 'to scold' - /m'ake/ 'k.o. fish'; /rim/ 'sentence-intonation; dialect' - /rem/ 'brake'; /siŋ/ short for: /s'ini/ 'here' - /seŋ/ 'no, not'; /man'ir/ 'manners' - /man'er/ 'sir'.

These examples clearly demonstrate that /i/ is also opposed to /e/ in morpheme-final syllables, so that the alternation /i ~ e/ in final syllables under the

aforementioned restrictions stated in PR1 and PR2 cannot be explained as neutralization.

The LOW CENTRAL VOWEL /a/ is realized as [a] in all positions. Examples:

/aNboŋ/ [āmbōŋ] 'Ambon; Ambonese'; /aNp'oK/ [ʔāmp'ok-] 'to swell up'; /aNt'ua/ [ʔānt'uwa] 'he; she' (respectful); /aroNb'aI/ [ʔarōmb'ai, ʔarōmb'ay] 'k.o. big proa'; /aŋer/ [ʔaŋer] 'bad fishy smell'; /kaI'apa/ [kaI'apa] 'coconut'; /aNbaK/ [ʔāmbak-] 'habit, character'; /skaP/ [skap-] '(carpenter's) plane'; /kab'as/ [kab'as] 'to wave, flutter'; /kad'alāŋ/ [kad'alāŋ] 'deep'.

The following minimal pairs attest the opposition between /a/ and /i/:

/akaŋ/ 'it; the' - /ikaŋ/ 'fish'; /ana/ 'child' - /ina/ 'mother'; /ina/ 'mother' - /ini/ 'this; these'; /s'atu/ 'one' - /s'itu/ 'there'; /baI'a/ 'to split s.t.' - /baI'i/ 'to buy s.t.'; /taI'aT/ 'late' - /taI'iT/ 'embankment, slope'.

The opposition between /a/ and /e/ is attested by the following minimal pairs:

/ana/ 'child' - /ena/ 'tasty, delicious'; /b'aca/ 'to read' - /b'eca/ 'pedicab'; /c'era/ 'k.o. edible leaf' - /c'ere/ 'to divorce'; /p'ela/ 'intervillage alliance' - /p'ele/ 'to obstruct'; /cak'a/ 'to strangle s.o.' - /cak'e/ '(vulg) to eat, stuff oneself'; /kas/ 'cupboard' - /kes/ 'monkey'.

The HIGH BACK ROUNDED VOWEL /u/ occurs in nonfinal and final closed and open syllables. It is always realized as [u]. In certain polysyllabic morphemes, /u/ in final unstressed syllables—be they open or closed—always alternates with /o/; however, since not every /o/ in that position and environment alternates with /u/, the opposition between these two phonemes is not neutralized. The alternation /u ~ o/ in final unstressed syllables of polysyllabic morphemes is not attested in:

PR3 - open final syllables when the penultimate syllable contains /u/ or /i/.

This situation parallels the /i ~ e/ alternation. Consequently, /u/ is regarded a heavy phoneme in final unstressed syllables of morphemes which have a nonhigh vowel in penultimate syllable; /o/ is its basic phoneme and [relative highness] is an optional feature. The following serves as an illustration of this claim:

<t'obu> /t'obu/ [t'obu] ~ <t'obo> /t'obo/ [t'obo] 'sugar cane' - <b'obo> /b'obo/ [b'obo] (not *[b'obu]) '(children's language) to sleep'.⁵

Examples:

/uNpaŋ/ [ʔūmpāŋ] 'bait'; /uNti/ [ʔūnti] 'k.o. delicacy made of grated coconut and palm sugar'; /aNt'ua/ [ʔānt'ua, ʔānt'uwa] 'he; she (respectful)'; /as'usiŋ/ [ʔas'usiŋ] 'k.o. oyster'; /b'ule/ [b'ule] 'blond(e)';

white man or woman'; /hul'alēŋ/ [hul'alēŋ] 'liana'; /capar'une/ [capar'une] 'be carelessly dressed'; /pus/ [pus] 'cat'.

Closed final syllables:

/c'abuT ~ c'aboT/ 'let's go!'; /c'aNpur ~ c'aNpor/ 'to mix'; /k'ukur ~ k'ukor/ 'to grate'; /m'aNpus ~ m'aNpos/ '(vulg) to die'; /t'ikus ~ t'ikos/ 'mouse; rat'; /b'uruŋ ~ b'uroŋ/ 'bird'.

But:

/arar'uT/ [arar'ut- *arar'ot-] 'arrowroot'; /bat'ul/ [bat'ul *bat'ol] 'right, correct'; /c'uPc'uP/ [c'up-c'up- *c'op-c'op-] '(onom.) fast movement'; /skruP/ [skrup- *skrop-] 'screw'; /tar'us/ [tar'us *tar'os] 'direct(ly); continually'; /kar'us/ [kar'us *kar'os] 'very thin'; /panak'uK/ [panak'uk- *panak'ok-] 'pancake'.

Open final syllables:

/m'asu ~ m'aso/ 'to enter'; /tapar'egu ~ tapar'ego/ 'to do s.t. hurriedly'; /cacal'epu ~ cacal'epo/ 'to fall on one's behind'; /cap'atu ~ cap'ato/ 'shoe'; /j'atu ~ j'ato/ 'to fall'; /g'ofu ~ g'ofu/ 'to catch shrimps with a grass noose'.

But:

/itu/ [ʔitu *ʔito] 'that; those'; /t'uNbu/ [t'ūmbu *t'ūmbu] 'to grow'; /cig'ulu/ [cig'ulu *cig'ulo] 'riddle'; /parl'u/ [parl'u *parl'o] 'necessary'; /sam'u/ [sam'u *sam'o] 'ant'; /s'ibus'ibu/ [s'ibus'ibu *s'ibus'ibo] in: /aŋiŋ s'ibus'ibu/ 'a light breeze'.

The following minimal pairs testify to the opposition between /u/ and /i/:

/ulaŋ/ 'to repeat' - /ilaŋ/ 'to disappear'; /utaŋ/ 'primeval forest' - /itaŋ/ 'black'; /g'ula/ 'sugar' - /g'ila/ 'mad'; /k'ukis/ 'biscuit' - /k'ikis/ 'to scrape off, scale'; /c'ucu/ 'grandchild' - /c'uci/ 'to clean; wash'; /k'utu/ 'louse' - /k'uti/ 'snap (sudden release)'; /t'iNbul/ 'to float' - /t'iNbil/ 'k.o. basket'.

The opposition between /u/ and /e/ can be demonstrated by:

/us/ short for: /usi/ 'older sister' - /es/ 'ice; ice cream'; /b'ulaŋ/ 'moon; month' - /b'elaŋ/ in: /aruNb'aI b'elaŋ/ 'k.o. large proa'; /b'alu/ 'widow' - /b'ale/ 'to return'; /hus/ 'Be quiet!' - /hes/ 'yeast'.

The opposition between /u/ and /a/ is attested by:

/uru/ 'to massage' - /aru/ 'Aru Islands'; /h'uri/ 'having lost its original shape; physically defective' - /h'ari/ 'day'; /g'agu/ 'to stammer, stutter' - /g'aga/ 'beautiful, handsome'; /kar'us/ 'very thin' - /kar'as/ 'hard, solid; loud'.

The MID BACK ROUNDED VOWEL /o/ is realized as [o] in all positions. Examples:

/oraŋ/ [orāŋ] 'man, human being'; /ose/ [ʔose] 'you'; /otaK/ [ʔotak-] 'part of pulp of durian fruit'; /b'odo/ [b'odo] 'stupid'; /goh'eba/ [goh'eba] 'eagle'; /g'oŋg'oŋ/ [g'oŋg'oŋ] 'to bark (of dog)'; /c'olo/ [c'olo] 'to dip (in liquid)'; /ford'omo/ [ford'omo] 'damn it!'; /amat'o/ [amat'o] 'farewell!'; /bob'o/ [bob'o] 'to smell'; /bal'oŋ/ [bal'oŋ] 'not yet'; /broIdeh'oŋ/ [broydeh'oŋ] 'bridegroom'; /l'oroK/ [l'orok-] 'nest-box for hens'.

The following minimal pairs prove the phoneme status of /o/ vis-à-vis /i/:

/ose/ 'you' - /ise/ '(excl) Gee!'; /g'oni/ 'gunny' - /g'ini/ short for: /bag'ini/ 'like this'; /h'otu/ 'go into the interior' - /h'itu/ 'Hitu (village)'; /p'opo/ '(vulg) vagina' - /p'opi/ in: /'ana p'opi/ 'doll'; /skoT/ 'shot (n)' - /skiT/ name of a neighbourhood in Ambon Town.

The phoneme status of /o/ versus /e/ is attested by:

/os/ short for: /ose/ 'you' - /es/ 'ice; ice cream'; /oŋgo/ short for: /dom'ingus/ '(personal name) Dominic' - /engo/ in: /'engo l'ari/ 'play hide-and-seek'; /b'oŋko/ 'bowed (of persons)' - /b'eŋko/ 'bend sideways (of persons)'; /c'ole/ in: /b'aju c'ole/ '(traditional) bodice' - /c'ele/ in: /b'aju c'ele/ '(traditional) blouse'.

The phoneme status of /o/ versus /a/ is attested by:

/oNb'oŋ/ 'dew' - /'aNb'oŋ/ 'Ambon; Ambonese'; /d'oti/ 'to practise black magic' - /d'ati/ 'k.o. patrilinear group'; /p'oko/ 'cost price' - /p'oka/ 'Poka (village)'; /b'aroŋ/ 'k.o. fibrous product from sugar-palm' - /b'araŋ/ 'things, goods'; /kat'oŋ/ 'we' - /kat'aŋ/ 'crab'.

The opposition between /o/ and /u/ is exemplified by:

/os/ short for: /ose/ 'you' - /us/ short for: /usi/ 'older sister'; /h'ori/ 'to wander about' - /h'uri/ 'having lost its original shape; physically defective'; /s'oa/ 'k.o. territorial group' - /s'ua/ 'to feed by placing food in mouth'; /mor/ 'but' - /mur/ 'sap of sugar-palm'; /b'oI/ 'Booi (village)' - /b'uI/ 'prison'; /k'uto/ 'damn it!' - /k'utu/ 'louse'; /pos/ 'post, mail' - /pus/ 'cat'; /poŋ/ 'tree' - /puŋ/ possessive marker in NP; /moI/ 'beautiful' - /muI/ 'aunt (mother's brother's wife)'.

The ARCHIPHONEME /U/ is posited in unstressed position after a vowel other than /u/ and immediately before a syllable or morpheme boundary, because the opposition /u/ vs. /w/ ceases to exist under those circumstances. (Notice that a phonetic transitional glide [y] may be realized intervocally in a sequence /iU/, /iu/, /eU/, while [w] may occur in a sequence /ua/, /Ui/, /Ua/.)

/l'aU/ [l'au, l'aw] 'sea'; /l'aUtaŋ/ [l'autāŋ, l'awtāŋ] 'deep-sea'; /pal'eU/ [pal'eyu, pal'eu, pal'ew] 'slow, indolent, inert'; /heU/ [heyu, heu, hew] 'to build an annex'; /past'iU/ [past'iyu, past'iu, past'iw] 'bored, fed up'; /t'iU/ [t'iyu, t'iu, tiw] 'uncle (mother's brother)'; /j'oU/ [j'ou, jow] term of address/reference for head of a *soa* (k.o. territorial village group); /al'oU/ [ʔal'ou, ʔal'ow] 'to grope, feel for'.

Compare:

<tu.u> /t'uu/ [t'uʔu] (not *[t'uww]) 'k.o. fish'; <ta.u.li> /ta'uli/ [taʔuli] ~ [ta'uli] (not *[t'awli]) 'wife-giver group'; <ci.ung> /c'iuŋ/ [c'iūŋ] (not *[ciwŋ]) 'to kiss'; <ta.ung> /t'aun/ [t'aun] 'year' (not *[tawŋ]); <no.ul> /n'oul/ [n'oʔul] ~ [n'oul] (not *[nowl]) 'k.o. fish'. (See Section 7 for syllable structure.)

Secondly, /U/ appears after a consonant and immediately before a stressed vowel:

/s'Uara/ [su'ara, suw'ara, sw'ara] 'sound; voice'; /b'Uaya/ [bu'aya, buw'aya, bw'aya] 'crocodile'; /k'Uini/ [ku'ini, kuw'ini, kw'ini] 'k.o. fruit'; /p'Uasa/ [pu'asa, puw'asa, pw'asa] '(Islamic) fasting'.

