BARANG-BARANG PHONOLOGY: A PRELIMINARY DESCRIPTION

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An initial phonological description of the Barang-barang language is presented. Barang-barang is spoken by approximately 500 people on the southern tip of the island of Selayar in South Sulawesi, Indonesia. Barang-barang is classified as an Austronesian language of the Western Malayo-Polynesian group, and has been commonly sub-classified as a member of the Muna-Buton group, although the linguistic evidence supporting this classification is far from complete. Other than short word lists, neither Barang-barang nor its nearest linguistic neighbors, Laiyolo and Kalao, have been previously documented. This phonological description, while far from complete, marks a significant step forward in our analysis of Barang-barang, and provides preliminary data which may help lead to a more accurate definition of the position of this language in relation to other languages of Sulawesi.

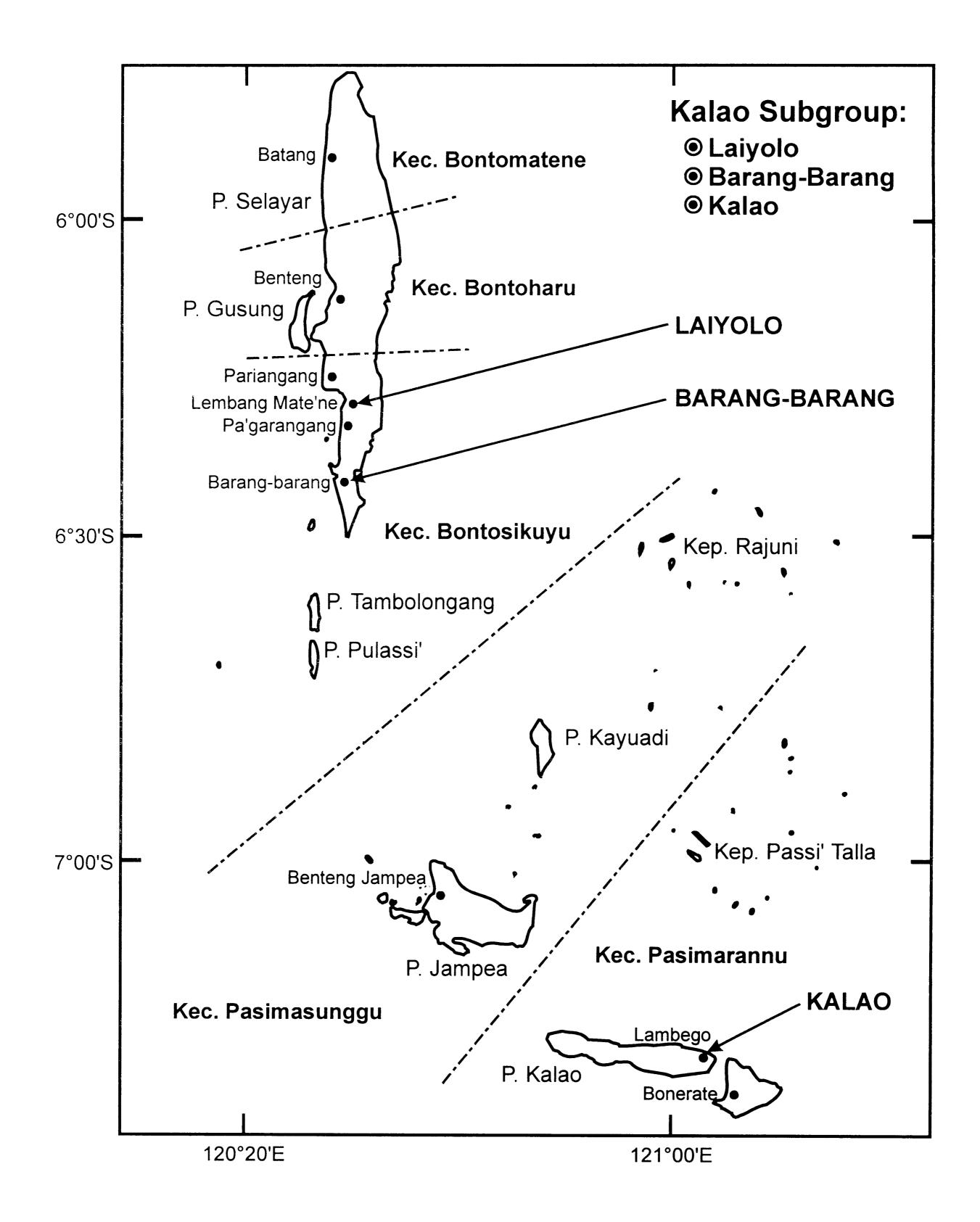
1. INTRODUCTION

The Barang-barang language¹ is spoken in the village of Barang-barang, *Desa* Lowa, on the southern tip of the island of Selayar in South Sulawesi. It is estimated that there are approximately 500 speakers of Barang-barang. Although the endonym for the village district as well as the language is [Loə?], both are generally referred to by outsiders as either Lowa, Loa, Loa', or Barang-barang. The name Barang-barang is used throughout this paper in order to be consistent with published references.²

There is virtually nothing in the literature concerning Barang-barang. The only published language data is a brief 200-entry word list (Grimes and Grimes 1987). In 1961, J. Noorduyn together with Sahabu Dg. Maingak were able to assemble some linguistic data on Barang-barang, including a wordlist and several texts, but this material was never published.³ Another Barang-barang wordlist was taken as a part of a comparative survey by Friberg and Laskowkse (1989:13-14). Although their wordlists were not published, the results of their analysis show a close lexical similarity between Barang-barang and Laiyolo⁴, spoken just to the north of Barang-barang on Selayar, and Kalao, spoken in the village of Lambego on the eastern portion of the neighboring island of Kalao (see Map 1). Friberg and Laskowske (1989:13-14) report the lexical similarity for these three languages, referred to as the Kalao subgroup, as follows:

Barang-barang86 Laiyolo77 76 Kalao

Unfortunately, the linguistic picture is no more complete for Laiyolo and Kalao than it is for Barang-barang. No published language data exists for Kalao, and the only available linguistic information for Laiyolo is a Holle wordlist collected by Koopman 1897 and recently published by Stokhof (1984). Because of the close relationship between Barang-barang and Laiyolo, it is important to note that Laiyolo was first recognized by Van der Stok (1865) in his description of Selayar, and was later mentioned briefly by Adriani and Kruyt (1914:272-5). It was also included on the early language maps of Holle (1894) and Esser (1938). A comparative word list of Barang-barang, Laiyolo, and Kalao is presented in Appendix A.



Map 1. The Kalao subgroup of languages located in South Sulawesi, Indonesia, consisting of Laiyolo, Barang-barang, and Kalao.

Barang-barang and the rest of the Kalao subgroup show a more distant relationship to the languages of Wolio and Kamaru, spoken on the island of Buton in Southeast Sulawesi, and Wotu, spoken in the district of Luwuk in South Sulawesi (Donohue 1994, Noorduyn 1991a:133-5, Noorduyn 1991b:144-5, Friberg and Laskowske 1989:13, Sirk 1988). While these languages have previously been considered a part of the Muna-Buton group of the Western Malayo-Polynesian group, there is some evidence that Wotu, Wolio, and the Kalao subgroup may be part of a language group that is separate from the Munic languages (Van den Berg 1988). It has been proposed that this group be called the Wotu-Wolio group (Donohue 1994). For the present, however, such a statement remains entirely speculative, pending the availability of linguistic data for these sparsely documented languages. It is hoped that an initial description of Barang-barang will lead to a better understanding of the relationships between these languages, and to a more accurate definition of their position in the Western Malayo-Polynesian group.

It should be noted that the village of Barang-barang is located in the midst of an area where Selayarese, the *lingua franca* which dominates the entire island, is still spoken vigorously by all segments of the population. It is therefore no surprise that the vocabulary and structure of Barang-barang have been significantly impacted by prolonged, intimate contact with Selayarese. Of interest for comparison purposes is the analysis of Selayarese phonology by Mithun and Basri (1987).

Regarding the place of origin of the Barang-barang people, according to oral history, it is claimed that they originated from what is now the district of Luwu' in South Sulawesi. In one account (see text in Appendix B), there is a story of a family of one of the nobility of that time that was returning by boat to Luwu' from a place referred to as "China", where they had attended a wedding. They lost their way in a storm and finally landed on the island of Selayar, where they settled in the village of Barang-barang, and presumably also in the village of Laiyolo. Later, according to oral tradition in Barang-barang, there was a secondary migration from these villages in Selayar to Kalao, resulting in the speakers of what is now the Kalao language in the village of Lambego. Tradition also has it that there was another independent primary migration from Luwu' to Buton, which presumably resulted in the Wolio and Kamaru speakers on that island. Although the details of the historical events are not known, there are clear, commonly recognized traditional relationships linking these language groups together⁶, and pointing toward the Wotu speaking area of Luwu' as the common origin of Barang-barang, Laiyolo, Kalao, Wolio, and Kamaru. Although the linguistic evidence is far from complete, these traditional accounts lend oral support to speculation that these languages may form a linguistically related group such as the putative Wotu-Wolio group mentioned above.

2. VOWELS

Barang-barang has six vowels i, e, ∂ , u, d isplayed in the traditional vowel chart:

Table 1. Vowel Inventory

	Front	Central	Back
High	i		u
Mid	e	Э	O
Low		a	

The examples in the following table offer evidence for the six-vowel inventory. Minimal pairs are shown where available; otherwise contrasts in similar environments are provided.

Table 2. Vowel Contrasts

i - e lipə? sarong leaf plate sia to tear sea ant filo blind felo activity baki basket bake kidney a - o boli to store bali enemy opa taro apa four	
sia to tear sea ant filo blind felo activity baki basket bake kidney a - o boli to store bali enemy opa taro	
sea ant filo blind felo activity baki basket bake kidney a - o boli to store bali enemy opa taro	
filo blind felo activity baki basket bake kidney a - o boli to store bali enemy opa taro	
felo activity baki basket bake kidney a - o boli to store bali enemy opa taro	
baki basket bake kidney a - o boli to store bali enemy opa taro	
a - o boli to store bali enemy opa	
a - o boli to store bali enemy opa taro	
opa taro	
opa taro	
	1
apa four	
704	
dala road	
dalo basket	
tobo? to spear	
toba? to repent	
a - e balo hole	
belo adorn	
ane if	
ana child	
eka wide	
aka older sibling	
dane baked sago	
daŋa handspan	
o - ə dənko to grill, toast	
donko? to ride	
tombə? rooster comb	
təmbə? bundle of corn	
bombon leaf shoot	
bombən wave	
dəkki? stick	
dokki? buttocks	

u - o	bafu	pig
	bafo	up, top
	kolo	river
	kulo	wormy
	ulo	snake
	olo	toward
	badu?	eel
	bado?	joke
a - ə	lante	to arrive
	lənte	bamboo floor
	katti	liter of measure
	kətti	to close
	assa	formal
	əssa	one
	jaŋka	deadline
	jəŋka	comb
	aŋka	number
	əŋka	to carry
	Ara?	Arab
	arə?	egoist
e - ə	emba	yard
	əmba	appear
	deŋka	to pound
	dəŋka	to crawl
	metta	black
	mətta	unripe
	deŋko	toothpaste
	dəŋko	to grill, toast
	sərrə?	sunset
	sərre?	extreme
	je?je?	eye infection
	jə?jə?	to guide

3. VOWEL SEQUENCES

There are no occurrences of word-initial vowel clusters. Vowel clusters in word-medial and word-final positions are indicated in the following tables. The number indicates the frequency of occurrence in a 15,800 word data corpus.⁷

Table 3. Word-Medial Vowel Clusters

I/F	a	е	Ð	i	0	u
a	-	90	45	262	60	227
е	95	-	75	51	35	2
Э	-	4	-	20	26	6
I	338	9	77	-	54	45
0	81	19	67	32	-	10
ų	240	14	70	52	4	-

Table 4. Word-Final Vowel Clusters

I/F	a	įе	9		0	Ü
a	-	19	-	215	13	76
· e	608	-	-	49	7	1
Э	-	-	-	-	-	-
	475	3	-	-	18	23
o l	79	9	-	55	-	13
u	156	4	-	71	4	_

From the above tables, the following conclusions can be made with regard to vowel clusters:

- 1. Geminate vowel clusters do not occur.8
- 2. Word-initial vowel clusters do not occur.
- 3. The clusters $\sqrt{\partial V}$ and $\sqrt{V\partial V}$ do not occur in word-final position.
- 4. The cluster /aa/ does not occur in any position.9

Additionally, sequences of three vowels can occur in Barang-barang. This happens when roots ending in a two-vowel sequence are suffixed by a vowel-initial morpheme, as shown in the following examples, all illustrating verbs with transitive suffixation.

Table 5. Three-Vowel Sequences

duruia	to take away s.t.
gauaka	to make s.t.
beloia	to adorn s.t.
taua	to place s.t.

inroia	to search for s.o.
saiaku	to give to me
agoia	to try to do s.t.
akuia	to confess s.t.

4. CONSONANTS

The Barang-barang consonant inventory consists of a total of twenty phonemes. Of these, however, it should be noted that two phonemes, the semivowels $/\mathbf{w}/$ and $/\mathbf{y}/$, are considered to be recent borrowings. But even though these borrowed phonemes have a limited distribution and occur with low frequency, they must be considered an integral part of the current Barang-barang sound system.

