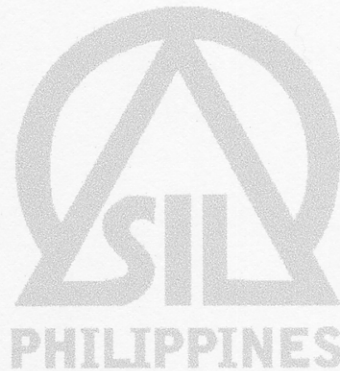


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THE PHONEMES OF SARANGANI SANGIRÉ

Kenneth R. Maryott
 Summer Institute of Linguistics
 Philippine Branch

The phonemes of Sarangani Sangiré¹ differ from those of its sister language, Sangihé of Indonesia,² notably with respect to the occurrence in Sangiré but not in Sangihé of consonantal front and back high vocoids. Certain problems in the interpretation of these vocoids will be featured in a separate paper soon to appear. It is the purpose of the present paper to describe more routinely the complete inventory of the Sangiré phonemes. The subject will be considered under the heads (1) contrast between the phonemes, (2) variation within the phonemes, and (3) distribution of the phonemes.

1. Contrast between the phonemes

The contrast between the phonemes is first summarized in the following chart. The horizontal and vertical dimensions of the chart are labelled in terms of distinguishing features rather than of full characterizations of the phonemes.³

Consonants		Labial	Alveolar	Velar	Glottal
Fricative		b	s	r	h
Stop	Voiceless	p	t	k	q
	Voiced	b	d	g	
Nasal		m	n	ng	
Lateral		Non-retroflexed		Retroflexed	
		l		ɭ	
Semi-Vowel		Labial		Palatal	
		w		y	

Vowels	Front	Central	Back
High	i	ɨ	u
Non-High	e	a	o

Stress	'
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The contrast between phonemes is now stated and exemplified for the individual (1) consonants, (2) vowels, and (3) stress placements.

1.1 Consonants

There is contrast with respect to manner of articulation between fricative, stop, nasal and lateral consonants, and semi-vowels. Since some of these phonemes are phonetically similar, such pairs are singled out as follows for illustration of their contrasts. (Note that Sangiré consonants other than ng, q, w and y do not contrast in word-final position simply because they do not occur there; see sec. 3.1. With forms that might otherwise end with these consonants, the replacive -ng and the paragoge -iq are invariably final.)

b and p

'bua 'fruit', 'pua 'k.o. bee'
ma'baesiq 'rainless', ma'paesiq 'discriminating (person)'
'saba 'spouse', 'sapa 'refuse'

b and β

bu'aya 'cat's cradle', βu'aya 'crocodile'
'laboq 'many, much', 'laboq 'k.o. vegetable'
nika'βuiq 'made to spring up (as water)', nika'βuiq 'fated'

b and w

'baw 'gong message', 'waw 'eight'
ka'basa 'darkness', ka'wasa 'wealthy person'
ni'aba 'changed weather', ni'awa 'soul'

r and k

'raho 'enunciation', 'kaho 'lice'
su'mare 'pass by', su'make 'embark'
ma'ngiri 'shave', ma'ngiki 'bite'

r and g

'rere 'his neck', 'gere 'tear (as in cloth)'
 ma'rabesiq 'fast', ma'gabesiq 'cleared of trees'
 nirin'dukang 'affected by hiccups', nigin'dukang 'confirmed'

r and t

'ramuq 'root', 'tamuq 'gnat'
 ma'ri'ba 'collapsed', ma'ti'ba 'abased'
 bi'rage 'its weight', bi'taqe 'its floor beams'

r and d

'rorang 'hole', 'dorang 'grain bud'
 ma'rung 'wet', ma'dung 'bumped (as head against beam)'
 'biariq 'life', 'biadiq 'fish roe'

r and l

'rosiq 'bind', 'losiq 'borrow'
 ba'erang 'rained in on', ba'elang 'cleared as for farming'
 ma'daseriq 'stormy', ma'daseliq 'placed against'

r and ʎ

'raung 'approach', 'ʎaung 'shadow, shelter'
 'qurang 'rice straw', 'qulang 'lobster, shrimp'
 'barisiq 'salt fish', 'balisiq 'line up'

r and y

'dara 'blood', 'daya 'landward area'
 'soroq 'move backward', 'soyoq 'guide through (opening)'
 ma'ngaro 'scratch', ma'ngayo 'assault'

d and l

'datu 'chieftan', 'latu 'ant'
 pi'di 'break (as in stick)', pi'li 'taboo'
 'tuidiq 'stump', 'tuiliq 'brace'

d and ʎ

'daiq 'bad', 'ʎaiq 'very bad'
 'bade 'its payment', 'bale 'house'
 maka'bude 'make mountainous', maka'bule 'forget'