However, not every sequence /Cw'V/ is paralleled by a sequence /CU'V/:

/sw'ami/ [sw'ami] (not *[su'ami, suw'ami]) 'k.o. cassava-dish'; /sw'ipeŋ/ [sw'ipeŋ] (not *[su'ipeŋ, suw'ipeŋ]) 'general traffic inspection'; /swaK/ [swak-] (not *[su'ak-, suw'ak-]) 'weak, feeble, languid'; /kw'arto/ [kw'arto] (not *[ku'arto, kuw'arto]) '(arch.) labour service for village head'.

Otherwise, /u/ is in opposition with /w/. Although I did not find minimal pairs which exhibit the opposition in every relevant position, the following examples may serve as proof of their different phonemic status:

/ua/ [ʔuwa] (not *[wa]) 'aunt (father's sister)' - /war/ [war] (not *[uar]) in: /l'akil'aki seN war/ 'good-for-nothing'; /t'uI/ [t'ui, tuy] (not *[twi]) in: /b'ulu t'uI/ 'k.o. bamboo' - /twiŋ/ [twiŋ] (not *[t'uiŋ]) in: /ikaŋ twiŋtwiŋ/ 'flying-fish'; /cwi/ [cwi] (not *[cui]) in: /buruŋ cwi/ 'k.o. hummingbird'; /twi/ [twi] (not *[tui]) in: /buruŋ twi/ 'k.o. parrot'; /d'ua/ [d'ua] (not *[dwa]) 'two'; /b'awa/ [b'awa] (not *[b'aua]) 'take/bring along'.

The ARCHIPHONEME /I/ results from the neutralization of the opposition /i/ vs. /y/ in unstressed position after a vowel, or alternatively, immediately before a stressed vowel. (Notice that a phonetic transitional glide [y] may occur intervocally in the sequences /ia, iu, io/.)

/aId'otaŋ/ [aid'otāŋ, ayd'otāŋ] 'k.o. banana'; /aroNb'aI/ [ʔarōmb'ai, ʔarōmb'ay] 'k.o. large proa'; /malam'eIT/ [malam'eit-, malam'eyt-]

'wife-taker group'; /k'eI/ [k'ei, key] in: /m'eti k'ei/ 'exceptional low tide'; /s'oI/ [s'oi, soy] in: /c'ari s'oI/ 'get oneself into trouble'; /tal'oI/ [tal'oi, tal'oy] 'k.o. food bowl made of coconut-shell'; /b'uI/ [b'ui, buy] 'prison'; /m'uI/ [m'ui, mui] 'aunt (mother's brother's wife)'.

Examples of /I/ preceding a stressed vowel are:

/bI'asa/ [bi'asa, biy'asa, by'asa] 'usual, normal'; /I'a/ [i'a, iy'a, ya] 'yes (formal)'; /I'o/ [i'o, iy'o, yo] 'yes (informal)'; /mutI'ara/ [muti'ara, mutiy'ara, muty'ara] 'pearl'; /pI'ara/ [pi'ara, piy'ara, py'ara] 'to support/keep s.o.'.

Again, not every sequence /yV/ alternates with /iV/, e.g. /ye/ [ye] (not *[i'e, iye] in /ana ye/ 'hair combed in the form of letter "j" next to the ears'. The opposition of /i/ and /y/ is exemplified by:

/ini/ [ʔini] (not *[yni]) 'this; these'; /ye/ [ye] (not *[ie]) in: /ana ye/ 'hair combed in the form of letter "j" next to the ears'; /tiU/ [t'iyu, t'iu, tiw] (not *[tyu]) 'uncle (mother's brother)'; /t'iaŋ/ [t'iyāŋ, t'iaŋ] (not *[tyaŋ]) 'pole, post, pillar'.

Section 4 deals with vowel sequences. There I will discuss variability to which sequences involving an archiphoneme are subject.

The picture is not yet complete, since there are a number of morphemes which show unexpected alternations. These are /for/ ~ /fur/, /puŋ/ ~ /poŋ/, /su/ ~ /so/, /di/ ~ /de/, /pap'iñu/ ~ /pap'iño/, /mar'iñu/ ~ /mar'iño/, /p'ulu/ ~ /p'ulo/. First, we have seen that monosyllabic morphemes show no phonemic alternation. Witness:

/rim/ [rīm] (not *[rēm]) 'sentence intonation; dialect'; /pus/ [pus] (not *[pos]) 'cat'. However, /for/ ~ /fur/ (prep) for, to'; /puŋ/ ~ /poŋ/ possessive marker in NP; /su/ ~ /so/ (aspect marker perfective) already'; /di/ ~ /de/ 'he; she; it' seem to refute this rule.

In the case of /for/ we are dealing with a loanword from Dutch, /vor/ 'for, for the benefit of', or maybe a contamination of Portuguese/Spanish /por/ and Dutch /vor/. It is indicative of the speech of older people in Ambon Town, where it competes with /b'uaT/ and /boT/ 'for, for the benefit of; to' as in: /be b'ilaŋ for d'ia/, /be b'ilaŋ fur d'ia/, /be b'ilaŋ b'uaT d'ia/, /be b'ilaŋ boT d'ia/ 'I said to him'. Elsewhere the preposition /par/ is used, a loan from Portuguese /para/ 'for; to; in order to'.

A possible explanation in the case of /puŋ/ ~ /poŋ/ and /su/ ~ /so/ could be that these morphemes are functional morphemes, and as such do not behave according to the phonological rules which apply to other morphemes. Both /puŋ/ and /su/ are intermediate forms in an ongoing (synchronic) process of reduction to which functional particles are subject:⁶

/p'uña/ > /puŋ/ > /ŋ/ > ZERO. Example:

/b'eta p'uña cal'ana/ = /b'eta puŋ cal'ana/ = /b'eta ŋ cal'ana/ = /b'eta cal'ana/ 'my trousers'

/s'uda/ > /su/ > /s/. Example:

/b'eta s'uda pi 'aNboŋ/ = /b'eta su pi 'aNboŋ/ = /b'eta s pi 'aNboŋ/ 'I have (already) gone to Ambon'

Similarly, /d'ia/ 'he; she; it' has a shortened form in Subject position: /d'ia/ > /di/. Example:

/d'ia mo 'apa/ = /di mo 'apa/ 'what does he want?'

Furthermore I recorded two words with open final syllable and /i/ in penultimate position, where the /u/ ~ /o/ alternation does occur (compare PR3). Both words are loans from Portuguese: /pap'iñu/ ~ /pap'iño/ 'k.o. cucumber-like vegetable' (< Por. *pepino*); /mar'iñu/ ~ /mar'iño/ 'village-messenger' (< Por. *marinho*). In my analysis these pairs are to be considered lexical doublets.

Finally, /p'ulo/ 'island' is, in a certain sense, a predictable form, because it derives from *pulau (see Note 5 for examples of monophthongization). A form /p'ulu/ in the expression /p'ulu 'ilaŋ'ilaŋ/ 'tiny islands' is again not excluded by PR3.

4. VOWEL SEQUENCES

Table 2 gives attested cases of vowel sequences V₁V₂ in monomorphemic roots (V stands for "vowel").

Table 2: Vowel Sequences

V ₁ V ₂	i	e	a	o	u	U	I
i	-	-	+	+	+	+	-
e	-	+	+	+	+	+	+
a	+	+	+	+	+	+	+
o	-	+	+	-	+	+	+
u	-	-	+	-	+	-	+
U	+	-	+	-	-	-	-
I	-	-	+	+	-	-	-

PR1, PR2, and PR3 (Section 3) state the conditions for the alternation of the vowels /i/ ~ /e/ and /u/ ~ /o/ in final unstressed syllables. The notion "heavy phoneme" versus "basic phoneme" explains the relationship between the high vowel and its nonhigh alternant.

Archiphonemes (V_2) in sequences $/V_1V_2/$ show a similar relationship to nonhigh vowels, that is, a sequence $/V_1I/$ often alternates with a sequence $/V_1e/$, while a sequence $/V_1U/$ is often found next to a sequence $/V_1o/$. The alternation of heavy archiphonemes V_2 and their basic phonemes in a sequence $/V_1V_2/$ is found whenever:

PR4 - V_1 is a nonhigh vowel differing from V_2 in its point of articulation on the dimension Front-Central-Back.

The following may serve as proof of our claim that $/I/$ and $/U/$ have a heavy status in the said environments:

<air> $/aIr/$ [$ʔair$, $ʔayr$] ~ <aer> $/aer/$ [$ʔaer$] 'water', versus <hael> $/hæl/$ [$hæl$] (not $*[h'ail]$, $*[h'ayl]$) in: $/isi h'æl/$ 'dorsal muscle'.

$/I/$ is a heavy archiphoneme, $/e/$ its basic phoneme: [relative highness] is an optional feature.

<lau> $/laU/$ [lau , law] ~ <lao> $/la'o/$ [$la'o$] 'sea', versus <aor> $/la'or/$ [$la'or$] (not $*[la'aur]$, $*[la'awr]$) 'k.o. edible sea-worm'; <paleu> $/pal'eU/$ [$pal'eyu$, $pal'eu$, $pal'ew$] ~ <paleo> $/pal'eo/$ [$pal'eyo$, $pal'eo$] 'slow, indolent, inert', versus <maleo> $/mal'eo/$ [$mal'eyo$, $mal'eo$] (not $*[mal'eyu]$, $*[mal'eu]$, $*[mal'ew]$) 'k.o. jungle fowl'. $/U/$ is a heavy phoneme, $/o/$ its basic phoneme: [relative highness] is an optional feature.

Below examples are given first of alternations of the heavy kind to which PR4 is applied, followed by instances of other vowel sequences. (Notice that a phonetic transitional glide $[y]$ may occur intervocalically in sequences $/eu/$, $/eo/$, $/ea/$, $/iu/$, $/io/$, $/ia/$; the semivowel $[w]$ may be realized intervocalically in a sequence $/ua/$, $/oa/$.) Examples:

$/aI/$ $/aId'otan/$ ~ $aed'otan/$ [$ʔaid'otān$, $ʔayd'otān$ ~ $ʔaed'otān$] 'k.o. banana'; $/aIr/$ ~ $aer/$ [$ʔair$, $ʔayr$ ~ $ʔaer$] 'water'; $/aroNb'aI/$ ~ $aroNb'ae/$ [$ʔarōmb'ai$, $ʔarōmb'ay$ ~ $ʔarōmb'ae$] 'k.o. big proa'; $/b'aI/$ ~ $b'ae/$ [$b'ai$, $b'ay$ ~ $b'ae$] 'good'; $/g'aI/$ ~ $g'ae/$ [$g'ai$, $g'ay$ ~ $g'ae$] 'to hook, trip (s.o.) up'; $/k'aIŋ/$ ~ $k'aen/$ [$k'aīŋ$, $k'ayŋ$ ~ $k'aēŋ$] 'cloth; traditional loin-cloth'; $/kalaw'aI/$ ~ $kalaw'ae/$ [$kalaw'ai$, $kalaw'ay$ ~ $kalaw'ae$] 'fishing-spear'; $/laIp'ose/$ ~ $laep'ose/$ [$laip'ose$, $laip'ose$ ~ $laep'ose$] 'to flirt'; $/m'aI/$ ~ $m'ae/$ [$m'ai$, $m'ay$ ~ $m'ae$] '(vulg.) mother'; $/m'aIŋ/$ ~ $m'aen/$ [$m'aiŋ$, $m'ayŋ$ ~ $m'aen$] 'to play'; $/maIt'ua/$ ~ $maet'ua/$ [$mait'uwa$, $mayt'uwa$ ~ $maet'uwa$] 'wife; girlfriend'; $/masn'aIT/$ ~ $masn'aeT/$ [$masn'ait-$, $masn'ayt-$ ~ $masn'aet-$] 'rower, oarsman on large proa'; $/mol'aI/$ ~ $mol'ae/$ [$m'olai$, $m'olay$ ~ $mol'ae$] 'to begin'; $/non'aI/$ ~ $non'ae/$ [$non'ai$, $non'ay$ ~ $non'ae$] 'small fishes thrown into sea as bait for larger fish'; $/p'aI/$ ~ $p'ae/$ [$p'ai$, $p'ay$ ~ $p'ae$] '(vulg.) father'; $/p'aIt/$ ~ $p'aet/$ [$p'ait$, $p'ayt$ ~ $p'aet$] 'bitter (taste)'; $/paIt'ua/$ ~ $paet'ua/$ [$pait'uwa$, $payt'uwa$ ~ $paet'uwa$] 'husband; boyfriend'; $/suwit'aI/$ ~ $suwit'ae/$ [$suwit'ai$, $suwit'ay$ ~ $suwit'ae$] 'to

interfere with women's affairs'; $/w'aI/$ ~ $w'ae/$ [$w'ai$, $w'ay$ ~ $w'ae$] 'Waa (village)'.