Table 6. Consonant Inventory¹⁰

	Labial	Alveolar ¹¹	Palatal	Velar	Glottal
Voiceless Stops	p	t	С	k	?
Voiced Stops	b	d	j	g	
Nasals	m	n	${ t n}^{12}$	ŋ	
Fricatives	f	S			h
Lateral		1			
Flap .		r			
Semivowels	W		у		

 Table 7. Consonant Contrasts

		
p - b	pau	word
	bau	new
	pusu?	gone, finished
	busu?	peak
	kape	paralyzed
	kabe	true
	lopa?	carton
	loba?	cruel
p - f	pale	to cut
P-1	fale	tasty
		
	pitu fitu	seven similar to
-		
	apu	fire
	afu	ashes
	lapa	to fold
	lafa	therefore
t - d	tafu	testicle
	dafu	portion
	toŋko?	lid
	doŋko?	to ride
	pitu	seven
	pidu	bile
	ate	liver
	ade	chin
t - n	tipa	mango
	nipa	k.o. palm
	tafa	leaf
	nafa	light
	atu	hundred
	anu	which, that
	batəŋ	corpse
	banən	thread
c - s	coto	meat dish
	soto	meat soup
	cani?	
	sani	honey to know
	boco? boso?	mosquito net
		high tide
	coco?	agree
•	soso?	diminish
j - n	Jafa	Java
	лаfa	spirit
	gajia	to hire s.o.
	kania	because of
	kaju	wood
	manu?	to drift
	lagaji	to employ
	la?ani?	to operate, cut

p - m	pusu	heart
•	musu	enemy
	pəllə?	palm, sole
	məllə?	stiff, cramped
	apa	four
	ama	father
	kapi	wing
	kami	we (1pe)
b - m	bala	dangerous
	mala	lake
	bəŋka	canoe
	məŋka	but
	liba	quick
	lima	five
	kábara?	news
	kámara?	room
c - j	cə?ə?	paint
	jə?jə?	to guide
	cala?	latch
	jale?	grasshopper
	boco?	mosquito net
	bojo?	cucumber
	kaci	white cloth
	saji	to serve
d - n	dəŋka	crawl over
	nəŋka	jackfruit
	ade	chin
	ane	when
	tada	sharp
	tana	land
	tudu	to order
	tunu	to bake
c-n	cala?	latch
	nafa	spirit
	cə?cərita	to converse
	<u>р</u> ә?пати?	strawberry
	daciŋ	scales
	kuni?	turmeric
	pəcobekəŋ	mortar
	рәлопка	<u>medicine</u>
k - g	kau	claw
	gau	to do, make
	kolo	river
	golo	ball
	bake	fruit
	bage	to divide
	loka	banana
L	loga	spacious

	y	
k - ŋ	kapa	cotton
	ŋ ара	ocean
	kura	pot
	ŋura	young
	aku	I, me (1s)
	aŋo	piece (CLASS)
	loka	banana
	loŋa	to see
? - k	fa?a	blue
	faka	root
	so?o	soup
	soko	hoe
	me?e	to bleat
	meke	to cough
	fa?i	spoiled
	baki	basket
h - Ø	tahu	tofu
	tau	to put
	Tuhaŋ	Lord
	tuaŋ	sir, mister
	hamma?	exclamatory. ¹³
	amma?	mother
	hakka?	alliance
	ákkala?	to deceive
n-n	nafa	light
_	nafa	spirit
	nipa	k.o. palm
	ліа	to exist
	tanuŋ	to weave
	тапи?	to drift
	mənia	parent-in-law
	dənia	to have, own
յո - ŋ	ரia	to exist
	ŋisi	tooth
	л ә? лати?	Strawberry
	ŋəʔŋərəʔ	to shout
	dənia	to have, own
	dəŋia	to be present
	lenon	Bald
	leŋoŋ	long
r - 1	roka	to tear down
	loka	banana
	rui	Thorn
	lui	k.o. palm
	belo	to adorn
	bero	to fan
	bara	shed, pen
	bala	dangerous

	T	
g - ŋ	gaji	wage
	ŋaji	to read
	guru	teacher
	ŋuru	news
	daŋe	baked sago
	bage	to divide
	pigu	corner
	liŋu	confused
2 - h	da?ang	without
	pahang	to understand
	hihi	to neigh
	si?i	this
	tu?a	old
	Tuhan	Lord
	sehe?	freind
		paint
2 0	kai	
2 - Ø		to hook
	kai?	to win
	biti?	news
	biti	calf of leg
	tobo?	to stab
	tobo	palm blossom
	fa?i	spoiled
	mai	<u>here</u>
n - ŋ	nasu	to boil
	ŋalu	wind
	nuriŋ	parrot
	ŋuru	news
	anu	that, which
	aŋu	piece (CLASS)
	tana	land
	taŋa	middle
n - m	nai	who
	mai	here
	ne?e	don't
	me?e	to bleat
	ánara?	polite
	ámara?	to greet guests
	ana	child
	ama	father
r - d	rua	two
	dua	also
	raŋa	friend
	dana	hand span
	tara	
	tada	way, manner sharp
		to descend
	turuŋ tuduŋ	to aescena to touch
L	tuuuij	ιο ισμετι

5. SEMIVOWELS

The phonemes /w/ and /y/ occur with relatively low frequency, and are limited to syllable-initial position, often occurring in recognized borrowings. Furthermore, it is extremely rare for semivowels to be found in word-initial position.

Several examples of semivowel occurrences are listed in the following table.

Table 8. Some Semivowel Occurrences

/w/	walli	monk
	wórtele?	carrot
	cawa?	loin cloth
	hawa	air
	gəŋiwaŋ	ear clip
	sawi	mustard greens
	awasia	to watch, guard
	máwara?	rose
	jowa?	troops, workers

/ y /	ya	yes
	yuraŋ	amount owed
	ra?ya?	society
	saya?	skirt
	aya?	verse
	bayaŋ	amaranth
	kiyau	dog
	diyuŋ	dugong

In spite of the fact that many occurrences of /w/ and /y/ are either in borrowed words or in ambiguous sequences, it should be recognized that unambiguous semivowel occurrences do exist in Barang-barang. Consider for example hawa "air". Because of the penultimate stress pattern, and the absence of clustered vowels within one syllable, hawa could not be analyzed as */haua/ since that would result in *[ha.ú.a] rather than the observed [há.wa]. Likewise, sawi "mustard greens" could not be analyzed as */saui/ since that would result in *[sa.ú.i] rather than the observed [sá.wa]. Similar arguments could be made for the phoneme /y/, with words like saya? "skirt" and bayaŋ "amaranth".

It is also instructive to consider the final vowel in kiyau "dog". One may be tempted to analyze this word as /kiyaw/ with a final semivowel instead of a vowel. But once again, the penultimate stress pattern would then predict [kí.yaw] rather than the observed [ki.yáw]. It is significant that stress is on the final /a/, since that indicates the /a/ is the penultimate syllable, and that the underlying representation is best denoted as /kiyau/. 14

The analysis of final /u/ rather than /w/ in kiyau "dog" is also supported by a study of CVV words, which are best analyzed with word-final vowels rather than word-final semivowels. Consider the CVV examples in the following table:

Table 9. Final Vowels in CVV Words

kai	pick
kae	swim
lai	run
lae	joint
koi	bed
koe	discouraged
rui	k.o. palm
bue	bean
tau	to place
tao	fashionable

Sau	steam
sao	descend
Ləlliu	mushy
ləllio	to aim
beu ¹⁵	k.o. bird
beo	k.o. bird
kia	why
kea	swing hips
nroa	to not exist
nrua	to be sick

Since the final vowels in CVV words are not limited to /i/ and /u/, there is no reason to introduce a more complex analysis involving the use of word-final semivowels for only one subset of CVV words. A two-syllable analysis (CV.V) with word-final vowels more elegantly captures the general pattern. This is also consistent with Barang-barang word patterns, which, except for a few particles and prepositions¹⁶, excludes monosyllabic words.

6. CONSONANT SEQUENCES

There are no occurrences of word-final consonant clusters. The tables below indicate the frequency of word-initial and word-medial consonant clusters occurring in the same 15,800-entry wordlist used to quantify vowel sequences. Note that there are no clusters with /h/, /w/, or /y/, so these phonemes have not been included in the tables.

Table 10. Consonant Clusters in Word-Initial Position

I/F	Ъ	C	d	f	8	j	k	Ī	m	n	1	ŋ	p	Î	S	t	3
Ъ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•
f	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
k	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-
m	150	-	•	1	-	-	-	5	40	-	-	-	73	5	6	9	-
n	-	-	1	-	-	-	-	-	-	-	-	-	••	22	-	11	-
Jn.	-	-	-	-	-	4		-	-	-	-	-	-	-	-	-	-
ŋ	-	_	-	-	34	-	92	-	-	-	-	-	-	-	-	-	-
D P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
r	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
t	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	_	-	<u>-</u>	-	_	-	-

Table 11. Consonant Clusters in Word-Medial Position

I/F	b	c	đ	f	g	j	k	1	m	n	n	ŋ	p		S		2
Ъ	82	-	•	_	-	_	-	-	-	-	-	-	-	-	-	-	-
C	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
đ	-	-	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-
j	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-	~	-
k	-	-	-	-	-	-	439	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	564	-	-	-	-	-	-	-	-	-
m	685	-	-	-	-	-	-	-	143	-	-	-	338	-	-	-	-
n	-	-	123	1	-	-	-	1	-	240	-	-	-	516	99	430	-
n	-	3	-	-	-	132	-	-	-	-	87	-	-	-	~	-	-
Ŋ	-	-	9	5	225	-	710	-	-	-	-	378	12	-	32	7	-
D P	-	-	-	-	-	-	-	-	-	-	-	-	291	-	-	-	-
T	-	-	-	-	-	-	-	-	-	-	-	-	-	244	-	-	-
S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	435	-	-
t 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	425	-
2	270	2	184	13	112	125	258	177	156	82	12	519	64	143	53	55	-

Several comments are in order with regard to previous two tables. First, clusters from foreign words have not been included in the consonant cluster tables, since these borrowings are clear exceptions to normal consonant cluster patterns in Barang-barang. Typical examples of words which were eliminated from the data corpus include proper nouns such as Afrika, Israil, Bakri, April, Agustusu?, Septembərə?, Oktobərə?, and borrowed words such as nuklir "nuclear", atlit "athlete",

perse?en "percent", persiden "president", guburnuru? "governor", biosko? "theater (BI: bioskop)", ilmu "science (BI: ilmu)", səkəripsi "thesis (BI: scripsi)", tripleks "plywood (BI: tripleks)", koreksi "to correct (BI: koreksi)", arloji "wristwatch (BI: arloji)", kismisi? "raisin (BI: kismis)", and merdeka "freedom (BI: merdeka)".

Second, word-initial NC combinations are limited to homorganic nasal-consonant clusters (those sharing a common point of articulation), and to consonant clusters beginning with /m/. In mC clusters without a common point of articulation, the /m/ functions as a shortened form of verbal prefixes mə- or ma-.

Third, the combination /ll occurs when the initial /l functions as a shortened form of the verbal prefix la- and is followed by a stem beginning with /l.

Lastly, there are infrequent occurrences of non-homorganic, word-medial, NC clusters. In the case of nC clusters, this is usually attributed to borrowing (e.g., /bontisi?/ "bean", /lansa?/ "k.o. fruit"), compounding (e.g., /kərən-tuno/ "heel", /pin-sio/ "the ninth time"), or suffixation (e.g., /da?n-po/ "not yet", /inron-da/ "mother only"). The single occurrences of /nf/ and /nl/ are found in multi-morphemic number words in which the nasal has not been assimilated to the point of articulation of the following consonant (e.g., /tapin-felu/ "eight times", /tapin-lima/ "five times").

Given the exceptions discussed above, the following generalizations regarding consonant clusters can be made:

- 1. Word-final consonant clusters do not occur.
- 2. Word-initial consonant clusters may consist of:
 - a. NC, only homorganic nasal-consonant clusters
 - b. mC, a consonant cluster with /m/ as the initial consonant
 - c. ll, the cluster /ll/
- 3. Word medially, consonant clusters may consist of
 - a. CC, only geminate consonants clusters
 - b. NC, including some non-homorganic NC clusters¹⁷
 - c. ?C, glottal stop followed by a consonant

It is also informative to consider which CC clusters occur as an integral part of the syllable structure versus those which occur only across syllable boundaries and those which occur only across morpheme boundaries. This distribution pattern is summarized as follows:

- 1. CC clusters integral to the syllable structure
 - a. NC homorganic clusters
- 2. CC clusters occurring across syllable boundaries
 - a. NC homorganic clusters
 - b. CC geminate consonant clusters
 - c. ?C glottal stop followed by consonant
- 3. CC clusters occurring across morpheme boundaries
 - a. NC homorganic clusters
 - b. CC geminate consonant clusters
 - c. ?C glottal stop followed by consonant
 - d. NC non-homorganic clusters resulting from affixation or compounding
 - e. word-initial mC clusters where /m/ is reduced morpheme
 - f. word-initial ll clusters where initial /l/ is reduced morpheme

7. NASAL-CONSONANT CLUSTERS

Barang-barang has a variety of homorganic NC combinations which carry a significant functional load in the language. These NC combinations could be treated as prenasalized consonants, if it were clear that they functioned as a single phonemic unit, or they could be treated as sequence of separate phonemic units, grouped together as an NC cluster. Here the latter analysis is chosen, as discussed below.