There is further contrast with respect to manner of articulation between voiceless and voiced stops.

p and b

'puang 'fitted with handle', 'buang 'fight (as cocks)'
 'kapang 'fishtrap', 'kabang 'scar'
 'qampang 'block with the body', 'qambang 'rescue'

t and d

'tingiriq 'speak', 'dingiriq 'hear'
bi'tage 'its floor beams', bi'dage 'its valley'
pan'tang 'porch', pan'dang 'thing watched'

k and g

'kang 'food, rice', 'gang 'brass'
bi'ka 'break (as clay pot)', bi'ga 'be ignorant of'
'tunggiq 'only child', 'tungkiq 'brace'

Fricatives and voiceless stops contrast at the labial, alveolar, velar and glottal points of articulation. None of these phonemes are phonetically similar, so normally their contrasts would need no illustration. However, certain of these contrasts are illustrated here because suspect on the grounds of the common derivation of the phonemes historically.

r and h

ra'misang 'massaged', ha'misang 'become Thursday'
ka'rong 'scratched (as itch)', ka'hong 'infested by lice'
'moroq 'ebb', 'mohoq 'chant'

k and q

'kapuq 'vine', 'qapuq 'lime'
'qutuki 'your brains', 'qutuqu 'your torch'
'bauke 'carry pickaback now', 'bauqe 'sell now'

Voiced stops and nasals contrast at the labial, alveolar and velar points of articulation. The laterals contrast with respect to non-retroflexed and retroflexed articulation. The semi-vowels contrast at labial and palatal points of articulation.

n and ng

mani'taq 'begin', mangi'taq 'winnow'
'lano 'lake', 'lango 'housefly'
li'manu 'your hand', li'mangu 'new or full moon'

l and ɭ

'latu 'ant', 'ɭatu 'chieftan higher than datu'
'sili 'defer to', 'siɭi 'separate out unhulled grain'
'qaling 'clairvoyant', 'qaliɳg 'transfer'

1.2 Vowels

Vowels contrast with respect to high and non-high tongue positions.

i and e

'qi 'this one', 'qe 'that one'
 'sindaq 'breathe', 'sendaq 'wax (of moon)'
 'qaling 'transfer', 'qaleng 'name'

ɨ and a

pi'diang 'thing broken off', pa'diang 'market'
mi'nabo 'fall', ma'nabo 'fallen'
 'rabiq 'sharpen', 'rabaq 'wrestle'

u and o

'quay 'rattan', 'qoay 'stake for securing boat'
 'pung 'base (as of tree)', 'pong 'northwest wind'
si'baqku 'my chest', si'baqko 'surely the chest'

Vowels further contrast with respect to front, central and back tongue positions.

i and ɨ

'qi 'this one', 'qɨ 'yes'
ni'labong 'be coiled around', nɨ'labong 'coil around'
miq'tikiq 'lie down', miq'tikiq 'endure'

ɨ and u

mi'nala 'mark limit of', mu'nala 'work'
bim'bang 'shoulder', bum'bang 'pump'
 'kinsiq 'pity', 'kinsuq 'k.o. star'

e and a

'qekeq 'fishhook', 'qakeq 'fresh water'
 'daleng 'walk', 'dalang 'dry over fire'
bi'ke 'narrate', bi'ka 'break'

a and o

'qanaq 'offspring', 'gonaq 'fish scales'
 'tongkaq 'roast', 'tangkaq 'stile'
 'lana 'oil', 'lano 'lake'