The following words have, in addition to an alternant with $/ae/$, a triplet form with $/ei/$ (see below):

$/kaIc'oa/$ ~ $kaec'oa/$ [$kaic'owa$, $kayc'owa$ ~ $kaec'owa$] 'cockroach'; $/laI/$ ~ $lae/$ [lai , lay ~ lae] 'again; also'; $/m'aIm'aI/$ ~ $m'aem'ae/$ [$m'aim'ai$, $m'aym'ay$ ~ $m'aem'ae$] all kinds of small flying insects; $/malam'aIT/$ ~ $malam'aeT/$ [$malam'ait-$, $malam'ayt-$ ~ $malam'aet-$] 'wife-taker group'; $/sisin'aI/$ ~ $sisin'ae/$ [$sisin'ai$, $sisin'ay$ ~ $sisin'ae$] 'to sift out facts from other peoples lives'; $/t'aI/$ ~ $t'ae/$ [$t'ai$, $t'ay$ ~ $t'ae$] 'faeces'.

$/aU/$ $/aU/$ ~ $ao/$ [$ʔau$, $ʔaw$ ~ $ʔao$] (exclam. displeasure); $/b'aU/$ ~ $b'ao/$ [$b'au$, $b'aw$ ~ $b'ao$] 'shoulder'; $/j'aU/$ ~ $j'ao/$ [$j'au$, $j'aw$ ~ $j'ao$] 'far (away)'; $/kaUk'aU/$ ~ $kaok'ao/$ [$kauk'au$, $kawk'aw$ ~ $kaok'ao$] 'stammered (language)'; $/laU/$ ~ $la'o/$ [lau , law ~ $la'o$] 'sea'; $/laUtaŋ/$ ~ $laotāŋ/$ [$lautāŋ$, $lawtāŋ$ ~ $laotāŋ$] in: $/lautaŋ biru/$ 'deep-sea'; $/makar'aU/$ ~ $makar'ao/$ [$makar'au$, $makar'aw$ ~ $makar'ao$] 'eclipse (of sun, moon)'; $/matak'aU/$ ~ $matak'ao/$ [$matak'au$, $matak'aw$ ~ $matak'ao$] 'k.o. amulet, charm'; $/m'aU/$ ~ $m'ao/$ [$m'au$, $m'aw$ ~ $m'ao$] 'to want, wish'; $/naUn'aU/$ ~ $naon'ao/$ [$naun'au$, $nawn'aw$ ~ $naon'ao$] 'silly, sheepish, stupid'; $/nusal'aU/$ ~ $nusal'ao/$ [$nusal'au$, $nusal'aw$ ~ $nusal'ao$] 'Nusalaut (island)'; $/pal'aU/$ ~ $pal'ao/$ [$pal'au$, $pal'aw$ ~ $pal'ao$] 'to faint'; $/par'aU/$ ~ $par'ao/$ [$par'au$, $par'aw$ ~ $par'ao$] 'proa'; $/pel'aU/$ ~ $pel'ao/$ [$pel'au$, $pel'aw$ ~ $pel'ao$] 'Pelau (village)'; $/t'aU/$ ~ $t'ao/$ [$t'au$, $t'aw$ ~ $t'ao$] 'to know'.

$/eU/$ $/baIleU/$ ~ $baIle'o/$ [$bail'eyu$, $bail'eu$, $baylew$, $bayleyu$, $bayle'u$, $baylew$ ~ $bail'eyo$, $bail'eo$, $bayleyo$, $bayleo$]; $/baeleU/$ ~ $baele'o/$ [$bael'eyu$, $bael'eu$, $bael'ew$ ~ $bael'eyo$, $bael'eo$] 'village council-house'; $/heU/$ ~ $he'o/$ [$h'eyu$, $h'eu$, hew ~ $h'eyo$, $h'eo$] 'to build an annex'; $/kah'eU/$ ~ $kah'eo/$ [$kah'eyu$, $kah'eu$, $kah'ew$ ~ $kah'eyo$, $kah'eo$] 'to counter-balance'; $/pal'eU/$ ~ $pal'eo/$ [$pal'eyu$, $pal'eu$, $pal'ew$ ~ $pal'eyo$, $paleo$] 'slow, indolent, inert'; $/reUreU/$ ~ $reore'o/$ [$reyureyu$, $reur'eu$, $rewrew$ ~ $reyoreyo$, $reore'o$] 'old and dodder'.

Following are examples of other vowel sequences:

/ii/ No attested cases.

/ie/ No attested cases.

/ia/ $/d'ia/$ [$d'iya$, dia] 'he; she; it'; $/los'iaŋ/$ [$los'iyāŋ$, $los'iāŋ$] 'weak from lack of sleep'; $/la'ia/$ [$la'iya$, $la'ia$] 'to clamber up'; $/d'iaŋd'iaŋ/$ [$d'iyāŋd'iaŋ$, $d'iaŋd'iaŋ$] 'silently; on the sly'; $/bag'iaŋ/$ [$bag'iyaŋ$, $bag'iāŋ$] 'share, part; turn'; $/pak'iaŋ/$ [$pak'iyāŋ$, $pak'iāŋ$] 'clothes'; $/bag'ia/$ [$bag'iya$, $bag'ia$] 'k.o. sago biscuit'.

The last three examples have doublet forms with $/ea/$ (see below). Furthermore some words which have a sequence (C) iV have a doublet form with (C) yV (see Section 5). Notice that $/la'ia/$ [$la'iya$, $la'ia$], $la'ia$ 'to clamber up', is in fact a three vowel sequence (see also below under $/ai/$).

/io/ /ol'io/ [ʔoliyo, ʔol'io] in: /k'ayu ol'io/ 'k.o. wood'; /an'ion/ [ʔan'iyōŋ, ʔan'ion] 'rolled up cloth to support load carried on head'; /kar'io/ [kariyo, kariyo] in: /bakar'io/ 'to wrench oneself free (from grip)'; /c'ion/ [c'ion, c'iyōŋ] 'to kiss'. This last example has an alternant with /iu/ (see below).

/iu/ /c'iuŋ/ [c'iuŋ, c'iyuŋ] 'to kiss'. The functional load of this sequence is low.

/iU/ /past'iU/ [past'iyu, past'iu, pastiw] 'bored, fed up'; /tat'iU/ [tat'iyu, tat'iu, tat'iw] in: /ikaŋ tat'iU/ 'k.o. fish'; /tiU/ [t'iyu, t'iu, tiw] 'uncle (mothers' brother)'. These are the only examples I recorded, so apparently the functional load of this sequence is low.

/iI/ No attested cases.

/ei/ No attested cases.

/ee/ Only one form was recorded: /he'eni/ [he'eni] (exclam. particle). Section 2 explained that, between like vowels, a phonetic glottal stop is realized.

/ea/ I recorded only three words which, moreover, have doublets with sequence /ia/: /baga/ [bageya, bagea] 'k.o. sago biscuit'; /bagaŋ/ [bageyāŋ, bageāŋ] 'part, share; turn'; /pakaŋ/ [pakeyāŋ, pakeāŋ] 'clothes' (compare /bag'ia/, /bag'ian/, /pak'ian/). This situation partly parallels to the /ua/ ~ /oa/ alternation (see below).

/eo/ /ma'leo/ [ma'eyo, ma'leo] in: /buruŋ ma'leo/ 'k.o. jungle fowl'; /teon/ [t'eōŋ, t'eyōŋ] 'k.o. honorary title'. See the alternants listed under /eU/ for other instances of /eo/.

/eu/ Only one example: /teuŋ/ [t'eūŋ, t'eyūŋ] 'k.o. honorary title'; /teon/ is its basic form.

/eI/ /k'eI/ [k'ei, key] 'Kei Islands'; /k'eI/ [k'ei, key] in: /m'eti k'eI/ 'exceptional low tide'. Besides these two forms I recorded three others which have doublet forms with /aI/: /t'eI/ [t'ei, tey] 'faeces'; /l'eI/ [l'ei, ley] 'again; also'; /m'eIm'eI/ [m'eim'ei, m'eym'ey] 'all kinds of small flying insects' (compare: /t'aI/, /l'aI/, /m'aIm'aI/).

Yet another group is formed by those morphemes which have, in addition to doublet forms with /aI/, a triplet form with /e/: /keIc'oa/ [keic'owa, keyc'owa] (next to /kaIc'oa/ and /kec'oa/) 'cockroach'; /malam'eIT/ [malam'eit-, malam'eyt-] (next to /malamaIT/ and /malam'eIT/) 'wife-taker group'; /sisin'eI/ [sisin'ei, sisin'ey] (next to /sisin'aI/ and /sisin'e/) 'to sift out facts from other peoples lives'.

/ai/ /pa'isal/ [pa'ʔisal, pa'isal] 'k.o. small proa'; /pa'isi/ [pa'ʔisi, pa'isi] 'naked'; /la'ia/ [la'ʔia, la'ia, la'iyā] 'to clamber up'.

/ae/ /hael/ [hael] in: /isi h'ael/ 'dorsal muscle'; /hahak'ae/ [hahak'ae] 'to act premature, rash'. Please refer to the alternants of /aI/ for other examples of /ae/ sequences; compare also /eI/.

/aa/ /sa'aru/ [sa'aru] 'sandbank'; /ma'ano/ [ma'ano] 'to put the harvest out to contract'; /w'aa/ [w'aʔa] 'trunk of sago-tree from which pith has been taken'. These words probably originate from local non-Malayic languages.

/ao/ /mala'ori/ [mala'ori] 'to wander about'; /l'aor/ [l'aor] 'k.o. edible seaworm'; /t'aon/ [t'aon] 'year'. This last example has a heavy form with /au/. Please see the alternants listed under /aU/ for other forms.

/au/ /ta'uli/ [ta'uli, ta'uli] 'wife-giver group'; /t'au/ [t'aun] 'year'.

/oi/ No attested cases.

/oe/ No attested cases other than those listed under /oI/. It is clear, however, that if morphemes should be found which do exhibit /oe/ where the opposition /e/ ~ /I/ is retained, this would make /I/ a heavy phoneme in a /oI/ sequence.

/oa/ /soa/ [s'owa, s'oa] 'k.o. territorial village group'; /man'oa/ [man'owa, man'oa] 'to visit a family regularly to court their daughter'; /keIc'oa/ [keic'owa, keyc'owa] 'cockroach'. Other instances of the sequence /oa/ concern forms which occur as doublets side by side with a form with /ua/: /b'oaŋ/ [b'owāŋ, b'oāŋ] 'to throw (away)'; /k'oaT/ [k'owāt-, k'oaT-] 'strong'; /paraNp'oaŋ/ [paramp'owāŋ, paramp'oāŋ] 'wowan'; /sam'oa/ [sam'owa, sam'oa] 'all, everything'; /tan'oar/ [tan'owar, tan'oar] 'eating time'; /tiNbar'oaŋ/ [timbar'owāŋ, timbar'oāŋ] 'to scoop bilge-water'; /totob'oaŋ/ [totob'owāŋ, totob'oāŋ] 'k.o. trad. instrument'.

/oo/ No attested cases. Since other sequences of like vowels do occur, this could be considered an incidental gap.

/ou/ /n'oul/ [n'oul] 'k.o. fish'.

/oU/ /a'oU/ [a'ou, a'ow] 'to grope, feel for'; /j'oU/ [j'ou, jow] term of address/reference for head of a *soa* (k.o. territorial village group); /kart'oU/ [kart'ou, kart'ow] 'pants, boxershorts'; /moNpr'oU/ [mōmpr'ou, mōmpr'ow] 'madam (arch. term of address)'; /moUm'oU/ [moum'ou, mowm'ow] 'dumb, mute'; /oU/ [ʔou, ʔow] 'Ou (village)'; /ou'ou/ [ʔouʔou, ʔowʔow] 'cup made of coconut-shell'.

/oI/ /b'oI ~ b'oe/ [b'oi, b'oy ~ b'oe] 'Booi (village)'; /k'oI ~ k'oe/ [k'oi, k'oy ~ k'oe] 'bedstead'; /man'oI ~ man'oe/ [man'oi, man'oy ~ man'oe] 'k.o. bird'; /m'oI ~ m'oe/ [m'oi, m'oy ~ m'oe] 'beautiful'; /n'oI ~ n'oe/ [n'oi, n'oy ~ n'oe] 'to nibble, gnaw'; /p'oIp'oI ~ p'oep'oe/ [p'oip'oi, p'oyp'oy ~ p'oep'oe] 'to dawdle, linger, loiter'; /sa'oI ~ sa'oe/ [sa'oi, sa'oy ~ sa'oe] 'k.o. basket'; /s'oI ~ s'oe/ [s'oi, s'oy ~ s'oe] in /c'ari s'oi/ 'get oneself into trouble'; /ta'oI ~ ta'oe/ [ta'oi, ta'oy ~ ta'oe] 'k.o. food-bowl made of coconut-shell'. In two cases I was not able to decide whether alternation occurs: /broIdeh'oŋ/ [broideh'ōŋ, broydeh'ōŋ] 'bridegroom'; /broIT/ [br'oit-, broyt-] 'bride'.