The inventory of these homorganic NC clusters is shown in the following table.

Table 12. Homorganic NC Clusters

	Labial	Alveolar	Palatal	Velar
Voiceless Stops	mp	nt		ŋk
Voiced Stops	mb	nd	лj	ŋg
Fricative		ns		
Flap		nr		

Contrastive examples of consonants with their NC cluster counterparts are presented in the table below.

Table 13. Homorganic NC Cluster Contrasts¹⁸

mp - p mpane hot hot lumpə? to jump lupu? tired mb - b mbafo to be short bafo top limbo neighbor libo engulfed hot? but of the falling tə?bun fall binto? cataract bito? k.o. plant housand adele? fair andele? capital adele? fair nr - r nrua to be sick rua two tanra sign tara manner tara manner manner phoko? to choke ng - g ngolo? golo? dagger ngəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog tumbən landslide			
lumpə? tired mb - b mbafo to be short bafo top limbo neighbor libo engulfed nt - t ntə?buŋ to be falling tə?buŋ fall binto? cataract bito? k.o. plant nd - d ndulu to share dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? dagger ŋgəssiŋ strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog	mp - p	mpane	to be hot
Iupu? tired mb - b mbafo to be short top Iimbo neighbor libo engulfed nt - t ntə?buŋ to be falling tə?buŋ fall binto? cataract bito? k.o. plant nd - d ndulu to share dulu partner andele? capital fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner njk - k njkafa to come kafa from, to bonjko? rotten boko? to choke ng - g ngolo? to compete golo? dagger ngəssin strong sumpu ear of corn sumbu candle wick tumpən frog		pane	hot
mb - b mbafo bafo limbo limbo libo neighbor libo neighlor libo engulfed not lobe falling tall binto? cataract bito? k.o. plant nd - d ndulu partner andele? capital fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner nk - k nkafa from, to bonko? bonko? boko? to choke ng - g ngolo? golo? dagger ngəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		lumpə?	to jump
bafo top limbo neighbor libo engulfed nt - t ntə?buŋ to be falling tə?buŋ fall binto? cataract bito? k.o. plant nd - d ndulu to share dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner njk - k njkafa to come kafa from, to boŋko? rotten boko? to choke njg - g njgolo? dagger njgəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		lupu?	tired
limbo neighbor engulfed nt - t ntə?buŋ to be falling fall binto? cataract bito? k.o. plant nd - d nd ulu partner andele? capital fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? dagger ŋgəssiŋ to be strong gəssiŋ sumbu candle wick tumpəŋ frog	mb - b	mbafo	to be short
Iibo engulfed nt - t ntə?buŋ to be falling tə?buŋ fall binto? cataract bito? k.o. plant nd - d ndulu to share dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog		bafo	top
nt - t ntə?buŋ binto? binto? bito? nd - d ndulu dulu partner andele? adele? fair ns - s -nsofu sofo? to move fenso reso reso effort nr - r nrua to be sick rua two tanra tara manner nk - k nkafa kafa from, to boŋko? boko? ng - g ngolo? golo? ngəssiŋ gəssiŋ sumpu sumpu candle wick tun frog		limbo	neighbor
tə?buŋ fall binto? cataract bito? k.o. plant nd - d ndulu to share dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? to compete golo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog		libo	engulfed
binto? k.o. plant nd - d ndulu to share dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? to compete golo? dagger ŋgəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog	nt - t	ntə?buŋ	to be falling
nd - d nd - d ndulu partner andele? adele? ns - s -nsofu sofo? to move fenso reso effort nr - r nrua to be sick rua two tanra sign tara manner nk - k nk afa bonko? bonko? ng - g ngolo? golo? ngəssin gəssin sumpu ear of corn sumbu candle wick tunpən frog		tə?buŋ	fall
nd - d dulu partner andele? capital adele? fair ns - s -nsofu sofo? to move fenso reso effort nr - r nrua to be sick rua two tanra sign tara manner nk - k nkafa kafa from, to bonko? bonko? boko? rotten boko? to choke ng - g ngolo? ngəssin gəssin strong mp - mb sumpu sumbu candle wick tumpən frog		binto?	cataract
dulu partner andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog		bito?	k.o. plant
andele? capital adele? fair ns - s -nsofu thousand sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog	nd - d	ndulu	to share
ns - s -nsofu sofo? to move fenso reso reso effort nr - r nrua to be sick rua two tanra sign tara manner nk - k nkafa kafa from, to bonko? boko? rotten boko? ng - g ngolo? golo? golo? ngəssin strong mp - mb sumpu sumbu ear of corn sumbu candle wick tuppən		dulu	partner
ns - s -nsofu sofo? to move fenso reso effort nr - r nrua to be sick rua two tanra sign tara manner nk - k nkafa kafa from, to bonko? boko? to choke ng - g ngolo? golo? ngəssin gəssin to be strong gəssin strong mp - mb sumpu sumbu candle wick tumpən frog		andele?	capital
sofo? to move fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? to compete golo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog		adele?	fair
fenso nervous reso effort nr - r nrua to be sick rua two tanra sign tara manner ŋk - k ŋkafa to come kafa from, to boŋko? rotten boko? to choke ŋg - g ŋgolo? to compete golo? dagger ŋgəssiŋ to be strong gəssiŋ strong mp - mb sumpu ear of corn sumbu candle wick tumpəŋ frog	ns - s	-nsofu	thousand
reso effort nr - r nrua to be sick rua two tanra sign manner nk - k nkafa kafa from, to bonko? bonko? rotten boko? to choke ng - g ngolo? golo? ngəssin gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		sofo?	to move
nr - r nrua two tanra sign tara manner nk - k nkafa kafa from, to bonko? boko? ng - g ngolo? ngolo? golo? ngəssin strong mp - mb sumpu sumbu candle wick tumpən frog		fenso	nervous
rua two tanra sign tara manner nk - k nkafa to come kafa from, to bonko? rotten boko? to choke ng - g ngolo? to compete golo? dagger ngəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		reso	effort
tanra sign tara manner nk - k nkafa to come kafa from, to bonko? rotten boko? to choke ng - g ngolo? to compete golo? dagger ngəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog	nr - r	nrua	to be sick
nk - k nkafa kafa from, to bonko? ng - g ngolo? ngəssin syssin syssin mp - mb sumpu sumbu candle wick to come to come to choke to choke to compete dagger syssin strong		rua	two
nk - k		tanra	sign
kafa from, to bonko? rotten boko? to choke ng - g ngolo? to compete golo? dagger ngəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		tara	manner
bonko? rotten boko? to choke ng - g ngolo? to compete golo? dagger ngəssin to be strong gəssin strong mp - mb sumpu sumpu ear of corn sumbu candle wick tumpən frog	ŋk - k	ŋkafa	to come
boko?to chokeng - gngolo?to competegolo?daggerngəssinto be stronggəssinstrongmp - mbsumpuear of cornsumbucandle wicktumpənfrog		kafa	from, to
ng - g golo? golo? dagger ngəssin to be strong gəssin strong mp - mb sumpu sumpu ear of corn sumbu candle wick tumpən frog		boŋko?	rotten
golo? ngəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog		boko?	to choke
golo? ngəssin to be strong gəssin strong mp - mb sumpu ear of corn sumbu candle wick tumpən frog	ŋg - g	ŋgolo?	to compete
mp - mb sumpu ear of corn sumbu candle wick tumpən frog	_	golo?	dagger
mp - mb sumpu ear of corn sumbu candle wick tumpən frog		ŋgəssiŋ	to be strong
sumbu candle wick tumpəŋ frog		1	strong
tumpəŋ frog	mp - mb	sumpu	ear of corn
	-	sumbu	candle wick
		tumpəŋ	frog
			landslide

mp - m mposo poison lumpə? to jump lumu? moss mb - m mbari to be many bari many tambo wages tamo heavy nt - n ntəggi to be rotten təggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud əngku to haul		1	
lumpə? to jump moss mb - m	mp - m	mposo	to gasp
mb - mmbari bari many tambo tambo tamoto be many many to be rotten to be rotten to be rotten to buntu buntu buntu bunund - nndulu to killnd - nndulu to share nunua sluggishns - n-nsofu monson monson mono?thousand to bow thousand nolo zeronr - nkanrea kaneato eat s.t. to touch s.t.tanra tanalandŋk - ŋŋkapa napaoceanməŋka məŋabut məŋaandŋg - ŋŋgolu nojo saŋga saŋato roll noid saŋga nameŋk - ŋgeŋkəŋ əŋgəŋ engguroad news enggu		moso	poison
mb - m mbari bari many tambo tambo tamo nt - n ntəggi notten buntu protrude bunu to kill nd - n ndulu ndu tunu bake ns - n -nsofu monson mono? nr - n kanrea kanea to touch s.t. tanra tana land ng - n ngolu njojo sanga sanga pny enggu proud tambo wages to be rotten to be thick to bow tunu bake to eat s.t. to touch s.t. tanra sign tana land to be thick napa ocean mənka məna and to roll nojo sanga boundary name news enggu proud			to jump
bari many tambo wages tamo heavy nt - n ntəggi to be rotten təggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		lumu?	moss
tambo tamo heavy nt - n ntəggi to be rotten təggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa nocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll nojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud	mb - m	mbari	to be many
nt - n ntəggi to be rotten təggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		bari	many
nt - n ntəggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		tambo	wages
təggi rotten buntu protrude bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		tamo	heavy
buntu bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land nk - n nk - n ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud	nt - n	ntəggi	to be rotten
bunu to kill nd - n ndulu to share nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa ocean məŋka but məŋa and ng - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		təggi	rotten
nd - n ndulu nunua sluggish dundu to bow tunu bake ns - n -nsofu nolo zero monson monson green mono? to stop nr - n kanrea kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa məŋka məŋa ngen məŋka but məŋa and ŋg - ŋ ŋgolu ŋojo still saŋga saŋga boundary saŋa name ŋk - ŋg eŋkəŋ - road əŋgəŋ news enggu proud		buntu	protrude
nunua sluggish dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still sanga boundary sana name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		bunu	to kill
dundu to bow tunu bake ns - n -nsofu thousand nolo zero monson green to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land nk - n npka to be thick napa ocean mənka but məna and ng - n ng olu to roll nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud	nd - n	ndulu	to share
tunu bake ns - n -nsofu thousand nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land nk - n nkapa to be thick napa ocean mənka but məna and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud		nunua	sluggish
ns - n -nsofu nolo zero monson green mono? to stop nr - n kanrea kanea to eat s.t. tanra sign tana land nk - n npkapa npa ocean mənka məna ng - n ngolu nojo sanga sanga sanga name nk - ng enggu proud		dundu	to bow
nolo zero monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land nk - n nkapa to be thick napa ocean mənka but məna and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud		tunu	bake
monson green mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land nk - n nkapa to be thick napa ocean mənka but məna and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud	ns - n	-nsofu	thousand
mono? to stop nr - n kanrea to eat s.t. kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		nolo	zero
nr - n kanrea kanea to eat s.t. to touch s.t. tanra sign land nk - n nkapa napa ocean mənka mənka mənya and ng - n ngolu nojo sanga sanga sanga sanga name nk - ng enkən enggu proud		monson	green
kanea to touch s.t. tanra sign tana land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		mono?	to stop
tanra sign land ŋk - ŋ ŋkapa to be thick ŋapa ocean məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud	nr - n	kanrea	to eat s.t.
tana land nk - n nkapa to be thick napa ocean manka but mana and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkan road angan news enggu proud		kanea	to touch s.t.
nk - n nkapa to be thick napa ocean mənka but məna and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkən road news enggu proud		tanra	sign
napa ocean manka but manya and ng - n ngolu to roll nojo still sanga boundary sana name nk - ng enkan road angan news enggu proud		tana	land
məŋka but məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud	ŋk - ŋ	ŋkapa	to be thick
məŋa and ŋg - ŋ ŋgolu to roll ŋojo still saŋga boundary saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		ŋapa	ocean
ng - n ngolu nojo still sanga sanga sana name nk - ng eŋkən əngən news enggu proud		məŋka	but
nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud		məŋa	and
nojo still sanga boundary sana name nk - ng enkən road əngən news enggu proud	ŋg - ŋ	ŋgolu	to roll
saŋa name nk - ng eŋkəŋ road əŋgəŋ news enggu proud		ŋojo	still
saŋa name ŋk - ŋg eŋkəŋ road əŋgəŋ news enggu proud		saŋga	boundary
enggu proud			name
enggu proud	ŋk - ŋg	eŋkəŋ	road
			news
		enggu	proud
			-

nt - nd	góntolo? góndolo?	manure bald
	móntoro? dóndolo?	erection serious
лj – j	njoro joro?	coconut slanted
	tajaŋ taŋja?	wait face

nd - nr	kondo konro	heron neck
nt - ns	məntu? mənsu	refuse lip
лј - n - л	njoro nolo nolo?	coconut zero while
	kunja runa nunu	basket soft smell

Given the two choices for analysis of NC clusters, prenasalized consonants vs. sequence of two phonemes, it seems most economical to choose the latter. The analysis of NC clusters as a sequence of two phonemes does require the addition of two new syllable types, NCV and NCVC, which would not be required if the NC clusters were treated as prenasalized consonant. However the addition of two syllable types is more economical that the addition of the many new consonant phonemes that would be required by the prenasalized consonant analysis. Furthermore, the prenasalized consonant analysis would require unique distribution rules for the prenasalized consonants, since their distribution is more restricted than that of other consonants.