1.3 Stress Placement

Word stress is phonemic only by virtue of a small class of stems in which stress is unpredictable. In the majority of words, however, stress occurs on the penult or, in the case of words with the paragoge -ɨq, on the antepenult, unless the vowel in those syllables is the high central ɨ. Where ɨ does occur, stress placement moves in the progressive direction except in words where there is no vowel but ɨ, in which case, again, the placement of stress is quite unpredictable. For other words,

although recourse to the grammar would reveal regular stress movement rules, stress placement purely in terms of the phonology itself is often arbitrary.⁴

'lebang 'pry', le'bang 'licked at'
'kapang 'fishtrap', ka'pang 'group (of animals, etc.)'
'kapu 'rub', ka'pu 'desire, want'

2. Variation within the Phonemes

Although articulatory variation has not been observed in all of the phonemes, for the sake of completeness all phonemes are listed here including those with but a single allophone. Again, the discussion deals separately with (1) consonants, (2) vowels, and (3) stress.

2.1 Consonants

In contrast to the vowels, variations characterizing the consonants are relatively few, though diverse in type.

- b [b] Voiced bilabial fricative non-vocoid with lenis articulation. Occurs before the high central vowel in sequences immediately preceding a stressed vowel (e.g. [bə'adiq] b+'ad+q 'sea wave').
- [b] Voiced bilabial fricative non-vocoid, occurs elsewhere (e.g. ['baba] 'baba 'down').
- s [s] Voiceless alveolar grooved fricative non-vocoid (e.g. ['sasiq] 'sasiq 'sea water').
- r [r̥] Voiced alveolar flapped non-vocoid. Occurs in all positions of the phoneme (e.g. ['r̥arudiq] 'rarud+q 'hoarse').
- [r̥^(g)] Voiced alveolar flapped non-vocoid with velar friction. Occurs in all positions in free variation with the allophone [r̥] of this same phoneme, being the more frequent (e.g. ['r̥^(g)ar̥^(g)udiq] 'rarud+q 'hoarse').
- h [h] Voiceless glottal fricative non-vocoid (e.g. ['qahu] 'qahu 'adopted child').
- p [p] Voiceless bilabial stop non-vocoid (e.g. ['pipiq] 'pipiq 'cheek').
- t [t] Voiceless alveolar stop non-vocoid (e.g. [ta'r̥^(g)iti] ta'riti 'rain').
- k [k] Voiceless back velar stop non-vocoid. Occurs immediately following glottal stop (e.g. ['qipuq̥ku] 'qipuqku 'my knife').

- [k] Voiceless velar stop non-vocoid. Occurs elsewhere (e.g. [ka'ɾ^(g)akaq] ka'rakaq 'crab').
- q [q] Voiceless glottal stop non-vocoid (e.g. ['qutaq] 'qutaq 'hair').
- b [b] Voiced bilabial stop non-vocoid. Occurs in all positions of the phoneme (e.g. ['bebeq] 'bebeq 'duck'). In word-initial position before the sequence vowel plus bilabial fricative (-Vb), occurs in free variation with the allophone [b] of the phoneme b (e.g. ['bubur^(g)iq] ~ ['bubur^(g)iq] 'buburiq 'kapok').
- d [d] Voiced alveolar stop non-vocoid. Occurs in all positions of the phoneme (e.g. [daɣən'dung] daɣɪn'dung 'wall').
- [dʒ] Voiced alveo-palatal affricated non-vocoid. Occurs in free variation with the sequence voiced alveolar stop plus either high front syllabic vocoid or high front non-syllabic vocoid (di/y) (e.g. [di'aw], ['dyaw] ~ ['dʒaw] di'aw 'tomorrow').
- g [g] Voiced velar stop non-vocoid (e.g. [maka'gaga] maka'gaga 'accomplish').
- m [m:] Voiced bilabial lengthened nasal non-vocoid. Occurs intervocalically following ɛ (e.g. [mə'm:ama] mɛ'mama 'chew betel').
- [m] Voiced bilabial nasal non-vocoid. Occurs elsewhere (e.g. [ma'momo] ma'momo 'dull, blunt').
- n [n:] Voiced alveolar lengthened nasal non-vocoid. Occurs intervocalically following ɛ (e.g. [tə'n:iq] tɛ'niq 'mosquito').
- [n] Voiced alveolar nasal non-vocoid. Occurs elsewhere (e.g. [ni'ɾ^(g)ino] ni'rino 'correct').
- ng [ng:] Voiced velar lengthened nasal non-vocoid. Occurs intervocalically following ɛ and a (e.g. ['dang:eng] 'dangeng 'move up into').
- [ng] Voiced velar nasal non-vocoid. Occurs elsewhere (e.g. [kɪŋ'kung] kɪŋ'kung 'fist').
- l [l:] Voiced alveolar lengthened lateral non-vocoid. Occurs intervocalically following ɛ (e.g. [məl:əl:osiq] mɛlɛ'losiq 'borrow').
- [l] Voiced alveolar lateral non-vocoid. Occurs elsewhere (e.g. [le'leng] le'leng 'weeded').
- l̥⁵ [l̥] Voiced retroflexed flapped lateral non-vocoid. Occurs immediately following low central and back vowels. (e.g. [da'ɣuɣang] da'ɣulɣang 'cargo').
- [l̥] Voiced retroflexed flapped lateral non-vocoid with retroflexed mid central non-syllabic vocoid on-glide. Occurs elsewhere (e.g. [l̥i^ɿi^ɿiq] 'lilɿiq 'clear field').