/ui/ No attested cases.

/ue/ No attested cases.

/ua/ /aŋt'ua/ [ʔānt'ua, ʔānt'uwa] 'he; she'; /apap'ua/ [ʔapap'ua, ʔapap'uwa] 'symbolic gift, offering'; /b'ua/ [b'ua, b'uwa] 'fruit'; /d'ua/ [d'ua, d'uwa] 'two'; /j'ua/ [j'ua, juwa] 'as well, also; please'; /j'ual/ [j'ual, j'uwal] 'to sell'; /kakat'ua/ [kakat'ua, kakat'uwa] 'cockatoo'; /kal'uar/ [kal'uar, kal'uwar] 'to go outside'; /k'ua/ [k'ua, k'uwa] 'sauce'; /laŋk'uas/ [lāŋk'uas, lāŋk'uwas] 'greater galingale'; /pasap'ua/ [pasap'ua, pasap'uwa] 'to hurry, be busy'; /penat'ua/ [penat'ua, penat'uwa] 'church elder'; /p'uar/ [puwar] (yell during fishing); /ruas/ [ruas, ruwas] 'internode of finger, bamboo'; /sab'ua/ [sab'ua, sabuwa] 'shed, lean-to'; /sah'ua/ [sah'ua, sah'uwa] 'to meddle in a conversation'; /s'ua/ [s'ua, s'uwa] 'to feed s.o. by placing food in the mouth'; /s'uaŋ/ [s'uaŋ, s'uwaŋ] 'dibble-stick'; /s'uar/ [s'uar, suwar] 'sweat'; /takar'uaŋ/ [takar'uaŋ, takar'uwaŋ] 'terribly'; /t'ua/ [t'ua, t'uwa] 'old'; /t'uaŋ/ [t'uaŋ, t'uwaŋ] 'sir'.

A second group of words displaying the sequence /ua/ are those which have doublet forms with a sequence /oa/: /b'uaŋ/ [b'uaŋ, b'uwaŋ] 'to throw (away)'; /k'uat/ [k'uat-, k'uwat-] 'strong'; /paramp'uaŋ/ [paramp'uaŋ, paramp'uwaŋ] 'woman'; /sam'ua/ [sam'ua, sam'uwa] 'all'; /tan'uar/ [tan'uar, tan'uwar] 'eating-time'; /tiNbar'uaŋ/ [timbar'uaŋ, timbar'uwaŋ] 'to scoop bilge-water'; /totob'uaŋ/ [totob'uaŋ, ~ totob'uwaŋ] 'k.o. trad.instrument'. The existence of a minimal pair /s'ua/ 'to feed s.o. by placing food in the mouth' vs. /s'oa/ 'k.o. territorial village-group', and the fact that the realization of a sequence /ua/ does not regularly vary between [uwa] and [owa] can be taken as an argument for not assuming allophonic variation.

/uo/ No attested cases.

/uu/ Only one form was recorded: /tuu/ [tuʔu] 'k.o. fish'.

/uI/ /m'uI/ [m'ui, m'uy] 'aunt (mothers' brothers' wife); /b'uI/ [b'ui, b'uy] 'prison'; /t'uI/ [t'ui, t'uy] in: /b'ulu t'uI/ 'k.o. bamboo'. Apparently the functional load of the sequence /uI/ is low.

/Ui/ /kU'ini/ [ku'ini, kuw'ini, kw'ini] 'k.o. fruit (mango)'. No other instances were recorded.

/Ue/ No attested cases.

/Ua/ /sU'ara/ [su'ara, suw'ara, sw'ara] 'sound; voice'; /bU'aya/ [bu'aya, buw'aya, bw'aya] 'crocodile'; /pU'asa/ [pu'asa, puw'asa, pw'asa] 'Islamic fasting'. (See Section 3 for proof of heavy status of /U/ in this position and environment).

/Uo/ No attested cases.

/Uu/ No attested cases.

/UU/ No attested cases.

/UI/ No attested cases.

/Ii/ No attested cases.

/Ie/ No attested cases.

/Ia/ /bI'asa/ [bi'asa, biy'asa, by'asa] 'usual(ly), normal(ly)'; /I'a/ [i'a, iy'a, ya] '(formal) yes'; /mutI'ara/ [muti'ara, mutiy'ara, muty'ara] 'pearl'; /pI'ara/ [pi'ara, piy'ara, py'ara] 'to support/keep s.o.'

/Io/ /I'o/ [i'o, iy'o, yo] '(informal) yes'; /sI'o/ [si'o, siy'o, syo] (exclam. expressing compassion, pity).

/Iu/ No attested cases.

/IU/ No attested cases.

/II/ No attested cases.

5. CONSONANTS

Ambonese Malay has nineteen consonant phonemes and four consonant archiphonemes (see Table 3):

Table 3: Consonant System

Place of articulation	Labial		Alveolar		Palatal		Velar		Glottal	
Voice	-	+	-	+	-	+	-	+	-	+
Archiphoneme	P		T		N		K			
Stop	p	b	t	d	c	j	k	g		
Nasal		m		n		ɲ		ŋ		
Fricative	f		s						h	
Lateral, Trill				l, r						
Semivowel		w				y				

The ARCHIPHONEMES /P, T, K/ result from the neutralization of the opposition between /p/ - /b/, /t/ - /d/, and /k/ - /g/ respectively in the following positions:

- Especially word-finally the occurrence of /P, T, K/ is frequent. Most words with /P, T, K/ in this position are (Dutch) loanwords, because many words of Malay origin have lost final stops *p, *t, *k, or *ʔ: *anaʔ > ana 'child'; *tutup > tutu 'to close'; *pantat > panta 'bottom, buttocks'. Word-finally the archiphonemes /P, T, K/ have a voiceless unreleased realization. Examples: /alman'aK/ [ʔalman'ak-] 'calendar' (< Dut. *almanak*); /laNsiK/ [lānsik-] 'languid, listless' (< Dut. *landziek*); /aNbaK/ [ʔāmbak-] 'character, habit' (< Jav. *ambek*); /otaK/ [ʔotak-] 'part of pulp of durian'; /aŋaT/ [ʔaŋat-] 'lukewarm'; /boT/ [bot-] 'ship, boat' (< Dut. *boot*); /dekaT/ [d'ekat-] 'close to, near'; /m'olaT/ [m'olat-] 'k.o. sago'; /rapaT/ [r'apat-] 'close to each other'; /sweT/ [swet-] 'sweat' (< Dut. *zweet*); /gal'aP/ [gal'ap-] 'dark'; /iskr'uP/ [iskr'up-] 'screw' (< Dut. *schroef*); /kan'oP/ [kan'op-] 'button'

(< Dut. *knoop*); /keP/ [kep-] 'notch, nick; to notch, nick' (< Dut. *keep*).

A considerable number of polysyllabic words with nonfinal stress have a doublet without final /P, T, K/ in nonemphatic speech:

/j'aNkriK ~ j'aNkri/ 'mole-cricket'; /bakar'ioK ~ bakar'io/ 'to wrench s.o. free from s.o.'s grip'; /r'usuK ~ r'usu/ 'rib (human, animal)'; /k'awaT ~ k'awa/ 'ironwire'; /t'akuT ~ t'aku/ 'afraid'; /r'unuT ~ runu/ 'fibroid material growing on palmtrees'; /t'utuP ~ tutu/ 'to close'; /s'iraP ~ s'ira/ 'shingles (for roofing)'; /s'iriP ~ s'iri/ 'fin (fish)'.

It may turn out that /P, T, K/ are heavy archiphonemes in this position and environment, that is, that they unidirectionally alternate with zero. Compare also:

/skaP/ [skap-] (not *[ska]) 'carpenter's plane; to plane'; /broT/ [brot-] (not *[bro]) 'bread'; /paK/ [pak-] (not *[pa]) 'to pack'; /gal'aP/ [gal'ap-] (not *[gal'a]) 'dark'; /sab'aP/ [sab'ap-] (not *[sab'a]) 'because'; /sar'uT/ [sar'ut-] (not *[sar'u]) in: /kwe sar'uT/ 'k.o. biscuit shaped like cheroot'.

Furthermore I recorded two words where final /K/ corresponds to a semantic distinction '+emphasis' vs. 'zero emphasis':

/b'odo/ 'stupid' vs. /b'odoK/ 'very stupid!'
/k'uto/ 'damn it!' vs. /k'utoK/ 'hell and damnation!'

2. In syllable-final position immediately before a stop, a nasal, the fricative /s/, or the lateral /l/, the archiphonemes /P, T, K/ have a voiceless unreleased realization.

Examples:

/kabaK'ti'anj/ [kabak-ti'anj] 'religious gathering'; /koT'pord'om/ [kot-pord'om] 'damn it!'; /h'oK'maT/ [h'ok-mat] 'to snap, snarl'; /naTs'epa/ [nat-s'epa] name of a beach on Ambon; /kaPs'eti/ [kap-s'eti] '(bird's) tuft, crest'; /n'aTsar/ [n'at-sar] 'offertory money'; /s'uK'leT/ [s'uklet] 'searchlight'; /p'aKsa/ [p'ak-sa] 'to force, compel'; /b'aKso/ [b'ak-so] '(Chinese) meatball'; /poK'p'oK/ [pok-p'ok-] 'k.o. low-speed diesel engine used on boats'; /c'uP'c'uP/ [c'up-c'up] onomatopoea suggestive of rapid movement.

The ARCHIPHONEME /N/ results from the neutralization of the opposition between /m, n, ñ/ and /ŋ/ before their respective homorganic obstruents and /l/. Examples:

/paraNp'uan/ [parāmp'uāŋ, parāmp'uwāŋ, parāŋp'uāŋ, parāŋp'uwāŋ] 'woman'; /a'Nbōŋ/ [ʔāmbōŋ, ʔāŋbōŋ] 'Ambon; Ambonese'; /biNt'aŋgor/ [bīnt'aŋgor, bīŋt'aŋgor] 'k.o. fruit'; /o'Ndos/ [ʔōndos,

ʔōŋdos] 'to flirt'; /karm'eNcoŋ/ [karm'ēŋcōŋ, karm'ēŋcōŋ] 'naughty boy/girl'; /p'aNjaŋ/ [p'āŋjāŋ, p'āŋjāŋ] 'long'; /a'Nsar/ [ʔānsār, ʔāŋsār] 'gill (of fish)'; /naNl'ohi/ [nānl'ohi, nāŋl'ohi] 'Nanlohi (clan name)'.

See also words with prefix *paN-:

/paNc'uri/ [pānc'uri, pāŋc'uri] 'to steal'; /paNt'utu/ [pānt'utu, pāŋt'utu] 'cover, top'; /paNp'ele/ [pāmp'ele, pāŋp'ele] something used to check, arrest something else; /paNb'odo/ [pāmb'odo, pāŋb'odo] 'very stupid'; /paNd'oti/ [pānd'oti, pāŋd'oti] 's.o. who uses black magic'.

Notice that in medial clusters with nasal plus /g, k/, no such variability is observed:

/aŋka/ [ʔāŋka] (not *[ʔāmka, ʔāŋka, ʔāŋka]) 'to lift s.t.'; /m'anga/ [m'āŋga] (not *[m'amga, m'aŋga, m'anga] 'mango'.