8. GEMINATE CONSONANT CLUSTERS

Geminate consonants clusters manifest themselves as lengthened consonants in Barang-barang. As with the sequential analysis of NC consonants, it seems most efficient analyze these lengthened consonants as the phonetic manifestation of geminate consonant clusters rather than as single, lengthened phonemic units, since the latter would require the addition of at least 16 phonemes. Also, the lengthened phoneme analysis would require additional distribution rules since unlike other consonants, the lengthened consonants do not occur word initially. Another argument in favor of the sequential CC analysis is that when such sequences occur as the result of affixation, the predicted phonetic lengthening of the consonant is observed.

The following geminate consonant clusters have been observed:

Labial **Palatal** Velar Alveolar **Voiceless Stops** kk tt ccpp **Voiced Stops** bb dd jj gg **Nasals** mm nn ŋŋ ŋŋ **Fricatives** ff SS Lateral 11 Flap rr

Table 14. Geminate Consonant Clusters

Regarding the preceeding table, it should be noted that the geminate alveolar flap /rr/ is realized phonetically as a trill.

The following table presents examples of contrasts with geminate consonant clusters and similar segments or clusters. Geminate consonant clusters are generally observed only in word-medial position. There are however a few instances of word-initial geminate consonant clusters, but these only occur across morpheme boundaries were the word-initial C is actually a reduced morpheme. Examples are mmai "to come here", which is composed of the reduced morpheme (verbal prefix) mwith the root mai, and llenka "to go", composed of the reduced morpheme (verbal prefix) l- and the root lenka.

Table 15. Contrasts with Geminate Consonant Clusters

	toppo	face
pp - p	tappa	face point, cape
	tapa	
	laruppai larupai	to pick up to prove
bb - b	kúbburu?	
ט - טט	búbusu?	grave add, take more
	nabbi	prophet
	labi	leftovers
mm - m	ámmala?	hold breath
	ámala?	deeds
	kumme	soft
	kami	we (1pe)
ff - f ²⁰	fəffelo	to shake
	kəfele	basket
	fəffala	sports ring
	kəfalu	mat
tt - t	katti	liter
	kati	to pick
	dəti?	second
	dətti?	to tap
dd - d	addo	oh!
	oda	ladder
	kəddi?	small
	kudi?	just
nn - n	məsinna	desire
	məsina	machine
	tannaŋ	to place
	tanuŋ	to weave
11 - 1	ballo	beautiful
	balo	hole
	jalla	lonely
	jala	fishnet
rr - r	larra	famous inside
	lara	
	sərrə? serə?	sunset sting
:: :		
jj - j	ájjala? ájərə?	time of death teach
	hajja?	desire
	bajaŋ	to penetrate
<u>դ</u> ր -	kannin	eyebrows
1.0. 1.	kuni?	turmeric
	ləŋŋiŋ	clean
	lenon	bald
kk - k	bakke	corpse
_ - _	bake	fruit
	bakka?	grandmother
	baka?	talent
gg - g	ləgga	already
	laga	wrestle
	mogge	big
	toge	bean sprout

pp - ?p ¹⁹	pə?podo?	shy person
	púppusu?	stub
	puppua	ancestor
	pə?pui?	conch shell
bb - ?b	subbu	dawn
	sa?ba	musical horn
	bəbbara	outfit, uniform
	bə?bafa	magic
mm - 2m	tumme?	lead, tin
	lo?me?	weak
	úmmuru?	age
	mú?musu?	to suck
ff - ?f ²¹	fəffala	sports ring
	fə?falu?	to wander
	fəffərri	to blow
	fə?fiddu?	tiny
tt - ?t ²²	təttoro	to sit
	tə?turu?	agreeable
	təttasi	bag
	tə?tisi?	to mend
dd - ?d	kəddi?	small
	kə?di?	if, when
	kuddi	let it be!
	ko?di	ugly
nn - ?n	tannaŋ	to place
	to?neŋ	melancholy
	jənna	step
	te?ne	happy
11 - 21	kolli?	to tease
	to?lo?	to spill
	ləlle?e	urinate
	ló?lori	to flow
rr - ?r	kərru?	to scrape
	ku?ru?	disheveled
	sərre?	extreme
	se?re?	one
jj - 2j	sujju?	to kneel
J J J	fu?ja	drunk
	hajji	pilgrim
	fəʔje	saliva
<u> դ</u> ր - շր	marəŋŋu?	slippery
	ku?ɲu?	shriveled
	kəmiŋŋə?	greasy
	kəri?nə?	wrinkled
kk - ?k	kəkkoto	boiling
	kə?koto?	mackerel
	kəkkaro	by one's self
	kə?kare?	cassava
gg - ?g	ləgga	already
	ba?ga	stupid
	bəggo?	k.o. fruit
	gelo?go?	to guzzle
	<u> </u>	

ព្យា - ព្	taŋŋa taŋa	in process middle
	ləŋŋa	sesame
	loŋa	to see
ss - s	nassu	to boil
	nasu	anger
	assa	formal
	asa	to rub
ss - ?s	passa	to force
	ra?sa	mercury

ŋŋ - 2ŋ ²³	ŋəŋŋoəŋ ŋəʔŋərəʔ	wasp to shout
	daŋŋa?	stupid
	ha?ŋa	rights
cc - c	pəkocci?	pickpocket
	səkoci	canoe
	macca	capable
	macaŋ	tiger
cc - ?c	məcə?cərita	to converse
	məcecceŋ	corrupt

9. SYLLABLE STRUCTURE

In Barang-barang, the basic syllable types are: V, CV, VC, CVC. In addition, the existence of word-initial, homorganic NC clusters add the syllable types NCV and NCVC. This does not imply that the other consonants, denoted by C, cannot be nasal. In fact, the distribution of syllable-final consonants is limited to include only nasals or glottal, unless the syllable-final consonant is the first consonant of a geminate consonant cluster. Examples of Barang-barang syllable types are shown in the following table.

Table 16. Syllable Types

V	<u>a</u> .de	chin
	e.ka	expansive
	ke. <u>a</u>	to swing hips
	ka. <u>e</u>	to swim
VC	ge. <u>a?</u>	to bother
	ja. <u>i?</u>	to sew
	ep.paŋ	bait
	<u>əs</u> .səŋ	gill
	ba.ge. <u>əŋ</u>	portion
	du.ri. <u>an</u>	durian
NCV	<u>nri</u> .u	to bathe
	<u>njo</u> .ro	coconut
	mpa.ne	to be hot
	ŋka.lə?	to be tired

CV	ba.fa	to bring
	to.fu	sugarcane
	po.di	cuscus
	re.so	effort
CVC	a. <u>so?</u>	to force
	ba. <u>du?</u>	eel
	ba. <u>fən</u>	onion
	tap.pa	face
	<u>ba?</u> .ga	stupid
	tə2.buŋ	to fall
NCVC	ntəg.gi	to be rotten
	mpas.sa	to break
	<u>mbo?</u> .bo?	to crack
	nko?.di	bad

Note that only word-initial examples of NCV and NCVC syllable types are shown. That is because word medially there is always ambiguity as to how to correctly divide syllables. For example, it is uncertain whether mpanra? "to damage" should be analyzed as /mpa.nra?/ or as /mpan.ra?/. Also, since there are no three-unit consonant clusters (CCC) in Barang-barang, the combinations NCC and CNC never occur. As a result, there are no unambiguous occurrences of syllable types NCV and NCVC other than those in word-initial position. This is discussed further in the following section.

10. WORD STRUCTURE

Barang-barang does not have monosyllabic words; hence Barang-barang word structure consists of two of more syllables with syllable structure as defined in the previous section.

All consonants except /2/, /w/, and /y/ may occupy the word-initial position. ²⁴ In addition, NC clusters can occur word initially. NC clusters may occur word medially also, but in those cases it is always ambiguous as to whether the nasal is the final C of the previous syllable or the initial nasal in the following syllable of type NCV or NCVC. This analysis assumes the former, since it seems somewhat more economical. Admittedly, the choice of this analysis is somewhat subjective. But the alternative would mean the possibility of word types such as CVC-NCV and CVC-NCVC, and since there are no occurrences of CNC clusters, such an analysis would require rules for blocking this construction. It seems simpler to just limit the distribution of NCV and NCVC syllables to the word-initial position. Further analysis, including the study of native speaker reaction to various syllable divisions, will be required before conclusive statements can be made. Assuming the current analysis, the syllable types NCV and NCVC are not shown to occur word medially or word finally. An additional word-level restriction is that the word-final consonant position may only be filled by /2/ and /ŋ/. ²⁵ This can be summarized as follows:

- 1. Words consist of two or more syllables
- 2. Word-initial Syllable conditions:
 - a. any syllable type (V, CV, VC, CVC, NCV, or NCVC)
 - b. initial C is not $\frac{1}{2}$, $\frac{w}{n}$, or $\frac{y}{n}$
 - c. final C is /2/, a nasal, or any C beginning a geminate cluster
- 3. Word-medial Syllable conditions:
 - a. only syllables V, CV, VC, or CVC
 - b. final C is only /?/, a nasal, or any C beginning a geminate cluster
- 4. Word-final Syllable conditions:
 - a. only syllables V, CV, VC, or CVC
 - b. final C is only /2/ or $/\eta/$

11. WORD STRESS

Word stress is normally penultimate. This applies to roots as well as derived forms. Other than for a particular group of words with an epenthetic final /-V?/, sometimes referred to as a paragogic syllable (Sneddon 1993), described later in this section, there are very few exceptions to the Barangbarang penultimate stress rule. The normal, penultimate stress pattern is shown in following examples:

Root forms:

Ade	chin
káe	to swim
báfa	to bring
éssen	gill
táppa	face
njóro	coconut
durían	durian

Table 17. Penultimate Stress – Root Forms

Table 18. Penultimate Stress – Suffixed Forms

Suffixed forms:	gáfe gaféna gaféəŋ gafeəŋa	make, work shape task his work
	táfu tafúi	testicle castrate
	lakánre lakanréa	to eat to eat s.t.
	lagáu lagauáka lagauakéa	to do to do s.t. to do s.t. to s.o.

The major exception to the penultimate stress rule is with a group of words, often recognized as borrowings in which the original word had a final consonant. Apparently when these words were assimilated into Barang-barang, they retained the stress on the same syllable that was originally stressed, and added an paragogic final syllable /-V2/ with an echo vowel. The echo vowel always copies the final vowel of the root. The addition of a paragogic syllable is similar to that observed in many languages of Sulawesi. For example, Sneddon (1993:17) states, "Martens (pers. comm.) points out that in recent borrowings into Uma and some other KP [Kaili-Pamona] languages, a paragogic vowel, usually an echo vowel, is frequently added to final consonants... In Uma and Ledo, and presumably in other KP languages, this paragogic syllable on recent borrowings is counted for stress placement, with stress falling on the syllable before it." The process is Barang-barang is similar that of Kaili-Pamona languages, except that in Barang-barang stress remains on the original stressed syllable, resulting on this group of words having antepenultimate stress. Because the added syllable is not counted for purposes of stress, it is more specifically denoted as an epenthetic syllable. The process of adding a epenthetic syllable serves to preserve Barang-barang word structure, which only allows /ŋ/ and /2/ as word-final consonants. Examples are as follows:

Table 19. Stress With Epenthetic -V?

Barang-barang	Indonesian	English
áddasa?	adas	fennel
ájjala?	ajal	time of death
áppele?	apel	apple
áŋgoro?	angur	grape
áŋgəre?	anggrek	orchid
bóŋtisi?	boncis	green bean
bá?dili?	bedil	gun
dábbusu?	dabus	scrub one's body
dóddolo?	dodol	taffy
dóttoro?	dokter	doctor
jə̂ʔjələʔ	jejal	press, cram
kántoro?	kantor	office
kúbburu?	kubur	grave

Throughout this paper (except for the tables in this section), stress is marked only in words that exhibit a stress pattern other than the normal penultimate stress pattern. That is, words with penultimate stress are not marked.

12. GLOTTAL INSERTION

Since geminate vowels clusters are not allowed, Barang-barang employs a glottal-insertion process to separate geminate vowel clusters which occur when morphemes are combined. This process occurs within morphemes as well as across morpheme boundaries.

Within single morphemes, the process is evidenced by the presence of words such as /ba?a/"head", /le?e/ "urine", /si?i/ "this", /ko?o/ "you", and /pu?u/ "tree", along with the fact that no geminate VV clusters occur.

Across morpheme boundaries, the process can be seen from the following examples, which show glottal insertion between like vowels but not between unlike vowels.

V2V (same V)	; VV (different V)
l <u>a?a</u> li	m <u>ua</u> li
l <u>a-a</u> li	m <u>u-a</u> li
3sS-buy	2sS-buy
he buys	you buy
p <u>i?inraŋ</u> p <u>i-inraŋ</u> 1 peS-borrow we borrow	lainraŋ la-inraŋ 3sS-borrow he borrows
ku?u?raŋia	kup <u>iu</u> ?raŋikea
ku-u?raŋi-ea	ku-p <u>i-u</u> ?raŋi-ka-ea
1sS-remember-3sO	1sS-CA-remember-BEN-3sO
I remember s.t.	I remind him
kupəlong <u>a?a</u> ka	lasa <u>ia</u> ka
ku-pə-long <u>a-a</u> ka	la-sa <u>i-a</u> ka
1sS-VR-see-TR	3sS-give-TR
I showed s.t.	he gives s.t.