- w [w] Voiced high close back unrounded non-syllabic vocoid. Occurs in all positions of the phoneme (e.g. ['waw] 'waw 'eight'). In open unstressed non-final syllables immediately following either a low vowel or a labial or alveolar stop or nasal, occurs in free variation with allophones of the phoneme u (e.g. ['laud^hiq] ~ ['lawd^hiq] 'laud^hiq 'ocean', [banu'ane] ~ [ban^h'wane] banu'ane 'his place').
- y [ɣ] Voiced high close front unrounded non-syllabic vocoid. Occurs in all positions of the phoneme (e.g. 'kayang 'kayang 'swim'). In open unstressed non-final syllables immediately following either a low vowel or an alveolar stop or nasal, occurs in free variation with allophones of the phonemes i (e.g. [ma'gats^hiq] ~ [ma'gays^hiq] ma'gais^hiq 'slashed', [mani'ataq] ~ [man'yataq] mani'ataq 'visit').

2.2 Vowels

Each vowel has at least two variants which differ from each other typically with respect to degree of closure or height of the tongue.⁶

- i [ɪ] Voiced high open front unrounded syllabic vocoid. Occurs either (1) in syllables closed with a nasal except those both stressed and word-final, or (2) in open unstressed syllables, immediately preceded by a low vowel and followed by a consonant (e.g. ['sɪnsɪŋ] 'sɪnsɪŋ 'ring', [ma'paɪq] ma'paiq 'bitter').
- [i] Voiced high close front unrounded syllabic vocoid. Occurs elsewhere (e.g. [ɪ̃^(g) aɪ̃^(g) i'ping] rari'ping 'boat transom', [ma'didiq] ma'didiq 'yellow'). In word-final position immediately following the low vowel a, occurs in free variation with the phoneme y (e.g. ['pay] ~ ['pai] 'pay 'over there').
- e [e] Voiced mid open front unrounded vocoid. Occurs either (1) in syllables closed with a nasal except those both stressed and word-final, or (2) unstressed immediately preceded by a low vowel and followed by a consonant (e.g. [lalen'teng] lalen'teng 'bridge', ['gaed^hiq] 'gaed^hiq 'instead').
- [e] Voiced mid close front unrounded vocoid. Occurs elsewhere (e.g. ['qeseq] 'qeseq 'male').
- ɛ [ɛ̃] Voiced mid central syllabic component of syllabic nasal non-vocoid. Occurs with any nasal word-initially immediately preceding a stop consonant (e.g. [ɛ̃'daɪq] ɛ̃'daɪq 'there').
- [ĩ] Voiced high open back unrounded vocoid. Occurs other than word-initially immediately preceding glottal or velar consonants (e.g. [mɪ̃qɛ̃'bɪ̃kɪ̃q] mɪ̃qɛ̃'bɪ̃kɪ̃q 'work').