The VOICELESS and VOICED STOPS of the series /p, b, t, d, c, j, k, g/ are found in word-initial and in word-medial position. /p, b/ are bilabials, /t/ is an apico-alveodental, /d/ is an apico-alveolar, /c, j/ are laminal-palatals, /k, g/ are dorsal-velars. Relevant (near) minimal pairs are:

- | | | | |
|-----|-----------------------------------|---|-----------------------------------|
| p : | b/p'aI/ 'vulg) father' | - | /b'aI/ 'good' |
| | /t'aNpa/ 'place, spot' | - | /t'aNba/ 'to add s.t.' |
| : | t /p'aku/ 'nail' | - | /t'aku/ 'afraid' |
| | /t'aNpa/ 'place' | - | /t'aNta/ term of address |
| : | d/p'ari/ 'ray (fish)' | - | /d'ari/ 'from' |
| | /b'apa/ term of address | - | /ba'd'a/ 'skin powder' |
| : | c/p'olo/ 'to embrace' | - | /c'olo/ 'to dip in liquid' |
| | /p'ipi/ 'cheek' | - | /p'ici/ 'to give money' |
| : | j /p'ari/ 'ray (fish)' | - | /j'ari/ 'finger; toe' |
| | /p'ipi/ 'cheek' | - | /p'iji/ 'to massage' |
| : | k/p'ele/ 'to obstruct' | - | /k'ele/ 'to press under arm' |
| | /l'upa/ 'to forget' | - | /l'uka/ 'wound' |
| : | g/p'araŋ/ 'machete' | - | /g'araŋ/ 'salt' |
| | /t'ipa/ 'drum (instr)' | - | /t'iga/ 'three' |
| b : | t /b'aru/ 'new' | - | /t'aru/ 'to place, put s.t. down' |
| | /g'abag'aba/ 'sago-palm leaf rib' | - | /g'atag'ata/ 'k.o. pincers' |
| : | d/b'apa/ term of address | - | /d'apa/ 'to obtain, get' |
| | /abu'abu/ 'k.o. banana' | - | /adu'adu/ 'to comfort s.o.' |
| : | c/b'ole/ 'may, be allowed to' | - | /c'ole/ 'bodice' |
| | /c'ubi/ 'to pinch s.o.' | - | /c'uci/ 'to clean, wash' |
| : | j /b'aNbaŋ/ 'to warm s.t.' | - | /j'aNbaŋ/ 'beard (on cheek)' |
| | /m'abu/ 'drunk' | - | /m'aju/ 'to go forward' |
| : | k/b'ore/ 'k.o. poisonous extract' | - | /k'ore/ 'to fumble, tinker' |
| | /c'ubi/ 'to pinch s.o.' | - | /c'uki/ '(vulg) to copulate' |

- g /b'aru/ 'new' - /g'aru/ 'to scratch'
 /b'oba/ 'yaws' - /b'ogab'oga/ 'shaky (walk)'
- t : d /t'ulan/ 'bone' - /d'ulan/ 'wooden tray'
 /s'oNto/ 'to nudge, jog' - /s'oNdo/ 'spoon'
 : c /t'ari/ 'dance' - /c'ari/ 'to search'
 /b'ataŋ/ k.o. classifier - /b'acaŋ/ 'Bacan (island)'
 : j /t'ari/ 'dance' - /j'ari/ 'finger; toe'
 /b'atu/ 'stone; rock' - /b'aju/ 'shirt, blouse'
 : k /t'anaŋ/ 'to plant' - /k'anaŋ/ 'right (side)'
 /t'atu/ 'tattoo' - /t'aku/ 'afraid'
 : g /t'ali/ 'rope' - /g'ali/ 'to dig'
 /r'ata/ 'even, flat' - /r'aga/ 'rattan-ball'
- d : c /d'ari/ 'from' - /c'ari/ 'to search'
 /b'adaŋ/ 'body' - /b'acaŋ/ 'Bacan (island)'
 : j /d'ari/ 'from' - /j'ari/ 'finger; toe'
 /adu'adu/ 'to comfort' - /aju'aju/ 'to imitate'
 : k /d'aki/ 'dirt' - /k'aki/ 'foot; leg'
 /d'udu/ 'to sit' - /d'uku/ 'k.o. fruit'
 : g /d'oti/ 'to work magic' - /g'oti/ 'dug-out tree trunk used
 for preparing sago'
 /s'adu/ in: /hari sadu/ 'Saturday' - /s'agu/ 'sago'
- c : j /c'ari/ 'to search' - /j'ari/ 'finger'
 /acu/ 'to ignore' - /aju'aju/ 'to imitate'
 : k /coK/ 'choke, plug' - /koK/ in: /b'uruŋ koK/ 'owl'
 /c'uci/ 'to clean, wash' - /c'uki/ '(vulg) to copulate'
 : g /c'ili/ 'chili(pepper)' - /g'ilig'ili/ 'to tickle'
 /c'ici/ 'great-great grandchild' - /c'igi/ '(interj) go!'
- j : k /j'aNji/ 'to agree on s.t.' - /k'aNji/ 'starch'
 /p'uji/ 'praise' - /p'uki/ '(vulg) vagina'
 : g /j'aga/ 'to keep watch' - /g'aga/ 'beautiful, handsome'
 /maNj'ala/ 'to fish with
 casting-net' - /maŋg'ala/ in: /m'ati maŋg'ala/
 'to faint'
- k : g /k'araŋ/ 'coral' - /g'araŋ/ 'salt'
 /p'ikir/ 'to think' - /p'igi/ 'to go (away)'

In some lexical items there is an unexplained alternation between the voiceless stop and its homorganic voiced counterpart:

- /cigulu/ = /jigulu/ 'riddle'
 /kat'ar/ = /gat'ar/ 'crab'

- /p'aroŋ/ = /b'aroŋ/ 'fibrous material from sugar palm'
 /pat'atas/ = /bat'atas/ 'sweet-potato'

The NASALS /m, n, ñ, ŋ/ are distinguished on the basis of the following (sub-)minimal pairs:

- m : n /m'ani/ 'bead' - /n'ani/ 'bamboo hoe, pickaxe'
 : ñ /m'adu/ 'honey' - /ñ'adu/ short for: /koñ'adu/ 'brother/sister-in-law'
 : ŋ /m'ana/ 'where' - /ŋ'ana/ short for: /t'uaŋ'ana/ '(excl) gee!'
- n : ñ /ne/ in: /b'ubur ne/ 'k.o. porridge' - /ñe/ in: /m'uka m'acaŋ ñe/
 'look disappointed'
 : ŋ /ina/ 'mother' - /iŋa/ 'to remember'
- ñ : ŋ /t'aña/ 'to ask' - /t'eŋa/ 'middle'

The distributional and functional load of the four nasals differs markedly. They occur word-initially and word-medially before vowels. Word-initially, however, the functional load of /ñ/ and /ŋ/ is low. Some examples are:

- /ñ'amu/ [ñ'amu] 'mosquito'; /ñ'iru/ [ñ'iru] 'winnow'; /ñoŋ/ [ñõŋ] term of
 address for boys; /ŋ'asi/ [ŋ'asi] 'k.o. tax on tradegoods'; /ŋoŋ'are/
 [ŋoŋ'are] (but also /moŋ'are/) 'boy having reached marriageable age';
 /ŋ'aor/ [ŋ'aor] in: /baŋ'aŋ ŋ'aor/ 'to stroll aimlessly'.

Other examples of the four nasals in the said positions can be readily found throughout the text. Here I will only give some examples of /m/ and /n/ occurring in a number of morphemes in medial position after /r/, /s/, /K/, and /l/:

- /w'armus/ [w'armus] 'to work in a slovenly manner'; /parm'aK/
 [parm'ak-] 'to beat s.o. up'; /laNt'erna/ [lãnt'erna] 'lantern';
 /karm'eNcoŋ/ [karm'ẽncõŋ] 'naughty boy'; /jarn'iŋ/ [jarn'iŋ] 'bright,
 transparent'; /carm'iŋ/ [carm'iŋ] 'mirror'; /pasn'ana/ [pasn'ana] in:
 /m'ulu pasn'ana/ 'glutton, gorging'; /musn'aIT/ [musn'ait-] 'rower,
 oarsman on large proa'; /h'oKmaT/ [h'okmat-] 'to snap, snarl';
 /alman'aK/ [alman'ak-] 'calendar'.

In morpheme-final position, nasals other than /ŋ/ are rarely attested, and I was unable to find minimal pairs differing in just the morpheme-final nasal phoneme. Nevertheless, we cannot say that the opposition between the nasals is neutralized in this position. First, if we were to substitute the feature [labial] for [velar] in a word such as /tam'aŋ/ [tam'aŋ] 'friend', this would yield a form [tamãm], which speakers of Ambonese Malay reject and distinguish from the word for 'friend'. This points to virtual opposition. Second, there are a number of morphemes showing final /m/ or /n/: /drom/ [drõm] '(oil)drum' (< Eng. *drum*); /fam/ [fãm] 'clan-name' (< Dut. *familie*); /h'afen/ [h'afen] 'harbour' (< Dut. *haven*); /h'asen/ [h'asen] 'k.o. children's game'; (< Dut. *hazen?*); /ir'en/

[i'ren] 'Irene (Christian name)' (< Dut. *Ireen*); /kan/ [kân] in: /k'ayu kan/ 'squared timber' (< Dut. *kanthout*); /kar'am/ [karâm] 'cramp' (< Dut. *kramp*); /koT'pord'om/ [kot-pord'ôm] 'damn it!' (< Dut. *godverdomme*); /n'ilon/ [n'ilôn] 'nylon; nylon fishing line' (< Dut. < Eng. *nylon*); /om/ [ôm] term of address (< Dut. *oom*); /pomp'om/ [pōmp'ôm] in: /sagu pomp'om/ 'k.o. sago-cakes roasted in cartridge-cases' (< Eng. *pompom*); /pum/ [pūm] '(onomat) sound of explosion'; /rem/ [rēm] 'brake' (< Dut. *rem*); /rim/ [rīm] 'belt, girdle' (< Dut. *riem*); /rim/ [rīm] 'dialect' (< Dut. *rijm*?). These examples, apart from one case of onomatopoeia, were all borrowed from Dutch or English. And even though some of these loans are sometimes realized with /ŋ/ (probably only multisyllables, e.g., /n'ilon/ ~ /n'ilon/), this does not alter the fact that a phonemic distinction is made. Finally, note that in the elliptic code word-final /ŋ/ may assimilate to the following obstruent or /l/ (see Section 8).

The LABIO-DENTAL FRICATIVE /f/ occurs only in loanwords and in words of unknown origin. The word /fufu/ has a sound-suggestive meaning 'to blow in one's hands (while practicing black-magic)', and a derived meaning 'to practise black magic'. Examples:

/fader/ [fader] term of address for men (< Dut. *vader*); /fam/ [fām] 'clan-name' (< Dut. *familie*); /f'oroK/ [f'orok-] 'fork' (< Dut. *vork*); /f'oris/ [f'oris] 'living-room' (< Dut. *voorhuis*); /fols/ [fols] 'wrist' (< Dut. *pols*); /fal'uŋku/ [fal'ūŋku] 'fist' (< ?).

Examples of /f/ in word-medial position are:

/alifuru/ [alifuru] 'original inhabitant of Moluccan islands'; /g'ofu/ [g'ofu] 'to catch shrimps with noose made from plant-fiber'; /t'ifa/ [t'ifa] '(trad) musical drum'; /ist'ufer/ [ist'ufer] '(exclam) gee!'; /bagar'ofu/ [bagar'ofu] 'to try to free oneself (from grip)'.

Other instances of word-medial /f/ concern European loanwords:

/a'fker/ [ʔ'a'fker] 'worthless, broken down' (< Dut. *afkeuren*, *afgekeurd*); /kn'efer/ [kn'efer] 'moustache' (< Dut. *knevel*); /l'efri/ [l'efri] 'referee' (< Eng. *referee*); /l'ofraK/ [l'ofrak-] 'trench' (< Dut. *loopgraaf*); /m'ofor/ [m'ofor] 'to grumble' (< Dut. *mopperen*).

It is not yet clear in which circumstances /f/ alternates with /p/ (or /P/). In daily conversations words such as /fal'uNku/, /f'oris/, /a'fker/ are heard next to pal'uNku/, /p'oris/, /aPker/. Even though I did not record minimal pairs, /p/ cannot regularly be replaced by /f/ (/p'aku/ [p'aku] not *[f'aku] 'nail'). Nor does it appear to be the case that every /f/ can be replaced by /p/ (/fader/ [fader] not [pader] term of address for grown man). So, while phonemic status can be attributed to both /p/ and /f/, the opposition between these two phonemes is not neutralized in certain positions, nor can "heaviness" (of either /p/ or /f/) be a

crucial factor. Sociolinguistic factors (e.g., relative status of addressee) may well play an important role in the /p/ - /f/ variability. For the time being I will consider these words as doublets.

I recorded only two cases of word-final /f/. One was a Dutch loanword used by (young) people in Ambon Town: /af/ [ʔ'af] 'finished (of love relation)'; and the other was onomatopoeic /buf/ [buf], which is suggestive of the fall of a heavy object.

The ALVEOLAR FRICATIVE /s/ occurs in word-initial, -medial, and -final position. Examples:

/saw'aI/ [saw'ai, saw'ay] 'awry, aslant, on one side'; /seŋ/ [sēŋ] 'no; not'; /b'olsaK/ [b'olsak-] 'mattress'; /gop'asa/ [gop'asa] 'k.o. tree'; /g'ogog/ [g'ogog] 'k.o. delicacy'; /rab'us/ [rab'us] 'to boil, cook'.