Table 20. Glottal Insertion

In addition to glottal insertion, Barang-barang also employs morphophonemic alternations to prevent the clustering of like vowels across morpheme boundaries. A variety of morphophonemic processes and alternations have been identified, but since they are morpheme specific, their characteristics and distributions are more appropriately described in a study of morphology. The glottal-insertion process is included in the present discussion since it operates at a phonological level.

13. RESIDUE

The only vowel cluster that never occurs is the sequence $/\partial a/$. This irregular vowel-cluster distribution pattern indicates a unique relationship between the vowels $/\partial$ and $/\partial$. It also suggests that $/\partial$ perhaps originated historically as a shift from $/\partial$ in certain environments. This could explain the absence of the cluster $/\partial a/$, since it would have originated from geminate vowel clusters which are never observed.

Related to this are morphophonemic data which show some predictable variation between /a/a and /a/a. This is seen with the nominalization suffix $-a\eta$, alternating with $-a\eta$ in the environment following /a/a. A similar pattern is also observed with the prefixes pa-, ma-, and ka-, alternating with pa-, ma-, and ka-, respectively, in the environment preceding /a/a. Note that the application of the

glottal insertion rule separates the resultant /aa/ sequences occurring with the -aŋ, pa-, ma, and kaforms. Representative examples of the -əŋ/-aŋ and pə-/pa- alternation are shown in the following
tables.

Table 21. Nominalizer $-\partial \eta \rightarrow -a\eta$ after /a/

-əŋ	dolaŋ-əŋ	\rightarrow	dolaŋəŋ
	ocean-NOM		ocean
	gafe-əŋ	\rightarrow	gafeəŋ
	work-NOM		effort
-aŋ	bafa-əŋ	\rightarrow	bafa?aŋ
	carry-NOM		companion
	kəfasa-əŋ	\rightarrow	kəfasa?aŋ
	power-NOM		power

Table 22. Verbalizer $p \rightarrow p a$ - before /a/

pə-	pə-laka	\rightarrow	pəlaka
	VR-fly		to fly
	рә-оро-оро	\rightarrow	pə?opo-opo
	VR-hide-hide		to play hide and seek
pa-	pə-ati-ati	\rightarrow	pa?ati-ati
	VR-look		to look for
	pə-agama	\rightarrow	pa?agama
	VR-religion		to be religious

In addition to the predictable alternation described above, there is also some unpredictable /a/- /ə/ alternation, as shown in the following examples. In some (but not all) cases, /ə/ is realized as /a/ when it receives word-level penultimate stress.

Table 23. Unpredictable /ə/-/a/ alternation

Root	/ə/ form	/a/ form
tokə?	tojəkia	tojakəŋ
to plant	to plant s.t.	sprout (noun)
kalə?	kuŋkalə?	ŋkalaki?i
tired	I am tired	they are tired
tanrəŋ	latanrəŋ	tanraŋəŋ
stand	to build	building (noun)

Such alternations are not common, and are perhaps best considered to be the lexicalized irregular forms. However, more study is warranted, especially in view of the irregular distribution of vowel clusters and the predictable morphophonemic /3/ - /a/ alternation.

Another observation that warrants further investigation is the occasional and unpredictable appearance of "hidden" root-final consonants when a suffix is added. Similar observations have been made in other languages of Sulawesi (Sneddon 1993:16-17): "In some KP [Kaili-Pamona] languages, perhaps in all, various phonologically unpredictable consonants are inserted between roots and vowel-initial suffixes. These may be reflexes of previous final consonants. However, very frequently they do not correspond with the original lost consonants." In some cases the final consonant is not completely hidden, but appears to have been reduced to /?/. Examples of these unpredictable consonants are seen in the following forms:

Table 24. Unpredictable Consonants

$\emptyset \to t$	pə-liu-i	\rightarrow	pəliuti
	VR-pass-LOC		to pass by s.t.
	binu-i	\rightarrow	binuti
	to pull-LOC		to pull out s.t.
$\emptyset \to s$	kə-ba?ani-əŋ	\rightarrow	kəba?anisəŋ
	brave-NOM		bravery
	ati-əŋ	\rightarrow	atisəŋ
	look-NOM		s.t. searched for
$2 \rightarrow k$	dongko?-əŋ	\rightarrow	dongkokəŋ
	ride-NOM		transportation
	ŋkalə?-i?i	\rightarrow	ŋkalaki?i
	tired-PL		they are tired
	jai?-əŋ	\rightarrow	jaikəŋ
	to sew-NOM		s.t. sewn

These unpredictable consonants are sometimes referred to as "thematic" consonants, and may reflect the retention of older final consonants (Sneddon 1993).

14. SUMMARY

A preliminary description of the phonology of Barang-barang has been presented. Included is a comparative survey wordlist (Appendix A) of the Kalao subgroup of languages, including Barang-barang, Laiyolo, and Kalao. An interlinearized text (Appendix B) is also provided in order to give a glimpse into the grammatical structure of the language.

Barang-barang has a six-vowel inventory /a, e, i, o, u, ə/. While the phoneme /ə/ is somewhat more limited in its distribution than the other vowels (in that /əV/ and /Və/ sequences do not occur in word-final position), the phoneme /ə/ does occur in both stressed and unstressed positions and in a variety of unpredictable environments. Its existence as a distinct phoneme is clear, in spite of the fact that a six-vowel system in somewhat unusual for language in this region of Indonesia.

The language has a total of 18 consonants /p, b, m, t, d, n, c, j, n, k, g, n, f, s, l, r, h, ?/, plus the two semivowels /y, w/ which occur infrequently and with limited distribution. Consonant clusters are limited to nasal-consonant clusters, geminate consonant clusters, and glottal-consonant clusters.

Syllable types include V, CV, VC, CVC, NCV, and NCVC. Words consist of two of more syllables, with /2/ or $/\eta$ / as the only allowed word-final consonants. Word stress is predictable, occurring on the penultimate syllable (regardless of affixation), or on the antepenultimate syllable in the case of what appears to be recently assimilated words ending in the epenthetic sequence /-V2/, where the vowel is an echo vowel copied from the final syllable of the root.

The data presented here, while only offering a initial look at the language of Barang-barang, provide an important first step in the documentation of the Kalao subgroup of languages. It is hoped that further study will enable these languages to be more completely documented, in order that their linguistic relationship with neighboring Sulawesi languages may be more accurately defined.

APPENDIX A: WORDLIST

A comparative wordlist representative of the Kalao language subgroup is shown below. While the Barang-barang and Laiyolo data are fairly reliable, due to the authors' limited access to Kalao speakers, the Kalao data has not gone through the same degree of testing. It is included, however, since no published wordlist of the Kalao language exists. The numbering in the list below follows the numbering of the standard Sulawesi Word Book survey list (Friberg and Laskowske 1989).

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
001a	batən karo	karo	baja	badan	body
001b	karo	tubu	tubu	tubuh	body
002	ba?a	ba?a	ba?a	kepala	head
003	kufa oto?	kau?fana ba?a	buku oto?	tengkorak	skull
004	oto?	oto?	oto	otak	brain
005	bəlua	bulua	bulu?a	rambut	hair (head)
006a	tanja?	tanja?	tanja?	wajah	face
006b	tappa	tanio	rupa	muka	face
007	rupa	rupa	rou	dahi	forehead
008	mata	mata	mata	mata	eye
009	batu mata	batu mata	batu mata	biji mata	eyeball
010	kannin	kanin	kire	kening	eyebrow
011	bulu mata	bulu mata	bulu mata	bulu mata	eyelashes
012	ufe mata	ufe mata	uvena mata	air mata	tear (crying)
013	kə?kipisi?	kipi?kipisi?	kipi-kipi	pelipis	temple
014	ano	апо	αηο	hidung	nose
015	bagəŋ	kasumpi	kasempi	pipi	cheek
016	buku bagən	buku bagən	buku kasempi	tulang pipi	cheekbone
017	ŋaŋa	папа папа	ηαηα	mulut	mouth
018	mənsu	muri-muri	mensu	bibir	lip
019	dila	dila	dila	lidah	tongue
020	ŋisi	ŋisi	ηisi	gigi	tooth
021	ade	ade	a?de	dagu	chin
022	təliŋa	taliŋa	taliŋa	telinga	ear
023	bəroko	boroko	baroko	leher	neck
024a	kə?kerro?	kərro?-kərro?	nerro?-nerro?	kerongkongan	throat
024b	gandron	ganron		jakun	Adam's apple
025	bəlikə?	baliko?	balike	bahu	shoulder
026	siku	siku	siku	siku	elbow
027	lima	lima	lima	tangan	hand, forearm
028	pəllə? lima	pəllə? lima	pele lima	tapak tangan	palm of hand
029	daŋa	rana	ndaŋa	jengkal	hand span
030	gərege	gurege	anana lima	jari	finger
031	inron gərege	inron gurege	indoŋa lima	ibu jari	thumb
032	kəniŋkiŋ	kəninkin	kanəŋkiŋ	jari kelinking	little finger
033	kənuku	kənuku	kanuku	kuku jari	fingernail
034a	kəssə?	pəŋguŋ	barembəŋ	punggung	back, spine
034b	taŋa	poŋko?	taŋa	pinggang	waist, loin
034c	təliku	taliku	taliku	belakang	back, backside
035	ranra	ranra	randa	dada	chest
036	susu	mimmi?	susu	susu, buah dada	breast
037	pompon	kompon	кәтро?ŋ	perut	belly
038	bəŋkəŋ	bəŋkəŋ	bəŋkəŋ	kaki	leg, foot
039	pəŋgoŋ	pongon	pa?a	paha	thigh
040	biti	biti	biti	betis	calf of leg
041	təputu	taputu	taputu	lutut	knee
042	dəndolən	dolən-dolən	palento?oŋ	pelipatan lutut	popliteal space
043	pəgəlangən bənkən	pəgalaŋəŋ bəŋkəŋ	gənte	pergelangan kaki	ankle
044	pəllə? bəŋkəŋ	pəllə bəŋkəŋ	pəllə bəŋkəŋ	tapak kaki	sole of foot

#	Barang-barang	Laiyolo	Kalao	Indonesian	English	
045	kərəntuno	kuruntuno	korontuŋo	tumit	heel	
046	gərege bənkən	gərege bənkən	anana bəŋkəŋ	jari kaki	toe	
047a	bulu	bulu	bulu	bulu	hair	
047b	bulu karo	bulu karo	bulu baja	bulu badan	body hair	
048	kuli	kuli	kuli	kulit	skin	
049	isi	dageŋ	isi	daging	meat, flesh	
050	mbaka	mbaka	mbaka	lemak	fat	
051	buku	buku	buku	tulang	bone	
052	buku kərəkka	bulu karakka	kərəkka	tulang rusuk	rib	
053	pusu	puso	jantuŋ	jantung	heart	
054	ra?a	ra?a	ra?a	darah	blood	
055	ufa ra?a	ufa ra?a	uvana ra?a	urat darah	vein	
056	ati	ati	ate	hati	liver	
057	pidu	pidu	pi?du	empedu	gall, bile	
058	pəpparu	paruparu	Pizua	paru-paru	lungs	
059	pompon	kompon	isi kəmpoŋ	usus	intestines	
	lekkere?	lekkere?				
060a	paja	puki	pa?a?	pantat	buttocks	
060b	dokki?	poŋko?	təkki	bokong	buttocks	
061a	təmbuŋ	təmmbuŋ	balona təkki	pelepasan	anus	
061b	təkki	təkki	təkki	dubur	anus	
062	le?e	ufe le?e	le?e	air kencing	urine	
063	ta?i	tai	ta?i	tahi	excrement	
064	lasu	lasu	tafu	kemaluan laki-laki	penis	
065	puki	puki	pio	kemaluan	vagina	
066	hallon	kubi-kubi	tarana mbela	perempuan bekas luka	ccar	
066	bəlləŋ			bisul	scar boil	
067	kəbisu	kabisu	kabisu	<u> </u>	 	
068	oməsə?	fusa	vosa	keringat	sweat (noun)	
069	ito	ito	ito	orang laki-laki	person male	
070	muane	muane	baine		man, male	
071	bine	baine		perempuan	woman, female husband	
072	bərei	bairəi	bərei	suami	• • • • • • • • • • • • • • • • • • •	
073	bərei	bahine	bərei	isteri	wife	
074a	papa?	pua	ama	bapak, ayah	father	
074b	ama	pua	ama	bapak, ayah	father	
075a	inron	amma?	ino	ibu	mother	
075b	amma?	amma?	ino	ibu	mother	
075c	ina?	amma?	ino	ibu	mother	
076	ana	ana?	ana?	anak	child	
077	ana lifua	ana? lifua	ana tumpe	anak sulung	first born child	
078	ana buŋko	ana? buŋko	ana buŋko	anak bungsu	last born child	
079	susu	kimah	susu	cucu	grandchild	
080	pua bine	pua baine	pua baine	nenek perempuan	grandmother	
081	pua muane	pua muane	pua muane	nenek laki-laki, kakek	grandfather	
082	pəppua	pua?	риа-риа	nenek moyang	ancestor	
083a	susu-susuna	kima-kimana	le?ena	keturunan	offspring	
083b	pə?piu?ŋa	piu?-piu?ŋa	piu-piuka	keturunan	offspring	
084	təttənai	fitianimu	гәррі	saudara	sibling	
085	aka muanena	aka muane	aka muane	kakak laki-laki	older brother	
086	aka hidanena	aka baine	aka baine	kakak perempuan	older sister	
087	anri muane	anri muane	andi muane	adik laki-laki	younger brother	
088	anri bine	anri baine	andi baine	adik perempuan	younger sister	
089	sətəttənai	pinuama	pinu ama	saudara laki-laki	mother's brother	
090	inroŋ sətəttənai ama	pinuama	pinu ama	dari ibu saudara laki-laki	-laki father's brother	
091	sətəttənai	pininroŋ	pinu indoŋ	dari ayah saudara perem-	mother's sister	
	inron			puan dari ibu		