- [ɨ] Voiced high close central unrounded vocoid. Occurs elsewhere (e.g. [mɨl:ɨm'bay] mɨlɨm'bay 'leave remnant').
- [ə] Voiced mid close central unrounded syllabic vocoid. In syllables preceding the stressed syllable and in some other environments, occurs in free variation with allophones of the same phoneme, being very frequent except in slow or deliberate speech (e.g. [məl:əm'bay] mɨlɨm'bay 'leave remnant').
- a [a] Voiced low open central unrounded vocoid. Occurs in all positions of the phoneme (e.g. [mɨqtatɨn'tang] mɨqtatɨn'tang 'different').
- [ə] Voiced mid close central unrounded syllabic vocoid. In syllables preceding the stressed syllable, occurs in free variation with the allophone a of this same phoneme, being very frequent except in slow or deliberate speech (e.g. [mətətən'tang] mɨqtatɨn'tang 'different').⁷
- u [u] Voiced fronted high open back rounded vocoid. Occurs in syllables closed with a nasal preceding the stressed syllable (e.g. [mang:uɔm'pitay] mangum'pitay 'firefly').
- [u] Voiced high open back rounded vocoid. Occurs immediately following a low vowel either (1) in stressed syllables immediately preceding the retroflexed lateral, or (2) in open unstressed syllables immediately preceding any consonant (e.g. [mama'uɨiq] mama'uɨiq 'tell', [mə'n:ausɨq] mɨ'nausɨq 'proceed').
- [u] Voiced high close back rounded syllabic vocoid. Occurs elsewhere (e.g. [ma'gukung] ma'gukung 'converse'). In word-final position immediately following the low vowel a, occurs in free variation with the phoneme w (e.g. ['waw] ~ ['wau] 'waw 'eight').
- o [o] Voiced high open back rounded vocoid. Occurs in unstressed syllables immediately following a high vocoid (e.g. [ba'hio] ba'hio 'gale', ['sayu] 'sayu 'k.o. tree').
- [o] Voiced mid close back rounded vocoid. Occurs elsewhere (e.g. [mɨ'ng:onggoq] mɨ'ngonggoq 'give').

2.3 Stress

Stress and high pitch in Sangiré words are observed to be allophones of the same phoneme. The treatment here is limited to primary word stress due to the need for further study of secondary stress.

- ' [(C)V] Stress. Occurs on any one syllable back to the antepenult, normally excepting those syllables with ɨ but occurring on any of them but the paragoge when they contain no vowel other than ɨ (e.g. [ka'pantagiq] ka'pantagiq 'use, purpose', ['batu] 'batu 'stone', [tə'aq] tɨ'aq 'fly', [ma'ki'gɨng] ma'ki'gɨng 'dried', [malɨ'gɨng] malɨ'gɨng 'sad').

[\bar{V}] High pitch. Occurs either simultaneous to or in free variation with stress (e.g. [$\bar{b}\bar{a}t\bar{u}$]~[$\bar{b}a\bar{t}u$]~[$\bar{b}\bar{a}t\bar{u}$]batu 'stone').

3. Distribution of the Phonemes

The distribution of the phonemes may be summarized by reference to the syllable patterning of consonants and vowels. In this summary, "consonants" (C) and "vowels" (V) are each viewed as hyperclasses in anticipation of their subclassification in the description to follow.

A phonemic syllable (S) consists of a single vowel optionally preceded and/or followed by a consonant (S = +C +V +C). The resulting four syllable patterns are illustrated as follows in their estimated order of frequency, and in all word positions.

CV 're 'field grass', bi.'sa.la 'conversation', 'qa.bu 'ashes'
 CVC 'boq 'after', ma.'sing.kaq 'know', 'qun.dang 'medicine'
 VC in.'diq 'perhaps', 'le.ang.ko 'must spear', qi.'aq 'I'
 V 'i.qi 'yes', si.'a.eng 'seashore', 'bo.a 'grey'

The arrangement of the syllables in sequences is limited only by the non-occurrence of types VC and V either in isolation or following a closed syllable.

The distribution of the phonemes may now be detailed, the phonemes being considered with respect to their systemic or paradigmatic relations, and then their structural or syntagmatic relations. These relations are now discussed under the alternative designations respectively of (1) phoneme classification, and (2) sequence limitations.