The GLOTTAL FRICATIVE /h/ occurs word-initially and word-medially. Only in the exclamations /ih/ (indicative of surprise) and /ah/ (indicative of irritation) does /h/ occur word-finally. Examples:

/h'ael/ [h'ael] in: /'isi h'ael/ 'dorsal muscle'; /hah'alan/ [hah'alāŋ] 'carrying pole'; /hah'esi/ [hah'esi] in: /b'ulu hah'esi/ 'k.o. bamboo'; /hal/ [hal] 'matter, case' (B.I. *perkara*); /hal'ia/ [hal'ia, hal'iya] 'ginger'; /h'aŋtan/ [h'āntāŋ] 'to hit hard, give s.o. a blow'; /h'osa/ [h'osa] 'to pant'; /l'oha/ [l'oha] 'to spit milk (of babies after drinking)'; /goh'eba/ [goh'eba] 'eagle'; /oha/ [ʔ'oha] 'k.o. sago delicacy'; /kah'elo/ [kah'elo] 'k.o. bee'.

In quite a few words word-medial /h/ is optional; when /h/ is deleted between like vowels, one of the two adjacent vowel segments is also deleted. See for example:

/bah'asa/	~ /b'asa/ 'language'
/istir'ahaT/	~ /istir'aT/ 'to rest'
/p'ohon/	~ /pon/ 'tree; bush; plant'
/l'eher/	~ /ler/ 'neck'
/kok'ohu/	~ /kok'oU/ 'k.o. dish' (< /k'ohu k'ohu/)
/tahaw'aru/	~ /taw'aru/ 'to find out by means of magic'
/padah'al/	~ /pad'al/ 'whereas'
/matah'ari/	~ /mat'ari/ 'sun'
/j'ahaT/	~ /jaT/ 'bad, wicked'
/kajah'atan/	~ /kaj'atan/ 'very bad, wicked'
/mas'ohi/	~ /mas'oI/ 'mutual aid, assistance'
/amah'e/	~ /ama'e/ 'Amahai (village)'
/latuh'alaT/	~ /latu'alaT/ 'Lathahat (village)'
/tuhum'ena/	~ /tum'ena/ 'Tuhumena (clan-name)'
/naNI'ohi/	~ /naNI'oI/ 'Nanlohi (clan-name)'

But it seems that deletion of medial /h/ can not be generalized into a rule because in some words deletion can not take place: /hahak'ae/ (not *[hak'ae]) 'to

act premature, rash'; /hah'aləŋ/ (not */h'aləŋ/) 'carrying pole'; /hah'al/ 'exclamatory scream expressing laughter' (not */h'al/).

Both LIQUIDS /l/ and /r/ occur in word-initial, -medial, and -final position. Examples:

/l'oNbo/ [l'oŋbo] 'soft; weak'; /l'ena/ [l'ena] 'to have a walk'; /l'epal'epa/ [l'epal'epa] 'k.o. proa'; /bal'i/ [bal'i] 'to buy'; /s'ele/ [s'ele] 'a fourth part, quarter'; /t'agal/ [t'agal] 'because of, on account of'; /s'esel/ [s'esel] 'k.o. tree'; /r'aci/ [r'aci] 'to rub s.t. down'; /r'abe/ [r'abe] 'to tear up, apart'; /t'ari/ [t'ari] 'dance'; /pars'is/ [pars'is] 'exactly'; /lur/ [lur] 'to peer'; /akar/ [ʔakar] 'root'.

The SEMIVOWELS /w/ and /y/ occur in word-initial and word-medial position before a vowel. Some examples of /w/ and /y/ are:

/w'akaw'aka/ [w'akaw'aka] 'k.o. plaited bamboo mat'; /w'ate/ [w'ate] 'uncle (father's sister's husband)'; /w'ela/ [w'ela] 'certain phase in growth of sago-palm'; /erwe/ [ʔerwe] 'k.o. dish made of dog-meat'; /sw'ami/ [sw'ami] 'k.o. cassava dish'; /kw'arto/ [kw'arto] '(arch.) labour service for village head'; /cwi/ [cwi] in: /b'uruŋ cwi/ 'k.o. hummingbird'; /twi/ [twi] in: /b'uruŋ twi/ 'k.o. parrot'; /aNtaw'ali/ [antaw'ali] 'k.o. climbing-plant'; /k'awek'awe/ [k'awek'awe] 'homosexual (man); sissy'; /gag'awaŋ/ [gag'awaŋ] 'to act recklessly'; /yal'us/ [yal'us] 'jealous'; /ye/ [ye] in: /ana ye/ [ʔana ye] 'hair combed in the form of letter "j" next to the ears'; /hay'al/ [hay'al] 'to flirt'; /kal'uyu/ [kal'uyu] 'shark'; /kok'oya/ [kok'oya] 'k.o. plaited mat used as hat during rainfall'.

5. CONSONANT SEQUENCES

Table 4 shows attested consonant sequences C_1C_2 belonging to the same syllable.

Regarding these clusters the following observations must be made. First, in daily speech words are frequently shortened in such a way that consonant clusters result from syncopation. In the examples which follow, syncopated forms are given next to full forms. See Section 7 for the structure of full forms, and Section 8 for some more details on forms in the elliptic code. Second, a process which runs counter to syncopation is epenthesis. Epenthesis results in cluster simplification and is frequently attested in loans from European languages. Nevertheless, the number of loans from European languages which display a C_1C_2 cluster is relatively high. Finally, archiphonemes /P, T, K/ have been left out of Table 4, even though consonant clusters involving these phonemes were recorded. For instance: /karT/ in: /aNboŋ karT/ 'a Moluccan raised and living outside the Moluccas'. Examples of C_1C_2 clusters are:

Table 4: Consonant Sequences

$C_1 \backslash C_2$	p	b	t	d	c	j	k	g	m	n	ñ	ŋ	f	s	h	l	r	w	y
p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
b	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-
t	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-
d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-
j	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
k	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	+	+	-
g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
n	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
ñ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ŋ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
s	+	-	+	-	-	-	+	-	+	+	-	-	-	-	-	+	+	+	-
h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
l	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
r	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
w	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

/pl/ /pl'eKster/ [pl'ek-ster] 'plaster (for wound)' (< Dut. *pleister*); /plap'oŋ/ [pla'pōŋ] 'ceiling' (< Dut. *plafond*); /pl'eces/ [pl'eces] in: /m'ulu pl'eces/ 'twaddler' (< ?); /t'aplaK/ [t'aplak-] in: /t'aplak m'eja/ 'tablecloth' (< Dut. *tafelaken*); /koNpl'eT/ [kompl'et-] 'complete, full' (< Dut. *complete*); /pal'aŋ/ [pal'aŋ] > /plaŋ/ [plāŋ] in: /pal'aŋpal'aŋ/ 'slowly, gently; softly'.

/pr/ /praŋ/ [prāŋ] onomatopoeia suggestive of falling or clashing objects; /premaŋ/ [prēmāŋ] in: /pak'iaŋ premaŋ/ 'plain (civilian) clothes (as opposed to uniforms)'; /paraNp'uaŋ/ [paramp'uāŋ] > /praNp'uaŋ/ [pramp'uāŋ] 'woman'.

/bs/ /bas'ar/ [bas'ar] > /bsar/ 'big'.

/bl/ /bl'iNblaŋ/ [bl'imblāŋ] 'be gaudily dressed'; /bal'acaŋ/ [bal'acāŋ] > /bl'acaŋ/ [bl'acāŋ] 'k.o. paste made from pounded fish or shrimps'; /sabal'a/ [sabal'a] > /sabl'a/ [sabl'a] 'side'.

/br/ /broId'eŋ/ [broydeh'ōŋ] 'bridegroom' (< Dut. *bruidegom*); /broIT/ [broyt-] 'bride' (< Dut. *bruid*); /broT/ [brot-] 'bread' (< Dut. *brood*);

- /l'abraK/ [l'abrak-] 'to beat s.o. up'; /bar'anjkaT/ [bar'anjkat-] > /br'anjkaT/ [br'anjkat-] 'to depart'.
- /t/ /tal'aNjan/ [tal'añjān] > /tl'aNjan/ [tl'añjān] 'naked'; /tal'an/ [tal'ān] > /tlan/ [tlān] 'to swallow'.
- /tr/ /tri/ in: /b'uruŋ tritri/ 'k.o. bird'; /tr'osol/ [tr'osol] 'to dawdle, loiter, linger' (< Dut. *treuzelen*); /l'istriK/ [l'istik-] '(electric) current' (< Dut. *electrisch*); /tar'igu/ [tar'igu] > /tr'igu/ [tr'igu] 'wheat' (< Por. *trigo*).
- /tw/ /twi/ in: /b'uruŋ twi/ 'k.o. parrot'; /twiŋ/ [twiŋ] in: /i'kan twiŋtwiŋ/ 'flying fish'.
- /dl/ /dal'apaŋ/ [dal'apān] > /dl'apaŋ/ [dl'apān] 'eight'.
- /dr/ /drom/ [drōm] '(oil) drum' (< Eng. *drum*); /ceNdraw'asi/ [cēndraw'asi] 'bird-of-paradise'; /dar'ayaŋ/ [dar'ayān] > /dr'ayaŋ/ [dr'ayān] 'wart'.
- /cl/ /cal'ana/ [cal'ana] > /cl'ana/ [cl'ana] 'pants'.
- /cr/ /car'ita/ [car'ita] > /cr'ita/ [cr'ita] 'story; to tell'.
- /cw/ /cwi/ in: /b'uruŋ cwi/ 'k.o. hummingbird'.
- /jl/ /jal'oNto/ [jal'onto] > /jl'oNto/ [jl'onto] 'to cheat at game of marbles'.
- /kn/ /kn'efer/ [kn'efer] 'moustache' (< Dut. *knevel*).
- /kl/ /klar/ 'ready, finished' (< Dut. *klaar*); /kal'uyu/ [kal'uyu] > /kl'uyu/ [kl'uyu] 'shark'; /makel'ar/ [makel'ar] > /makl'ar/ [makl'ar] 'intermediary, middleman (in selling goods)' (< Dut. *makelaar*).
- /kr/ /j'anj'kri/ [j'anj'kri] 'cricket'; /karaNjan/ [karāñjān] > /kr'aNjan/ [kr'āñjān] 'basket'.
- /kw/ /kw'arto/ [kw'arto] '(arch.) labour service for village head' (< Por. ?); /kwe/ 'biscuit; cake'.
- /gl/ /gal'aP/ [gal'ap-] > /gl'aP/ [glap-] 'dark'.
- /gr/ /negri/ [negri] 'village'; /gr'eNdel/ [gr'endel] '(door)bolt' (< Dut. *grendel*); /bagar'a/ [bagar'a] > /bagr'a/ [bagr'a] 'to move'.
- /ml/ /mal'ayu/ [mal'ayu] > /ml'ayu/ [ml'ayu] 'Malay'.
- /mr/ /mar'aju/ [mar'aju] > /mr'aju/ [mr'aju] 'to be in a bad temper'.
- /nl/ /nal'ayaŋ/ [nal'ayān] > /nl'ayaŋ/ [nl'ayān] 'fisherman'.
- /fl/ /flur/ 'floor' (< Dut. *vloer*).
- /fr/ /l'ofraK/ [l'ofrak-] 'trench' (< Dut. *loopgraaf*); /fr'esko/ [fr'esko] 'fresh' (< Por. *fresco*); /l'efri/ [l'efri] 'referee, umpire' (< Eng. *referee*).
- /sp/ /speT/ [spet-] 'to spray, spout, squirt' (< Dut. *spuiten*); /spul/ 'to wash, rinse' (< Dut. *spoelen*).
- /st/ /st'apel/ [st'apel] in: /k'ayu st'apel/ 'firewood' (< Dut. *stapel*); /stiP/ [stip-] 'pencil-eraser' (< Dut. *stuf*); /pl'eKster/ [pl'ekster] 'plaster (for wound)' (< Dut. *pleister*).

- /sk/ /sk'ola/ [sk'ola] 'school' (< Por. *escola*); /sk'eleŋ/ [sk'elēŋ] in: /m'ata sk'eleŋ/ 'cross-eyed' (< Dut. *scheel*); /skaP/ [skap-] '(carpenter's) plane' (< Dut. *schaaf*); /sak'araŋ/ [sak'arān] > /skaraŋ/ [sk'arān] 'now'.
- /sm/ /sm'erlaK/ [sm'erlak-] 'dirty fellow, rascal' (< Dut. *smeerlap*).
- /sn/ /snuK/ [snuk-] 'candy' (< Dut. *snoep*).
- /sl/ /sl'aber/ [sl'aber] 'floor-cloth' (< Dut. *slabber*); /sl'oki/ [sl'oki] 'tot of liquor' (< Dut. *slokje*); /sal'obar/ [sal'obar] > /sl'obar/ [sl'obar] 'brackish, saltish'.
- /sr/ /sar'iaŋ/ [sariān, sar'iyān] > /sriaŋ/ [sriān, sr'iyān] 'a long time'.
- /sw/ /sw'aŋgi/ [sw'āngi] 'k.o. evil spirit'; /sw'ipen/ [sw'ipēŋ] 'general traffic inspection' (< Eng. *sweeping*); /sw'ami/ [sw'ami] 'k.o. cassava dish'.
- /ls/ /fols/ in: /fols t'aŋaŋ/ 'wrist' (< Dut. *pols*).
- /rt/ /karT/ [kart-] in: /a'Nbōŋ karT/ 'a Moluccan raised and living outside the Moluccas' (< Dut. *kaart*).
- /rs/ /bors/ in: /b'ulu bors/ 'money-box made of bamboo' (< Dut. *beurs*).