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
092	sətəttənai ama	pininron	pinu indoŋ	saudara perem-	father's sister
				puan dari ayah	
093	bətua	bəttua	batua	hamba, budak	slave
094	bəbbalu	balu-balu	məlola?a	janda	widow
095	itoŋkafa	tamu	tamu	tamu	guest
096a	raŋa	raŋana	raŋa	kawan, teman	companion
096b	baha?	raŋaka	raŋa-raŋana	kawan, teman	companion
096c	pəbafa?aŋ	pobaha?	raŋa-raŋana	kawan, teman	companion
097	aku	aku	yaku	aku, saya	I, me
098	ko?o	ko?o	ko?o	engkau, kamu	you
099	sia	sia	sia	dia, ia	he, she
100	kami	kami	kami	kami	we (1pe)
101	kita	kita	kita	kita	we (1pi)
102a	ko?omiu	ko?o salele	kəmiu	kalian	you (PL)
103	sianai	ko?omiu lele	sinai	mereka	they
104	kərambu	karambu	karambau	kerbau	water buffalo
105	sapiko?o	anoa	anoa	anoa	anoa
106	tanru?	tanru?	tandu	tanduk	horn
107	iku	poti	iku	ekor	tail
108	jənjanan	kado?kadola	manu-manu	burung	bird
109	jənjanan	kado?kadola	ьәŋŋо	burung gagak	crow
	kəla?a?	kalla?a?			
110	jaŋaŋ	kadola	manu	ayam	chicken
111	kapi	kopi	kapi	sayap	wing
112	gərau	gərau	gorau	telur	egg (chicken)
113	bulu	bulu	bulu	bulu	feather
114	ama-ama	kutu	ama-ama	kutu	louse (chicken)
115	kutu	kutu	kutu	kutu	louse (head)
116	kəntuma	kəntuma (baju)	kantuma	tuma	louse (clothes)
117	pənəkki	ponekki	panəkki	kelelawar	bat (small)
118	pənəkki	ponekki	panəkki	keluang, kalong	fruit bat (large)
119	ulo-ulo	ulo	ulo	ulat	caterpillar
120	kəkkote	kote-kote	kote-kote	kupu-kupu	butterfly
121	kəsissili?	kosisili?	kasəssi	nyamuk	mosquito
122	lale	lale	lale	lalat	fly
123	bubu?	bubu?	lipen	anai-anai	termite
124	lipəŋ	lipəŋ	lipəŋ	lipan	centipede
125	oŋgə?	oŋgə?		kelemanyar	millipede
126	pə?pepe?	pəpepe?	роро-роро	kunang-kunang	firefly
127	kala	kala	supikala	kalajengking	scorpion
128a	təttərri	turi-turi	tetteri	tonggeret	cicada
128b	jəŋkərri?	tərri	jeŋkerri	tonggeret	cicada
129	bəmbolaŋ	bolen	puka-puka	labah-labah	spider
130	gəŋ-gəlleŋ	gelleŋ-gelle	gelleŋ-gelleŋ	cacing tanah	earth worm
101	tana	tana	1	1	•
131	ulo	ulo	ulo	ular	snake
132	juku?	juku?	juku	ikan	fish
133	sissi?	sissi?	paki	sisik	fish scales
134	əssəŋ	ossəŋ	essəŋ	insang	fish gills
135	gəggelu	gelu?	gelu-gelu	ikan belut	eel
136	tumpəŋ	tumpəŋ	tumpaŋ	katak	frog
137	kə?kura?	saŋkura?	kura-kura	kura-kura	turtle
138	buaja	buaja	buaja	buaya	crocodile
139	rusa	rusa	rusa	rusa	deer
140	punro?	punro	kərra	monyet	ape
141	bəlafo	balafo	balavo	tikus	rat, mouse
142	bafu	bafu	bavu	babi	pig
143	kiyau	keyau	keau	anjing	dog
144	pu?u	batan	pu?u	pohon	tree
145	tafa	tafa-tafa	tafa	daun	leaf
146	təŋke	təŋke	<u>təŋke</u>	cabang	branch

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
147	faka	faka	faka	akar	root
148	kuli kaju	kuli kaju	kulina kaju	kulit kayu	bark (tree)
149	kaju	kaju	kaju	kayu	wood
150	bake	bake	bake	buah	fruit
151	taju?	buŋa	kəmbəŋ	bunga	flower
152	rui	rui	rui	duri	thorn
153	loka	loka	loka	pisang	banana
154	njoro tu?a?	njoro makərrin	kalalo tua	kelapa tua	coconut (ripe)
155	njoro nura	njoro nura	kalalo ŋura	kelapa muda	coconut (unripe)
156	kufa	kaufa	kouva	tempurung	coconut shell
157	pərriŋ	pərriŋ	perrin	bambu	bamboo
158	bəlambaŋ	balambin	rumbia	pohon rumbia, pohon sagu	sago palm
159	nipa	nifa	nipa	pohon nipah	nipa palm
160	luro	lauro	lauro	rotan	rattan
161	tofu	tofu	tevu	tebu	sugar cane
162	sangoren	sangoren	kaju tanah	kacang tanah	peanut
163	kəkkafu	pu?una kafu- kafu	kavu-kavu	pohon kapok	kapok
164	pənrola	palola	pandola	terung	eggplant
165	kələmpeŋa	kolompeŋa memaŋ	baŋəlle	jahe	ginger
166	kənro? kaju	kandora kaju	opakau	ubi kayu	cassava
167	kənro? mənrele	kandora lu?i	kandora	ubi jalar	sweet potato
168	komba	komba	komba	sirih	betel
169	pinəŋ	pinəŋ	pinoŋ	pinang	areca nut
170	bobomatufu	rompo?	boron	rumput	short grass
171	rea	padan tirosi	pa?dəŋ	alang-alang	sword grass
172	pandan	pandaŋ	pəndəŋ	pandan	pandanus
173	liso	liso	batu	biji	seed
174	lamuŋəŋ	lamuŋəŋ bae	vini	bibit (padi)	rice seedling
175	bae	bae	asə	padi	field rice
176	bae	bae	asə	gabah	unhulled rice
177	kuli bae	kulina bae	kulina asse	sekam (gabah)	hull of rice
178	berəsə?	bərəsə?	asə	beras	hulled rice
179	kənanre	rikare	kinande	nasi	cooked rice
180	ganru	batari	bətari	jagung	corn
181	mata ajo	matana ajo	mata ajo	matahari	sun
182	bula	bula	bula	bulan	moon
183	bintoeŋ	bintoen	bintoeŋ	bintang	star
184	laŋi?	laŋi?	əllə	langit	sky
185	ta?i ŋalu	tai ŋalu	ke?bu	awan	cloud
186	rəmməŋ	marəmməŋ	ke?bu eta	awan hitam	rain cloud
187	kə?bu	kə?bumo	ke?bu-ke?bu	kabut	fog
188a	lətte	lette	lətte	guntur	thunder
188b	gunturu?	gunturu?	guntu	guntur	thunder
189	kilə?	kela?	lelə	kilat	lightning
190	uda	uda	uda	hujan	rain
191	tara ufe	tara ufe	toro uve	pelangi	rainbow
192	ŋalu	ŋalu	aŋiŋ	angin	wind
193	napa h:6	tafən	tavon	laut	sea, ocean
194	bifi ŋapa	bifi tafəŋ	bivi bone	pantai	shore
195	bone	bone	bone ielo?bon	pasir	sand
196	jəmmen	jammen	jelo?boŋ	lumpur	mud
197	tana	lingun	lindun	tanah	earth, ground
198	linrun	linrun	linduŋ	gempa bumi	earthquake salt
199	gərrəŋ	gərrən	tino	garam	
200	pəgaŋga	golla ufe	gola	gula air	sugar
201	ufe		uve mosolo	air terjun	water waterfall
202	ufe ntə?buŋ	ufe maurru	uve mosolo	1 an icijun	waterjall

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
203	mata ufe	mata ufe	matana uve	mata air	spring
204	bənto	bonto	bento	gunung	mountain
205	busu?	1	ba?ana bənto	puncak	summit
206	rompo?	boron	boron	hutan	woods, forest
207	kolo	kolo	mala	sungai	river
208	mala	mala		danau	lake
209	apu	apu	<u>apu</u>	api	fire
210	ombu	ombu	ombu	asap	smoke (of fire)
211	afu	afu	avu	abu	ashes
212	afu-afu	limpuran	limpurəŋ	debu	dust
213	batu	batu	batu	batu	stone
214	tila	kaporo?	<u>toila</u>	kapur	lime
215	ito-itoka	ito-itoka	ito-ito	bayang-bayang	shadow
216	sapo	sapo	sapo	rumah	house
217a	lənte	lənte	lənte	lantai	floor
217b	lapərə?	lənte	dopi	lantai	floor
218	rinrin	rinrin	rindin	dinding	wall (of house)
219	bamba	bamfa	bamba	daun pintu	door
220	tərosəŋ	tərosaŋ	patəŋko	atap	roof
221	kərəkka	kaso	kaso	kasau	rafter
222	pəppa?a	pəppa?a	рәра?а	para	storage shelf above hearth
223	hantan sano	hanten cano	ori	tiang rumah	house post
	benten sapo	bənten sapo		tiang rumah	
224	kəpeo	kapeo	kapeo	kolong rumah	crawl space
225a	tonro?	kikisi	tondo	pagar	fence
225b	kikisi?	kikisi	tərali	pagar	fence
226	bənka	lepa-lepa	<u>beŋka</u>	perahu	canoe, boat
227a	bose	gajon	bose	dayung	canoe paddle
227b	gajon	gajon	jao?	dayung	canoe paddle
228	raki?	raki?	raki	rakit	raft
229a	tottoro?	afon	avon	arang	charcoal
229b	osaŋ	osaŋ	<u>afon</u>	arang	charcoal
230a	dəlikəŋ	dəlikəŋ	dalikəŋ	tungku	fireplace
230b	dapurəŋ	dapuru?	dapu?	tungku	fireplace
231	kura	kuro	kura	periuk, belanga	cooking pot
232	gusi	gusi	pəlalinəŋ	tempayan	water jar
233	pəllo diŋkanəŋ ufe	təmpələ?	pəllo	tempat air bambu	bamboo water container
234	pəŋalle	pəŋalle	ta?bo	gayung	ladle
235	loson	loson	loson	lesung	mortar
236	ana loson	ana loson	anana losoŋ	penumbuk, alu	pestle (rice)
237	piso	piso	piso	pisau	knife
238	berən	berən	berəŋ	parang	machete
239	bənua berən	bənua berən	banoa	sarung parang	machete sheath
240	jənka	jəŋka	suru	sisir	comb
241	sinsin	sinsin	sinsin	cincin	ring (for finger
242a	tolu	kalara	lui	tali pintal	twine
242b	kəlara	kalara	kəlara	tali	rope
243	banəŋ	banən	banəŋ	benang	string, thread
244	pənjai?	pənjai	рәрјаі	jarum	needle
245	lipə?	lipə?	tope	sarung	sarong
.45 .46	səluara?	sala	sala	celana	trousers
.40 .47	kəfalu	kəfalu	kifalu	tikar	mat
247 248a	səlimu?	salimu?	lamba	selimut	blanket
	† · · · · · · · · · · · · · · · · · · ·	†	ιωτιυα	selimut	+
248b	kaeŋ panasa?	salimu?	hanta		blanket
249	bəntələ?	bəntila	bəntə	bantal	pillow
250	pəŋali?	sombi	sələmbin	cawat	loincloth
251	pakeyəŋ karuŋ tule	tule	pakeyəŋ karu	jeluang	bark cloth
ורים	1111 	: IIIIe	tule	saguer	wine
252 253	ufə?	ufə?	ичо	obat	medicine