3.1 Phoneme Classification

The distribution of the phonemes is described here in terms of phoneme classes posited on the basis of their common positions in the phonological word. As implied in the section introduction, however, the syllable also is highly pertinent to phoneme distribution. It is therefore necessary to present the classes in relation to the syllable types as these occur in each of the three significant sectors of the word: word-initial, word-medial, and word-final.⁹

The classification is depicted by the following chart, in which the horizontal dimension represents the word sectors and the syllable positions therein, and the vertical dimension represents the different syllable types. Boxes are filled by phoneme classes, the membership of which is given below the chart. Diagonal lines in certain boxes indicate the non-occurrence of phonemes in the syllable position thus marked. Illustrations are provided following the chart.

Chart 2: Phoneme Classification

		Word Position								
Syl- lable Type	Initial Syllable			Medial Syllable(s)			Final Syllable			
	Initial Conso- nant	Vowel	Final Conso- nant	Initial Conso- nant	Vowel	Final Conso- nant	Initial Conso- nant	Vowel	Final Conso- nant	
CV	Class C-1	Class V-1	/	Class C-1		/	Class C-1	Class V-3	/	
CVC			/			/			/	
VC	/	Class V-2	/	/	Class V-1	Class C-2	/	Class V-3	Class C-4	
V	/		/	/			/			/

Class Membership:

<u>C-1</u>	<u>C-2</u>	<u>C-3</u>	<u>C-4</u>	<u>V-1</u>	<u>V-2</u>	<u>V-3</u>
ng	ng	ng	ng	ɨ	ɨ	
m	m	m		i		i
n	n	n		e		e
q	q		q	a		a
w			w	u		u
y			y	o		o
b						
s						
r						
h						
p						
t						
k						
b						
d						
g						
l						
l						

Illustrations:

Word-Initial Syllables

C_1V_1	<u>'bi.la</u> 'if', <u>ma.'di</u> 'dislike, refuse'
$C_1V_1C_2$	<u>'qing.ka.qu</u> 'it's up to you', <u>m̄q.k̄i.'nang</u> 'test'
V_2C_3	<u>̄m.'be.l̄iq.ko</u> 'must hold it', <u>̄n.'da.ung</u> 'here you are'
V_2	<u>̄i.'nge.aw</u> 'meow', <u>'̄i.q̄̄</u> 'yes' ¹⁰

Word-Medial Syllables

C_1V_1	<u>ka.k̄i.'di.te.te</u> 'disregard it', <u>seng.'go.tang</u> 'sailed'
$C_1V_1C_2$	<u>ku.'mang.ke</u> 'eat now', <u>ma.nḡing.'ga.r̄iq</u> 'summon'
V_1C_2	<u>'na.ung.ku</u> 'my "heart"', <u>ma.'am.bang</u> 'rescued'
V_1	<u>ka.'i.ri</u> 'left', <u>ko.'a.neng</u> 'right'

Word-Final Syllables

C_1V_3	<u>'qa.pa</u> 'what?', <u>'tang.ko</u> 'must run' ¹¹
$C_1V_1C_4$	<u>'qon.deq</u> 'Little Fellow', <u>'na.ung</u> '(past tense particle)'
V_3C_4	<u>s̄im.'ba.uq</u> 'one', <u>ma.ki.t̄i.'ang</u> 'take leave'
V_3	<u>ta.'ta.u</u> 'three', <u>t̄in.ti.'ro.i</u> 'let it be taught'

3.2 Sequence Limitations

The limitations on the co-occurrence of phonemes in sequence are to be taken together with the preceding classification as a refinement of the distributional statement. These limitations are comprehended by constraints concerning (1) consonant sequences, (2) vowel sequences, and (3) consonant-vowel sequences.

3.21 Consonant Sequences

Consonants are limited in their occurrence with contiguous consonants in that doubling does not occur and, of the consonants which do occur in cluster, the nasals and glottal stop never follow the other consonants and only precede the other consonants where they are of certain points of articulation with respect to those consonants.