Looking at Table 4 and the examples above we can make the following generalizations:

1. by far the most clusters occur in word-initial position;
2. most clusters consist of a stop followed by a lateral or trill; other clusters occupy a marginal position in this respect;
3. /s/ outnumbers all other consonants in C₁ position regarding combinatory possibilities;
4. considering the occurrence of the cluster /cr/ the nonoccurrence of the cluster /jr/ must be seen as an incidental gap.

Other consonant sequences, which are far less often attested however, are of the C₁C₂C₃ type. These are all (or nearly all) loans from European languages and occur in word-initial position only, while C₁ position is occupied by /s/. Examples:

- /skr/ /skr'obi/ [skr'obi] '(excl) Go away!' (< Dut. ?); /skruP/ [skrup-] 'screw; bolt' (< Dut. *schroef*).
- /str/ /straT/ [strat-] 'street' (< Dut. *straat*); /streP/ [strep-] 'stripe' (< Dut. *streep*); /strika/ [strika] 'to iron' (< Dut. *strijken*); /stroŋ/ [strōŋ] '(excl) shit' (< Dut. *stront*); /str'oŋken/ [str'ōŋkēŋ] 'k.o. oil lamp' (< Eng. *Storm King*).

See Section 7.2 for epenthesis with /i/.

7. SYLLABLE AND ROOT STRUCTURE

7.1 SYLLABLE STRUCTURE

If we start from the assumption that there is a close relationship between syllable structure and word structure, we arrive at the following general scheme for the syllable: (C₁)(C₂)(C₃) V (C₄)(C₅). The phonotactic constraints of the language allow at most a sequence of three consonants in word-initial position, and no more than two consonants in word-final position. In this analysis it is also assumed that every vowel constitutes a nucleus on its own, while no syllabic consonants were observed. Examples of syllable types can be found in the next section.

7.2 ROOT STRUCTURE

Pulgram (1970) proposes three principles—both general and language specific in nature—for establishing syllable boundaries. Assuming that each syllable can be divided phonologically into onset and core, and each core divided phonetically into nucleus and coda, the principles can be summarized as follows: (1) maximal open syllabicity, (2) minimal coda and maximal onset, (3) irregular coda. The following serves as an illustration. The word <tampa> 'place, spot' is syllabified as <t'a. mpa> according to the first principle. This, however, creates a consonant cluster at the onset of the second syllable which violates a sequential constraint in AM. The second principle resyllabifies <ta.mpa> into <tam.pa> because as many consonants as necessary—but no more—are detached from the onset of the second syllable and moved to the first as coda. I have not come across instances where the third principle operates to put the burden of unavoidable word-structure irregularities on the coda rather than the onset.

The archiphonemes /I/ and /U/ are treated as vowels although their realizations may yield forms with varying syllabicity.⁷ Based on 1741 entries taken from an early version of my wordlist, roots in Ambonese Malay can be divided as follows:

monosyllables	: 109	(6.3 percent)
disyllables	: 1227	(70.5 percent)
trisyllables	: 314	(18.0 percent)
quadrisyllables	: 91	(5.2 percent)

These figures show that disyllabic roots form the majority of morphemes that were recorded, while monosyllables and quadrisyllables occupy a numerically more marginal position in this sample. Roots containing more than four syllables were not found.

The various combinations of syllable types which are displayed by these roots follow. Number of occurrences is given in parentheses; syllable boundaries are indicated by a dot; not all structures are exemplified.

Monosyllables:

V (1), CV (15), VC (5), CVC (65), CCV (1), CCVC (16), CVCC (3), CCCVC (3).

Examples:

/e/ 'interj) he, gee'; /bu/ '(term of address/reference) older brother'; /ir/ 'drunk'; /ser/ 'no; not'; /tri/ in: /b'urun tr'itri/ 'k.o. bird'; /speT/ 'to spray, squirt'; /fols/ 'wrist'; /streP/ 'stripe'.

Disyllables:

V.V (3), V.CV (42), V.VC (1), V.CVC (45), CV.V (52), CV.CV (416), CV.VC (23), CV.CVC (345), CV.CCV (2), CV.CCVC (5), VC.CV (13), VC.CVC (24), VC.CCVC (4), CVC.CV (95), CVC.CVC (121), CVC.CCV (1), CVC.CCVC (3), CCV.CV (5), CCV.VC (1), CCV.CVC (11), CCVC.CV (8), CCVC.CVC (2), CCVC.CCVC (2), CCCV.CV (1), CCCV.CVC (1), CCCVC.CVC (1).

Examples:

/a.U/ (exclam. expressing displeasure); /a.cu/ 'to ignore'; /a.Ir/ 'water'; /aN.pa/ 'four'; /ba.I/ 'good'; /t'a.un/ 'year'; /aN.san/ 'gill'; /g'a.ga/ 'beautiful, handsome'; /d'e.kaT/ 'near, not far'; /tiN.ba/ 'to scoop'; /h'aN.tan/ 'to hit'; /koN.pl'eT/ 'complete'; /fres.ko/ 'fresh'; /skr'o.bi/ 'Go away!'; /bliN.blan/ 'be gaudily dressed'; /str'on.keŋ/ 'k.o. oil lamp'.

Trisyllables:

V.V.CV (1), V.CV.V (2), V.CV.CV (5), V.CV.VC (1), V.CV.CVC (8), CV.V.V (1), CV.V.CV (5), CV.CV.V (23), CV.CV.CV (64), CV.CV.VC (19), CV.CV.CVC (68), CV.V.CVC (2), CV.CVC.CV (15), CV.CVC.CVC (18), VC.CV.V (1), VC.CV.CV (2), VC.CVC.CVC (1), VC.CV.CVC (2), VC.CCV.CV (2), CVC.CV.V (6), CVC.CV.CV (36), CVC.CV.VC (3), CVC.CV.CVC (20), CVC.CVC.CV (3), CVC.CVC.CVC (5), CVC.CCV.V (1).

Examples:

/a.U.w'o/ (exclam. expressing displeasure); /a.ma.t'o/ 'farewell'; /a.r'i.ŋan/ 'light, not heavy'; /o.li.o/ 'k.o. wood'; /aN.t'u.a/ 'he; she'; /is.t'o.ri/ 'to tell'; /sa.k'a.li/ 'very'; /pan.g'a.yo/ 'to row'; /taN.p'i.as/ 'to spatter, splash'; /maN.j'a. I/ 'to sew'; /pan.k'o.tor/ 'dirty'; /biN.taŋ.gor/ 'k.o. tree'; /is.k'a.kar/ 'avaricious, stingy'; /moN.pr'o.U/ '(term of address) madam'.

Quadrisyllables:

V.V.CV.CVC (1), V.CV.CV.V (1), V.CVC.CV.V (1), V.CV.CV.CV (1), V.CV.CV.CVC (1), CV.V.CV.V (2), CV.V.CV.CV (7), CV.CV.V.CV (2), CV.CV.V.CVC (1), CV.CV.CV.V (10), CV.CV.CV.CV (31), CV.CV.CV.VC (5), CV.CVC.CV.CV (1), CV.CVC.CV.VC (2), CV.CVC.CV.CVC (5), CV.

VC.CVC.CV (1), CV.CV.CV.CVC (11), CV.CV.CVC.CVC (1), VC.CV.CV.CV (1), CVC.CV.CV.CV (2), CVC.CV.CV.VC (1), CVC.CV.CV.CVC (1), CVC.CV.CV.CV (1), CCV.V.CV.CVC (1). Examples:

/a.I.d'o.taŋ/ in: /p'isaŋ aId'otang/ 'k.o. banana'; /aN.ta.w'a.li/ 'k.o. climbing-plant'; /ba.I.l'e.U/ 'village council-house'; /ba.I.m'a.na/ 'how'; /sa.la.w'a.ku/ 'shield'; /ka.ka.r'i.ŋaŋ/ 'dried-up'; /sa.la.w'e.na/ 'to act hurriedly and rash'; /a.pa.p'u.a/ 'symbolic gift, offering'; /ga.cu.m'oN.taŋ/ 'cock of the walk, ringleader'.

Further conclusions which can be drawn concerning the structure of roots in his sample:

- 1. V, CV, and CVC syllables are more common than any other syllable type;
- 2. roots which conform to a CV(C).CV(C) pattern represent 56.1 percent of all sampled roots. Within this group, roots which have a European origin are relatively less frequent than in other structures;
- 3. the number of European loans is high in roots which have a CC(C) sequence (see Section 6);
- 4. Nonproductive affixes account for a number of tri- and quadrisyllabic roots (cf. kakaringang, panggayo).

The words with an initial /C₁C₂C₃/ cluster (see Section 6; /s/ occupies C₁ position) are sometimes realized with /iC₁C₂C₃/. Examples:

/iskr'obi/ 'excl. Go away' (cf. /skr'obi/); /iskruP/ 'screw; bolt' (cf. /skruP/); /istr'aT/ 'street' (cf. /straT/); /istrika/ 'to iron' (cf. /strika/). Occasionally, epenthesis with /i/ also occurs in word-initial /C₁C₂/ clusters (/s/ occupies C₁ position): /ist'ori/ 'to tell; speak' next to /st'ori/.

It is not yet clear if there are dialectal or social differences underlying this variability. Therefore it is hard to tell if, within one and the same dialect or code, epenthesis is employed as a means to achieve resyllabification.

3. THE ELLIPTIC CODE

During the interviews with my main informant, data were gathered by means of elicitation. In such a situation the informant concentrates on giving 'correct' and full, unabridged wordforms. This speech style, which is called explicit code here, is also used by Ambonese Malay speakers in formal situations, or situations where a H-language is thought proper. On the other hand, when speakers focus on the message rather than the form, the elliptic code is used. Characteristic features of this elliptic code are a fast speech, interior dissimilation and exterior assimilation, deletion of segments, vowel coalescence, and the use of basic forms next to heavy forms.

I am aware that this represents a simplistic picture of the actual sociolinguistic situation. To begin with, it is probably more correct to view explicit code and elliptic code as the extreme ends of a continuum between which other codes are situated, and from which AM speakers—consciously or not—continually select styles which are deemed proper for the speech situation. Secondly, it must be borne in mind that bordering on the explicit code is the national standard language, Bahasa Indonesia, to which AM stands in a dialect-language relation.

A careful investigation of additional data may provide useful insights into the often neglected phenomena of segment deletion, assimilation, and other features which fall under the heading of so-called Rapid Speech Phenomena. Because my own scanty data do not allow for giving solid conclusions nor formulating exact rules—if there are any—I will restrict myself to some provisional observations on external assimilation (sandhi), segment deletion, and vowel coalescence. (Interior dissimilation was described under archiphoneme /N/ in Section 5.)

Exterior assimilation:

In the elliptic code word-final /ŋ/ may assimilate to a following obstruent or /l/. Examples: /seŋ b'isa/ > /sem b'isa/ 'not possible'; /be seŋ d'apa/ > /be sen d'apa/ 'I didn't get (it)'; /m'uka s'ama kes/ > /m'uka sam kes/ > /m'uka saŋ kes/ 'a face like a monkey'; /m'uka m'acaŋ c'ina m'ati/ > /m'uka m'acaŋ c'ina m'ati/ 'to have a pale, sickly complexion' (lit. 'to have a face like a dead Chinese'); /koŋ b'eta/ > /kom b'eta/ 'And what about me?'; /d'ia seŋ l'ia 'akaŋ/ > /de sen li 'akaŋ/ 'he didn't see it'; /d'ia seŋ s'ono/ > /de sen s'ono/ 'he is not asleep'; /seŋ jaU/ > /seŋ jaU/ 'not far (away)'.

Segment deletion:

Because syllables and words resulting from deletion processes often deviate from preferred syllable-structure and word-structure types, it is inferred that the main factor which triggers deletion is the desire to speak fast rather than to comply with syllable-structure or word-structure rules (see Sections 7.1, 7.2).

Deletion of segments occurs in initial, medial, and final position. It may affect one or more segments.