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
255	dala	dala	dala	jalanan	trail, road
256	mogge	maoge	oge	besar	big
257	kəddi?	makiddi?	kə?di	kecil	small (object)
258	məlape	malape	patte	baik	good
259	kurəŋajərə?	makuronnajara	da?a	jahat	bad, evil
260	fəssa	fəssa	fessa	basah	wet
	 		təηko	kering	dry
261	təŋko	matəŋko?			
262	məluo	malua?	fare	lebar	wide
263	məseke?	maseke	sekə	sempit	narrow
264	ngəssin	magəssin	ka?a	kuat	strong
265	mələmma	pamele	runa	lemah	weak
266	mərido	marido	rido	jauh	far
267	məsumpe	masumpe	sumpe	dekat	near
268	bau	bau	beəru	baru	new (objects)
269	məleŋoŋo	maliŋoŋŋo	leŋoŋ	lama	old (objects)
270	mətu?a	matu?a?	tu?a	tua	old (persons)
271a	məkapa	makafa	kapa	tebal	thick (objects)
271b	ŋkapa	makafa	kapa	tebal	thick (objects)
272	mənipi	manipi	nipi	tipis	thin (objects)
273					skinny
	mərusu	mado?koŋ	lampo	kurus	
274	mələmpo	maoge	ləmpo	gemuk	fat
275a	pane	pane	pane	panas (air)	hot (water)
275b	bəlla (ufe bəlla)	pane	pane	panas (air)	hot (water)
276	dinin	madinin	diŋiŋ	dingin (air)	cold (water)
277	bələkuku	ufe kammu?	pane-pane	hangat (air)	lukewarm
					(water)
278	mpokkolo?	mpokolo	kənduŋ	tumpul	dull (knife)
279	mətada	matada	tada	tajam	sharp (knife)
280	mpo?do	mpodo-podo	po?do	pendek	short (length)
281a	mbafo	mbafo	mbavo	rendah	short (height)
281b	bəmbafo	bəmbafo	mbavo	rendah	short (height)
282	mərate	marate	rate	panjang	long (object)
283	· · · · · · · · · · · · · · · · · · ·		vərru	busuk	rotten (fruit)
	mətəggi	matəggi	kəssi		
284	məkəssi	pakəssi		masam, asam	sour bitter
285	mpa?i	mpa?i	pa?i?	pahit	-
286	tənniŋ	tennin	tənniŋ	manis	sweet
287	fonru	fonru	vondu	harum, wangi	fragrant
288	filo	filo	vilo	buta	blind
289	mboŋolo?	mbonolo?	ьоло	tuli	deaf
290	mənrua	madodoŋ	ndua	sakit	pain, to be sick
291	mərou	marou	mərou	haus	thirsty
292	ma?ara	ma?ara	ma?ara	lapar	hungry
293	mbosu	mbosu	mbosu	kenyang	full, satiated
294	məraen	maraen	marain	lain	other, different
295	səlelea	salelea	lelea	semua	all
296	bari	mbari	bari	banyak	many
297	mətamo	matamo	tamo	berat	heavy
298	terəsə?	materasa	təre	keras	hard (substance)
	+		· †	<u> </u>	
299	mərənnəsə?	marəmmasa	rota	kotor	dirty
300	məkate	mlambusu	kate	lurus	straight
301	mbogu	bo?doŋ	ko?doŋ-kodoŋ	bulat	round, spherical
302	səssino	sino	sinoŋ	sunyi, sepi	lonely
303	mərəsai	marasai	marasai	sukar	difficult
304a	məlaro	malaro	laro	licin	smooth
304b	ma?alusu?	ma?alusu	ma?allu	halus	smooth
305	ləssiri?	ləssiri	simboŋ	lekas, cepat	fast
306	mənrala	mralan	ndala	dalam	deep
307	bukke	bukke	buke	penuh	full (container)
308	kana	kana	kana	benar	true, correct
309	putti	putti	puti	putih	white
307	pulu	putti	puu	1 putili	WILLE

# 310	Barang-barang etta	Laiyolo etta	Kalao təttəη	Indonesian hitam	English black
311	kunnin	kunnin	kunin	kuning	yellow
312	le?i	le?i		merah	1 -
313			kudaran	hijau	red
314	monson	monson ninro	ndo		green
	ninro		daəŋ	tidak	not
315	da?aŋ	da?aŋ	ndo	tidak ada	none
316 317	ninro	nainro	- 	bukan iila	no :c
318	ane	ane	ane	kalau, jika	if
310	anu	anu	anu	anu, yang	that, whatever you call it
319	ləggamo	lengamo	ləgga	sudah	already
320	məna	məna	тәпа	dan	and
321	si?i	si?i	si?i	ini	this
322a	tria	tiria	itu	itu	that
322b	təria	teria	itu	itu	that
323	mərido tria	tiria marido	turi	itu yang jauh	that distant
324	ri si?i	ri si?i	ri si?i?	di sini	here
325	ri itu	ri itu	ri itu	di situ	there
325 326	ri itumako	tiria mako	ri turi	di sana	
327	sə?ənsa		sa?ensa		way over there
327 328		sa ansa		dua satu	one
328 329	rua talu	rua ansa	talu	tiga	three
329 330		talu ansa			three four
	lima	pata ansa	pata lima	empat lima	
331 332		lima ansa			five
	ana	ana ansa	ana	enam	Six
333	pitu	pitu ansa	pitu	tujuh	seven
334	falu sio	falu	valu	delapan	eight
335	· 	Sio	Sio	sembilan	nine
336	səpulu	səpulu	səpulu	sepuluh	ten
337	ruappulu	rua pulu	rua pulu	dua puluh	twenty
338	sa?atu	sa?atu	sa?atu	seratus	hundred
339	sənsofu	sansofu	sa?ansovu :	seribu	thousand
340	ri	rı	1:	di	at
341	kiri	kiri	kairi	kiri	left (hand)
342	ka?ana	kanan	ka?ana	kanan	right (hand)
343	barə?	barə?	<u>barə</u>	barat	west
344	mbure	timoro	<u>timu</u>	timur	east
345	təŋio sulu? ŋapa	tanio manau ri barə?	tambe	ke arah laut	seaward, toward the sea
346	təŋio	taŋio	bavo	ke arah pedalaman	inland, toward the interior
347	ri tambe	lario	tambe	di bawah	under
348	ri bafo	rate	ri bavo	di atas	on top of, above
349	ri təliku	ri taliku	ri mburi	di belakang	behind
350	ri təŋio	ri tanio	ri taŋəo	di depan	in front
351	lara bifi	lara taliku	ri bivi	di luar	outside
352	lara	lara	ri lara	di dalam	inside
353	bifi	bifi	ri bivi-bivi	pinggir	edge
354	ajo	ajo	ajo	hari	day
355	boni	malo	boni	malam	night
356	pəŋessələ?	maŋəssolo	boŋi-boŋi	pagi	morning
357	mənafamo	ajo?mo	taŋa ajo	siang	midday
358	kənəfia	kənəfia	konovia	sore	afternoon
359	riafi	riafi	riavi	kemarin	yesterday
360	ajo si?i	ajo si?i	ajo si?i?	hari ini	today
361	lile	lile	laile	besok	tomorrow
362	taun	taun	taun	tahun	year
363	məsili	masi?-masili	sili	malu	ashamed, shy
364	nassuna	konassu	konasu	marah	
365	lameka	maeka	maeka	takut	to fear, be afraid
JUJ	LIUIIICNA	Паска	biləŋ	menghitung	io jeui, ve uji ulu

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
367	pəmiajərə?	pəmiajərə	pamiajə	belajar	to learn
368	lapəpikkiri?	pikkiri	pikiri	berpikir	to think
369	lasania	asani	sania	tahu (sesuatu)	to know (s.t.)
370	musania	asani kita	lasania	kenal (orang)	to know (s.o.)
371	məliŋa	malinea	maliŋa	lupa	to forget
372	pərərrafo	rafo-rafo	ravo	berbohong,	to lie (untruth)
0,2	Pororraro			mendusta	
373	lapiliki	pili	pili	memilih	to choose
374	kape	ngora	bero	memanggil (dng.	to beckon (with
0, 1	Mapo	30014		tangan)	hand)
375	pau aka	pau aka	poŋurusia	memberitahu, kasi	to tell
076	•			tahu	1
376a	lapəppau	pəpau	рәраи	berkata	to say, speak
376b	lapəbisara	pəpau	рәраи	berkata	to say, speak
377a	laulaŋia	aulania	pakuliŋ	mengulangi	to repeat
377b	labəlilisia	aulaŋia	pakuliŋ	mengulangi	to repeat
378	lalafəŋ	fali-falia	bo?o	menjawab	to answer
379	lapəkeloŋ	pukeloŋ	kajəŋki	menyanyi	to sing
380	lataŋi	taŋi	taŋi	menangis	to cry
381	lapəŋərre	gege	ŋərre	tertawa	to laugh
382	lapənraŋo	muraŋo	гало	mendengar	to hear
383	lapəllona	pea lona	loŋea	melihat	to see
384	laboua	fo bou	bou	mencium (bau)	to smell, sniff
385	lapale	pale	pale	memotong	to cut (wood)
386	labissə?	birea	bira	membelah	to split (wood)
387	lapənasu	pəmanasu	pemanasu	memasak	to cook
388	koto	kotomo	rende	mendidih	to boil (water)
	<u> </u>	bonkarə?	buŋkəri	membuka	1
389	labuŋkərə?				to open, uncover
390	lakanre	bekare	kande	makan	to eat
391	lodu	lodu	lodu	minum	to drink
392	lapəkikki?	kikki?	kekiti	menggigit	to bite
393	lamuntea	pomunta	munta	mengunyah	to chew
394	lakanre loka	makara loka	репәŋ	makan pinang	to chew betel nut
395	laome	komea	ome	menelan	to swallow
396a	lamu?musu?	muigu	emmu	mengisap	to suck
396b	laemmu?	muigu	emmu	menjilat	to lick
397	latəppo	təppo	təppo	meniup	to blow
398	lakenia	teteŋ	keni	memegang	to hold
399	lapərra	pərra	pərra	memeras	to squeeze
400	lamənakea	banakea	naka	membuang	to throw away
401	latə?buŋ	marau	ndau	jatuh	to fall, drop
402	lapətə?buŋea	paurru kia	ndautəkia	menjatuhkan	to drop
403	labəmbore	mbo?o-mbo?ore	mbore-mbore	bermain	to play
404	lapəgafe	keni	jama	bekerja	to work
405	latunu	a?tunua	tunu	membakar	to burn
406	lalamuŋ	lamun	lamuŋ	menanam	to plant
407	tufu	tufu	dadi	tumbuh	to grow
408	latapi	pənapi	tapi	menampi	to winnow
	ladeŋka	pənapı pədo?da	rəntu	menumbuk	to pound (rice)
409	<u> </u>	tufu	da?di	hidup	to live, alive
410	tufu				to die, dead
411	matte	matemo	mate	mati	· · · · · · · · · · · · · · · · · · ·
412	lakeke	keke	keke	menggali	to dig (hole)
413	lakubburu?aka	toluananugo	balokəkia	menguburkan	to bury, inter
414	lasoronea	lasoron	soroŋ	mendorong	to push
415	labeso?	labeso?	nunu	menarik	to pull
416	latəmbəŋ	bokea	boke	mengikat, menambatkan	to tie, to tether
417	lafəlili	popalin	pəllin	berbelok	to turn
418	lapinro	po inro-inro	pakainto	berputar	to turn around
419	ladəkki?	kadekki	parakki	melekat berlekat	to stick to
420	lalu?lu?	lalu?lu?	laləlukia	mengelap	to wipe
740	iaiuiiui	lauliui	iuioiuniu	1 mengerap	1 to muc

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
421	latapəsə?	panapəsa	рәпарә	mencuci pakaian	to wash clothes
422	la?ajoni	paŋajoni	pai	menjemur	to dry in sun
423	labəssuki	menoki lima	pambəssu	mencuci tangan	to wash hands
	limana				
424	lapənriu	panriu	pandiu	mandi	to bathe
425	lapənriua	panriua	pandiua	memandikan	to bathe s.o.
426	lapənaŋo	ponaŋo	рапапо	berenang	to swim
427a	laenre?	laenre?	ende	memanjat	to climb (tree)
427b	lakələmbi?	laenre?	ende	memanjat	to climb (tree)
428	laenre?	laenre? lanta	ende	mendaki	to climb (hill)
429	laopo	laopo	оро	bersembunyi	to hide
430a	ladatələ?	tatola (rusa)	patola	berburu	to hunt
430b	ladatələ?	osea (kadola)		berburu	to hunt
431	pəlaka	pəlaka	latəŋ	terbang	to fly
432a	lapəpana	lapəpana	pana	memanah	to shoot arrow
432b	lapəmana	lapəpana	pana	memanah	to shoot arrow
433a	lapətobo?	patobo?	tobo?	menikam	to stab
433b	lapənobo?	patobo?	tobo?	menikam	to stab
434	labunu	bunu (ito)	bunu	membunuh	to kill
435	lapəmbərru?	tutu (batu)	pantuda	melempar	to throw
436	lapalua	tapalua	palu	memukul	to hit
437	lasemba?	semba (bola)	turrəŋ	menendang	to kick (ball)
438	lapəgirən	pəlaga	pogaga	berkelahi	to fight
439	lapəlukka?	pəmanako	pamanako	mencuri	to steal
440	lapənjai?	jai?	jai	menjahit	to sew
441	latanuŋ	tannun	tanuŋ	menenun	to weave cloth
442a	lajəllin lənte	jəllin	pənpəlliŋ	menjalin	to weave (mat)
442b	la?ana kəfalu	laana	ana	menganyam	to weave (mat)
443	la?ali	ali	ali	membeli	to buy
444	labalu?	balu?	baluka	menjual	to sell
445	labajara?	pəmbajara	pameo	membayar	to pay
446	lapusa	saiko	pasai	memberi	to give
447a	tənnaka	banaka	tobanaka	hilang	lost
447b	latənnaka	tebanaka	tobanaka	kehilangan	to lose s.t.
448	lapənosa	ponosa	painosa	bernafas	to breathe
449	kəmeke	kəmeke	komeke	batuk	to cough
450	lapəfə?je	fə?je	pavəjje	meludah	to spit
451	latəlua	təlua	tolua	muntah	to vomit
452	latətta?i	totai	tuta?i	buang air besar,	to defecate
.02				berak	
453	kəkkata	makata	kakata	gatal	to itch, be itchy
454a	lapəmərəŋkau	pərəŋkau	kau	bergaruk	to scratch
454b	lapəkaui	pokau	kau	bergaruk	to scratch
455	durui kutu	banakea kutu	nisi	menghilangkan	to delouse
1.50				kutu	
456	lasossoro?	peso? mako	pəgigi	menggosok	to rub (massage)
150		karakka	roo		(masuge)
457	lamboro	lamboro	voron	bergembung,	to swell (as an
			, 5, 5,	membengkak	abscess)
458	lalo?loro?	lo?loro?	solo	mengalir	to flow
459	lapəlai	mərrun	pendatə	berlari	to run
460	laleŋka	leŋka	leŋka	berjalan	to walk
461	latanrən	tanren	tandən	berdiri	to stand
462	latoro	toro	joηko	duduk	to sit
463	lakəŋkoleŋ	kolen	ηgolu	berbaring	to lie down
464	latədo?do?	todo?do?	tojuju	mengantuk	to nod, be sleepy
465	lapəmojai	lapəmoja	1		
466	lakolen	kolen	kolen	menguap tidur	to yawn to sleep
467	lapənipi			<u> </u>	to dream
468		panipi banu	paŋipi ene	bermimpi	
469	labanung	banu paras?	banua	bangun	to wake up
707	labaŋuŋea	baun erea?	baŋua	membangunkan	to awaken s.o.