- m precedes only the labial stops p and b (e.g. 'rampediq 'flavor', ma'namba 'increase').
- n precedes only the alveolar stops and fricative t, d and s (e.g. m̄n'tiq 'only', 'pende 'coconut shell', 'qensoq 'move').
- ng precedes only the velar stops k and g (e.g. ma'songkariq 'aggravated', s̄ing'gaq 'some').
- q precedes only the alveolar and velar stops t, d, k and g (e.g.

míqti'pala 'spear fish', míqdiq'dolong 'be begging', 'balaqku
'my bolo', míq'gaq 'separate (on trail)').¹²

Consonants are limited in their occurrence with non-contiguous consonants in that the laterals l and l never follow r, and dissimilar laterals do not co-occur (e.g. la'lúsaq 'food turner', lali'ngala 'look up').

3.22 Vowel Sequences

Vowels are limited in their occurrence with dissimilar contiguous vowels only in that i and e have not been found either to precede or follow i (e.g. 'sie 'he/she', 'piaq 'have', 'tiuq 'blow', ka'tioq 'small', pa'tei 'let it be killed', ta'beaq 'by your leave', 'reo 'cry', bi'aq 'middle', di'uq 'thunder', gi'ohung 'reverberation', ba'ine 'other', sa'kaeng 'boat', maki'paiq 'thick', 'bauq '(classifier)', paga'ongang 'glass', 'duiq 'raise', ba'kueq 'belch', 'butq 'spring', 'pua 'k.o. bee', ma'pu 'ten', ta'roi 'let it be put into', 'loeq 'pry', si'koiq 'cough', 'boa 'grey', po'udaq 'k.o. root crop').¹³

3.23 Consonant-Vowel Sequences

Semi-vowel consonants are limited in their occurrence with contiguous vowels in the following respects.

- a. w is preceded and/or followed only by a (e.g. 'wa 'termite', la'wati 'roundworm', mi'buaw 'quarrel').
- b. y is preceded and/or followed only by a, u and o (e.g. 'yakang 'eldest sibling', 'taya 'no', 'payung 'umbrella', 'dayo 'praise', 'soyo 'lamp', 'yutaq 'innumerable', 'buyang 'fan', 'puyung 'grand-child', 'bany 'change (behavior)').

FOOTNOTES

¹The Sangiré are an Islamic people residing in coastal areas of southern Cotabato and Davao Provinces, Republic of the Philippines. The largest community is said to be at Tugis in the municipality of Kiamba, Cotabato, where considerable mixture with the Magindanao is reported. The Sangiré are also found on lower Sarangani Peninsula and on the Sarangani Islands, where Balut Island has probably the second largest concentration of these people. Exact population figures are unavailable but a reasonable estimate would place the total number of Sangiré between 5 and 10 thousand.

The dialect of Sangiré indigenous to the Sarangani Islands differs somewhat from that spoken on the Mindanao mainland. With only occasional references to the latter, the following description is limited to the island dialect which is herein designated Sarangani Sangiré. Research for this study was done by the author and his wife Alice Maryott on Balut Island in 1964, mainly, under the auspices of the Summer Institute

of Linguistics. It was for the files of this institute that the present paper was prepared around 1967.

2. Compare H. Adriani, Sangireesche Spraakkunst (Leiden, 1893), pp 8-19; also my "The Phonology and Morphophonemics of Tabukang Sangir [nee Sangihé]", Philippine Social Sciences and Humanities Review 26:111-126 (1963).

The Sangiré, when referring to both themselves and the Sangihé, distinguish their own group as the Sangiré Pilipinasé as opposed to the Sangiré Indonesia. These Indonesians are also referred to as the Mallolle after the nearest of the islands from which they originated. The Philippine Sangiré are also known by the name "Sangil", undoubtedly a modification of the indigenous name by other Philippine peoples.

3. The alveolar flap r has been placed among the fricatives because of the marked fricative quality which most often characterizes this sound; see sec. 2.1.

In the chart and throughout the paper, italics indicate phonemic notation and square brackets, phonetic notation. In the few instances where it is used, the practical orthography substitutes ll for l and é for i, as in the names Sangiré and Mallolle. For all three notations, the diagraph ng represents the voiced velar nasal consonant, and the rest of the symbols used have the values generally recognized for those symbols. Syllable breaks, where relevant to the discussion, are indicated by periods.