Vowels in stressed syllables are usually not deleted (exceptions are: /ose/ > /se/ alongside /os/ 'you'. Perhaps not surprisingly there is a semantic distinction between full forms and shortened forms (see below); /'akaŋ/ > /kaŋ/ alongside /aŋ/ 'it').

Usually, but not always, shortened forms appear in sentence context only, that is, only some shortened words may constitute a one-word sentence (e.g., Pi! 'Go (away)!'; Se? '(And what about) you?').

Short-form personal pronouns occur in certain syntactic positions only (e.g., /beT/ > /be/ < /b'eta/ 'I, and /di/ < /d'ia/ 'he, she, it' only in Subject position; /se/ > /os/ < /'ose/ 'you' both in Subject and Object position; /aŋ/ > /kaŋ/ < /'akaŋ/ 'it' only in Object position).

Some examples of forms with deleted segments are:

Deletion of initial segment(s):

/a'kaN/ > /kaN/ 'it'; /a'kaŋ/ > /aŋ/ 'it'; /baŋ'ini/ > /g'ini/ 'like this'; /baŋ'itu/ > /g'itu/ 'like that'; /koŋ'adu/ > /ŋ'adu/ 'brother/sister-in-law'. In the case of /'ose/ > /se/ deletion corresponds to a semantic distinction [- familiar] versus [+ familiar].

Deletion of medial segment(s):

/a'mbe/ > /ame/ 'to take'; /d'oraN/ > /doŋ/ 'they; you'; /ka'm'oraŋ/ > /ka'm'oŋ/ 'you'; /ba'l'akaN/ > /bl'akaN/ 'back side'; /ba'ras/ > /bras/ '(uncooked) rice'; /ba'raT/ > /braT/ 'heavy' (cf. /ba'raT/ not */braT/ 'west'); /nu'sal'aU/ > /nusl'aU/ 'Nusala (island)'; /naNl'ohi/ > /naNl'oI/ 'Nanlohi (clan-name)'; /leher/ > /ler/ 'neck'; /p'ohon/ > /pon/ 'tree'; /d'ohod'oho/ > /dod'oho/ 'present taken home from journey'; /k'ohuk'ohu/ > /kok'ohu/ 'k.o. dish made from grated coconut and smoked fish'; /t'omit'omi/ > /tomt'omi/ 'k.o. cherry-like fruit'; /l'ayan/ > /lan'ayan/ 'kite'; /m'oNom'oNo/ > /monm'oŋo/ 'stupid, idiot'; /n'aUn'aU/ > /nan'aU/ 'imbecile, stupid'; /t'eqat'eqa/ > /tent'eqa/ '(in the) middle (of)'; /t'uat'ua/ > /tut'ua/ in: /'oraŋ tut'ua/ 'elders'; /p'akep'ake/ > /paKp'ake/ 'black magic, to practise blackmagic'; /baŋ'alaN/ > /baŋ'aN/ 'to walk'.

Deletion of final segment(s):

/d'ekaT/ > /d'eka/ 'close, nearby'; /paIT/ > /paI/ 'bitter'; /seNtaP/ > /seNta/ 'frame of large proa'; /r'usaK/ > /r'usa/ 'damaged, broken down'; /b'eta/ > /beT/ 'I'; /a'Nbel/ > /a'Nbe/ 'to take'; /p'angel/ > /paNge/ 'to call'; /b'awa/ > /baw/ 'to bring'; /b'awa/ > /ba/ 'to bring'; /l'ia/ > /li/ 'to look, see'; /d'ia/ > /di/ 'he; she; it'; /ale/ > /al/ 'you'; /s'ama/ > /sam/ 'just like; to'; /h'ari/ > /har/ 'day'; /d'ari/ > /dar/ 'from'; /m'ari/ > /mar/ 'come'; /ini/ > /in/ 'this; these'; /usi/ > /us/ 'older sister'; /itu/ > /iT/ 'that; those'; /b'aru/ > /bar/ 'new'; /k'alo/ > /kal/ 'if, when'; /k'asi/ > /kas/ 'to give'; /sap'ulu/ > /sapul/ 'ten'; /l'alu/ > /lal/ 'and then'; /l'alu/ > /la/ 'and then'; /s'atu/ > /saT/ 'one'; /d'olo/ > /do/ 'first'; /pigi/ > /pi/ 'to go'; /s'aja/ > /sa/ 'only, just'; /s'uda/ > /su/ 'already'; /deNaŋ/ > /deN/ 'with'; /s'apa/ > /saP/ 'who'; /s'ini/ > /siN/ 'here'; /s'ana/ > /saN/ 'there'.

In the case of /'ose/ > /os/ 'you', deletion corresponds to a semantic distinction [± respect] versus [- respect]. Final segments of the prefixes baku- and kasi- may be deleted as well: /b'aku/ > /baK/ RECIPROCAL PREFIX; /k'asi/ > /kas/ TRANSITIVIZING PREFIX.

Vowel coalescence:

coalescence of two vowels resulting in monosyllables—a process which stands apart from deletion—is attested in: /d'ua/ > /do/ 'two'; /j'ua/ > /jo/ 'please'; /b'uaT/ > /boT/ 'for, in order to; to'; /t'uaN/ > /toN/ 'Lord' in: /t'uaN 'ala/ '(excl) God!'.

ABBREVIATIONS AND SYMBOLS

AM	Ambonese Malay	[]	phonetic representation
Dut.	Dutch	/ /	phonemic representation
Eng.	English	< >	orthographic representation
Jav.	Javanese	.	syllable boundary
Por.	Portuguese	PR	Phonological Rule
		#	morpheme boundary
		'	wordstress
		~	nasalized (vowel)
		~	alternation (phonemic)
		<	derives from
		*	ungrammatical form; proto form

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and kindness of the family Soumokil can hardly be reciprocated. Finally, I owe it to Om Ka Pieter in Ambon Town that I could leave the island with a handbag full of notes and recordings. It stands to reason that any shortcomings remain my responsibility.

NOTES

1. The results of my research will appear in a descriptive analysis of Ambonese Malay which covers phonology, morphology, and parts of its syntax.
2. Grimes (1988) deals with the sociolinguistic situation on Ambon Island.
3. Considering the fact that AM has phonemic wordstress I propose an orthography in which stress is consistently indicated by ' if it is not on the penultimate syllable, but which otherwise deviates as minimally as possible from the spelling principles for Bahasa Indonesia which are laid down in *Pedoman Umum Ejaan Bahasa Indonesia Yang Disempurnakan* and in *Pedoman Umum Pembentukan Istilah* (Pusat Pembinaan dan Pengembangan Bahasa Nasional, 1980). The orthographic vowel symbols are the same as corresponding symbols used by Pike (Phonemics). The orthographic consonant symbols which differ from Pike's counterparts are: /ñ/ = <ny>, /ŋ/ = <ng>. The archiphonemes /I/ and /U/ are represented by <i> and <u> respectively; in the orthography they are treated as if they were (syllabic) vowels. I will use <p, t, k> for the archiphonemes /P, T, K/ respectively. Please note that I use /j/ and /j/ for the voiced centro-palatal stop. Examples: /b'araN/ <barang> 'things, goods'; /t'aña/ <tanya> 'to ask'; /tam'aN/ <tam'ang> 'friend'; /pa'isi/ <paisi> 'naked'; /palt'ua/ <paitua> 'husband'; /w'aa/ <waa> 'trunk of sago palm from which pith has been taken'; /ba#aIr/ <baair> 'watery, sloppy'; /sab'aP/ <sab'ap> 'because'; /kalaw'aI/ <kalawai> 'fishing spear'; /b'aI/ <bai> 'good'.
4. I use the term "root" to refer to elements such as /tri/ in /buruN tri'tri/ 'k.o. bird', /twiŋ/ in /ikaŋ twiNtwiN/ 'flying fish', /eleK/ in /eleK'eleK/ 'oil-lamp made from glass jar'. Duplicated roots will be separated orthographically by a hyphen (-): /b'uruŋ tri'tri/ <burung tri-tri>, /eleK'eleK/ <elek-elek>, etc.
5. I recorded five morphemes showing phonemic alternation of the heavy kind which provide interesting cases of complete integration into the AM soundsystem. They are: /'ofo/ ~ /'ofu/ 'k.o. drink made from milk'; /s'opo/ ~ /s'opu/ 'to bathe, dab a sore spot with warm towels'; /t'opo/ ~ /t'opu/ in: /t'opo t'aŋaŋ/ 'to clap one's hands'; /k'alo ~ kalu/ 'if, when'; /k'aso ~ kasu/ 'rafters of roof, joisting'. The case of /'ofo/ ~ /'ofu/ is quite transparent since this is directly derived from a brandname, *Ovomaltine*. Other instances of brandnames becoming class names, generic nouns, or even verbs are: /str'oŋkeŋ/ 'k.o. oil lamp' (from *Storm King*, possibly via another

Indonesian language); /d'iko/ 'under-coating, filling putty; to apply' (from Duco). In the case of /s'opo/ ~ /s'opu/ and /t'opo/ ~ /t'opu/ the facts are more complicated. In the framework of the present study, I will not dwell upon reflexes of *schwa and other phonemic innovations which occurred in a fair number of morphemes. Suffice it to say here that these innovations comprise replacement of the mid-central vowel *schwa, vowel lowering in final syllable, loss of final consonant, and stress-shift from final to penultimate syllable. Schematically the following changes can be noted (not necessarily in this order, however; <e> stands for schwa): *sep'uh > sep'oh > sep'o > sop'o > s'opo *tep'uk > tep'ok > tep'o > top'o > t'opo. Quite a few historical diphthongs have been monophthongized to a mid-vowel /e/ or /o/ in Ambonese Malay. Thus, *sampa becomes /s'aNpe/ 'until', and likewise *pisau becomes /p'iso/ 'knife'. The Bahasa Indonesia forms which correspond to /k'alo/ and /k'aso/ are /kalau/ and /kasau/ respectively.

6. The same, or same kind of, morphemes are subject to severe reduction in other varieties of Malay, though with different results (D. J. Prentice, pers. comm.):

Urban Bazaar Malay (W. Malaysia): puña > myē poss. marker (*puñā > puñe > *peñē > *pñē > *pmyē > myē)

Jakarta Malay: sudah > de 'already' (*sudah > *suda > *sude > ude > de)

Manado Malay: kita-oran > toŋ 'we' (*kita-oran > kitoran > *ketoran > toran > toŋ)

7. If we opted for treating the archiphonemes as consonants, words such as /aIr/ 'water' and /m'aIN/ 'to play' must be analysed V.CC and CV.CC respectively, which is of course not possible. Alternatively, if we treat these archiphonemes as vowels the syllable division becomes V.VC and CV.VC, which is structurally acceptable.

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REVIEWS

Pdt. M. Th. Magana. 1984. *Bathera Injil di Halmahera*. GMIH (Protestant Church of Halmahera). Pp. ix + 473. Five appendices, bibliography. Rp. 5000. Available through the Gereja Masehi Injil di Halmahera office, Tobelo.

SANDRA G. WIMBISH
PATTIMURA UNIVERSITY AND
THE SUMMER INSTITUTE OF LINGUISTICS

Anyone interested in the history, culture, religion, or the development of the church of the peoples of Halmahera will find worthwhile reading in *Bathera Injil di Halmahera* (translated, *The Gospel Ship of Halmahera*). This book was written in conjunction with the commemoration of the 35th anniversary of the Gereja Masehi Injil di Halmahera (GMIH, the Protestant Christian Church of Halmahera) on June 6, 1984.

The author, Thimotheus Magana, was born in the town of Tobelo on the island of Halmahera. He worked as a church leader in Halmahera for a number of years, then served as an associate pastor in Jakarta. This book was actually completed in 1979, but was not printed until 1984 under request from the committee of the Church Council of Indonesia (*Dewan Gereja Indonesia*).

Though the author's main consideration is to give a thorough history of the church, he first discusses the factors which influenced its development. The first three chapters set the stage as he describes what the foreword calls, "the thick wall which had to be battered down by the Gospel," (p. 5), that is, the day-to-day aspects of life and the belief systems of the Halmaheran peoples before the church came upon the scene.

Chapter 2 breaks down the complex of spirits and gods, and differentiates each one. Thirty-two specific gods and spirits are described. This is followed by a brief discussion of the basic beliefs: Animism, Pantheism, Spiritism, and "Law" (the regulations which, when adhered to, safeguarded a follower from the wrath of the gods, ancestors, and fellowmen).

Chapter 3 details many of the traditional beliefs and practices of Halmaherans, guided by native (traditional) law. Childbirth, adoption, proposal of marriage, brideprice, and all activities related to marriage were carried out in accordance with native law. Also described are deathbed practices and many ceremonies connected with placating spirits in order to harvest crops or hunt for daily food.