4. This fact seems to provide additional evidence for some kind of integration of morphological with phonological rules, as for example in the stratificational or the transformational-generative approaches. Neo-Bloomfieldians such as Kenneth L. Pike have not been unaware of this kind of problem (see Pike's "Grammatical Pre-requisites" articles), but they provide little apparatus in models like Tagmemics to deal with the matter on a practical level.

A reference here to the morphology of Sangiré, however, and even beyond to a comparison of the cognate terms in Sangihé can shed much light on the stress patterns before us. In the case of le'bang, the stem 'leba has the expected penult stress. However, when such stems ending with a non-high vowel are suffixed with the morpheme <-ang> 'objective voice, objective orientation' ("goal" or "referent focus" in some Philippine languages), the allomorph -ng occurs and stress moves one syllable, as it happens, to the ultima. But in Sangihé, the corresponding allomorph is -ing. Therefore, when a Sangihé stem occurs with this affix, though stress progresses one syllable as in Sangiré, it is again the penult which is stressed since the suffix itself is a syllable (Sh 'leba + <-ang> → le'baing 'licked at'). The loss of the Sangihé i in Sangiré cognates is normal in this and other positions.

The form ka'pang is explained in a similar way except that -ng is now a part of the root rather than a separate morpheme (the segment is

probably a frozen or non-productive morph etymologically derived from a proto-form of the suffix <-ang>). Again, it is enlightening to compare the Sangihé cognate, viz. Sh ga'paing 'group, flock'. Note that this form too has penult stress.

The third instance of non-penultimate stress is ka'pu, the Sangihé cognate of which is Sh ka'pulu 'desire'. It will be noted that there has been inter-dialectal loss of the Sangihé lateral, the vowels then coalescing and stress thereby being forced to occur on the final syllable.

5. This phoneme does not occur in the Mindanao dialect of Sangiré. In Mindanao cognates the corresponding phoneme is the flap r, which also represents the Sarangani r.

6. Determining the allophonic variation of vowels are such additional factors as position with respect to stressed syllable, syllable type (open or closed), articulation of contiguous consonants, speech rate, and perhaps vowel harmony. Further study would undoubtedly reveal a ranking among these environmental factors that might be more conveniently described in sets of ordered rules.

7. Compare allophone [ə] of the phoneme ɨ. This neutralization of the phonemes ɨ and a is reminiscent of the phenomenon described by Richard Elkins, "Partial Loss of Contrast between a and e in Western Bukidnon Manobo" (Lingua 12:205-210 (1963)). In both Sangiré and Manobo, the feature is probably related to shortness of vowel caused by either closed syllables or pre-stress position (Elkins: preceding an "intonation peak"), and also to vowel harmony. However, in Manobo the feature properly belongs to the phonemics since in the "certain limited environments" in which contrast is lost, the loss is not dependent--as it is in Sangiré--on phonetic factors such as speech rate.

8. Pitch is subject to modification by intonation patterns in such a way that a raised pitch on a stressed syllable may be neutralized and a final low-pitched syllable may correspondingly raise. The phenomenon is particularly noticeable in the case of emphasized phrase-final enclitics. Another prominent intonational feature is the marked lengthening of the stressed and/or high pitched syllable during intense or expressive speech.

9. Obviously excluded from this classification are such non-assimilated borrowings as waktu 'time' (Arabic via Magindanao?) and ari'plano (Visayan).

10. Additional instances of syllable type V in word-initial position are lacking in the data of the Sarangani (S) dialect. The present analysis, however, is supported by abundant examples from the Mindanao (M) dialect (e.g. M ɨ'luq (S 'luq) 'swallow', M ɨ'rabɨq (S 'rabɨq)

'sharpen (as stake)', M i'baq (S 'baq) 'hull by pounding (as rice)').

11. An irregular word-final occurrence of the high central vowel has been observed in the words 'qi, 'iqi 'yes' and bi'gi 'what a pity'.

12. Informants differ somewhat with respect to the particular consonants before which glottal stop is articulated. The present analysis is liberal enough, but some informants have been heard to produce glottal also before labial stops, r and l.

13. The lack of an example in the data for the vowel sequence eu is considered accidental and not suggestive of a co-occurrence constraint.

In addition to the above clustering of dissimilar vowels, i and a have been observed to double through morphophonemic processes (e.g. ni'ikiq 'tied', makai'katiq 'become ready').