#	Barang-barang	Laiyolo	Kalao	Indonesian	English
470a	piamea	daŋea	tokava	datang	to come
470b	lantemo	katamo	tokava	tiba	to arrive
471	bəlili	balili	balili	pulang	to return home
472	laənton	əntoŋ	toro	tinggal	to live, dwell
473	latungua	tungua	tuŋgu	menunggu	to wait
474	lakətənai	kitinai	kotinai	mengandung hamil	to be pregnant
475	saŋa	saŋa	saŋa	nama	name
476	pə?pauwəŋ	melagərə?	bisa-bisara	cerita	story
477	pau	pau	pau	kata	word
478	bisara	bisara	bisara	bahasa	language
479	inraŋ	utəŋ	utəŋ	utang	debt
480	kanre	kanre	patambə	sarapan pagi	breakfast
	pəŋəssələ?	maŋəssalə?			
481	ənto?nikka	onto?nikka	pausa	mas kawin	bride price
482	apea	pea	ареа	apa	what
483	nai	nai tirio	nai	siapa	who
484	te?ea mai	te?eko	ri təe	di mana	where
485	rirəppia	ripia	laipia	kapan	when
486	səkia	sakia	sakia	berapa	how many
487	fərenumo	kampəkia	verenu	bagaimana	how
488a	kapəkiaka	kapokia	lapokea	mengapa	why
488b	pəkia	pəkia	lapokea	kenapa	why

APPENDIX B: INTERLINEARIZED TEXT

The following text is interesting not only because it sheds light on the grammatical structure of Barang-barang (a topic of a forthcoming publication), but also because it provides a traditional view of the origin of the people of Loa'.

Assala?ŋa Loə? - The Origin of Loa'

Mənuru? pə?pauəŋa assala?ŋa ito kana ito Lo₉3 1. ri RED-pau-əŋ-na assala?-na kana ito Lo₂? mənuru? ito ri according RED-word-NOM-3sP GP before origin-3sP person Loa' person

si?i, kafa ri daera Luwu?. si?i kafa ri daera Luwu? this from GP region Luwu

According to the story of the ancestors, the Loa' people originate from the area of Luwu.

Saba? kana, 2. mənuru? ito mətu?a pauna turunəŋa ri saba? ito mə-tu?a ri kana turun-əŋ-na mənuru? pau-na ST-old GP before descend-NOM-3sP according word-3sP because person

kafa ri Luwu?, toka. kafa ri Luwu? toka from GP Luwu true

Because the ancestors say that they are truly descendants of the people of Luwu.

Si?i Sawerigadin mənuru? pə?pauəŋa mako 3. ito kana ri si?i Sawerigadin RED-pau-əŋ-na mənuru? ito ri kana mako this Sawerigading according RED-word-NOM-3sP GP before there person

siamo itu kəraeŋ. sia-mo itu kəraeŋ 3s-EMP that king

Now Sawerigading, again according to the ancestors, was a king.

4. Kəraeŋa Sulawesi; ito ogge. kəraeŋ-na sulawesi ito ogge king-3sP Sulawesi person big

His kingdom was Sulawesi; he was an important person.

5. Lafa si?i Sawerigadin ri fattuna bemafərei, lapəromua lafa si?i Sawerigadin ri fattu-na be-ma-fərei la-pə-romu-a therefore this Sawerigading GP time-3sP **FUT-AF-spouse** 3sS-VB-gather-3sO

səlelea bəbbijana ri Luwu?. səlele-a RED-bija-na ri Luwu? all-3sO RED-family-3sP GP Luwu

So when Sawerigading was going to get married, all of his family were gathered together in Luwu.

Labafea bəbbijana leŋka pəbontin, Sina. ri tana 6. Sina la-bafe-a RED-bija-na leŋka pəbontin ri tana wedding GP 3sS-bring-3sO RED-family-3sP walk Cina land

His brought his family to the wedding in China.²⁶

7. Sangena lalenkaimo səbija səpəmənakən. sangena la-lenka-i-mo sə-bija sə-pəmənakən so that 3sS-walk-PL-EMP one-family one-relatives

It turned out that all the relatives went.

bəlili kaləggamo Sangena fattuna lele, pəbontinəna 8. ri bəlili ka-ləggamo pəbontin-ən-na ri lele fattu-na sangena time-3sP all **REA-already** to marry-NOM-3sP GP so that return

Sawerigadin,labəlilimoduakəluargana.Sawerigadinla-bəlili-moduakəluarga-naSawerigading3sS-return-EMPalsofamily-3sP

Finally when it was time to go home, because Sawerigading's wedding was over, his relatives also went home.

Kəluarganamo si?i lamanu? mako lipu məmanu?, sangena 9. ri si?i la-manu? mako lipu mə-manu? kəluarga-na-mo saŋgeŋa ri this GP ST-drift so that there village family-3sP-EMP 3sS-drift

risaŋa təria lipu Loə?. ri-saŋa təria lipu Loə? PAS-name that village Loa

But it was these relatives that went adrift, and finally drifted to a village that was named Loa'.

si?i si?i 10. Munkin sianai lasaŋea lipu lipu Loa?. si?i si?i munkin sianai lipu lipu la-saŋa-ea Lo₉? village this 3sS-name-3sO this village Loa' 3p maybe

It is possible that it was these people who named the village Loa'.

11. Sannin kəluargana Sawerigadin. sannin kəluarga-na Sawerigadin all family-3sP Sawerigading.

All of them were relatives of Sawerigading.

12. Tenka kəluargana Sawerigadin, saba? barina baran muni saba? bari-na tena-aka kəluarga-na Sawerigadin baran muni family-3sP Sawerigading speak-TR many-3sP also because item

anti? kafa rikeke.
anti? kafa ri-keke
antique from PAS-dig

It is said it was the Sawerigading family because of all their artifacts that were dug up.

13. Mənuru? pənəlidikəna ito tena bari mənuru? pənəlidikən-na ito tena bari according investigation-3sP person speak many

pə?baraŋ-baraŋəŋ.
pə?-baraŋ-baraŋ-əŋ
NOM-item-item-NOM

According to the research, people say there were all kinds of artifacts.

ri karirumpə? ri 14. Anuna ito kana lipu Loa?. ka-ri-rumpə? lipu ito ri ri Lo₂? kana anu-na GP **REA-PAS-find** GP something-3sP village person true Loa' Possessions of people from earlier times were found in Loa'.

riomai 15. Səmbau Toka, Səŋkima, Bəntopala. ri lipu ri Toka ri səmbau ri lipu səŋkima riomai bəntopala Sengkima village Toka below Bentopala like GP GP

Likewise in the villages of Toka, Sengkima, and below Bentopala.

16. **Məŋa** ri tampa? Loa?. ri məraeŋəŋa tampa? ri Lo₉? ri mə-raeŋ-əŋ-na məŋa GP ST-other-NOM-3sP location GP Loa' and

And also in other locations around Loa'.

- 17. Fəŋkoən bari dua baran.
 Fəŋkoən bari dua baran.
 Hangkoang many also item
 Hangkoang also had lots of artifacts.
- bifitu 18. Tərianamo kalasaŋea ito lipu Lo₂? si?i bifi-tu ito lipu si?i ka-la-saŋa-ea Təria-na-mo Lo₉? this REA-3sS-name-3sO edge-that village Loa' that-3sP-EMP person Baran-baran. lipu

lipu Baran-baran village Barang-barang

Because of that outsiders refer to the village of Loa' as Barang-barang.

- 19. **Saba?** barina kafa rikeke makeke baran anti? ane nia ito kafa ri-keke pia ito ma-keke saba? bari-na baraŋ anti? ane if many-3sP antique from PAS-dig AF-dig item exist person because Because lots of artifacts were found when people dug.
- təria makəttulu? rikafa alina. 20. Baran ma-kəttulu? ri-kafa ali-na baraŋ təria AF-expensive price-3sP PAS-from that item The artifacts that were found were of high value.
- 21. Tenaimo Lo₉? si?i si?i. ito si?i si?i ito Lo₂? tena-i-mo this speak-LOC-EMP this Loa' person That is what the people of Loa' say.
- Sawerigadin. kafa 22. Meman turunəŋmami ri kafa ri Sawerigadin turun-əŋ-mami meman descend-NOM-1peP Sawerigading GP from Truely It is true that we are descendants of Saweriganding.
- 23. Bijana Sawerigadin tərianamo kania ito Loa?. ito Lo₂? Sawerigadin təria-na-mo ka-nia bija-na family-3sP Sawerigading that-3sP-EMP Loa' **REA-exist** person The relatives of Sawerigading are therefore the people of Loa'.
- 24. Lafa ito latoroi təria Selea.
 lafa ito la-toro-i təria Selea
 therefore person 3sS-sit-LOC that Selayar
 So the people lived in Selayar.
- Loə? si?i. 25. Pətumbu latoroi Selea siamo ito təria itu Loa? si?i la-toro-i təria Selea sia-mo ito pətumbu itu Loa' this that Selayar 3s-EMP that 3sS-sit-LOC person first This was the beginning of the Loa' people living on Selayar.
- kania ajosi?i. 26. Tərianamo ito Lo₂? saŋgeŋa si?i ajo-si?i ka-nia si?i Lo₂? sangena Təria-na-mo ito today that-3sP-EMP **REA-exist** Loa' until this person And as a result there are still Loa' people there to this day.
- 27. **nia** Lo₉? lipu Loa?. ito ri Lo₂? lipu ito Lo₂? ri nia GP village Loa' Loa' person exist There are people of Loa' in the village of Loa'.

- 28. Tərianamo Loa?. təria kateŋka da?dua kampon kampon təria da?dua ka-tena-aka Lo₉? Təria-na-mo village that REA-speak-TR Loa' that-3sP-EMP also That is how the village got to be called Loa'.
- 29. **Si?i** ajo si?i risaŋa Loa?. desa si?i si?i ri-saŋa Lo₉? ajo desa village this PAS-name Loa' this day To this day it is called Loa'.
- 30. **Saba?** məpəbisara səlelea ito sannin bisara Lo₉? lara mə-pə-bisara sannin Lo₂? səlele-a bisara lara saba? ito all-3sO ST-VR-speak all Loa' inside speak person because si?i.

lipu si?i
lipu si?i
village this

And all the people always speak the Loa' language in the village.

- Loa? sassi?ina teŋkamo Baran-baran. 31. **Ri** lipu Baran-baran lipu ri Loa? RED-si?i-na tena-aka-mo speak-TR-EMP village Barang-barang RED-this-3sP GP Loa' In Loa' to this time the village is named Barang-barang.
- barinamo pə?baraŋ-baraŋəŋ rikeke, 32. Munkin saba? kafa ri saba? pə?-baraŋ-baraŋ-əŋ kafa ri-keke munkin bari-na-mo ri NOM-item-item-NOM because many-3sP-EMP GP PAS-dig maybe from təria kupau pənane, ri Sankima, ri səmbau bəntona anu Saŋkima ku-pau təria pəŋane səmbau ri bənto-na ri anu Sangkima REL GP 1sS-word that earlier GP like mountain-3sP Bentopala, ri Fəŋkoəŋ, ri ri Kətoka. rate Fəŋkoəŋ Bəntopala ri ri ri Kətoka rate Kətoka Hangkoang GP GP Bentopala GP top

Probably because of all the artifacts that were dug up, like I said before, on Sanglima mountain, in Bentopala, in Hangkoang, and up in Katoka.

here

Baran-baran, saba? 33. Kalasaŋaia kampon Baran-baran saba? kampon ka-la-saŋa-i-a Barang-barang village REA-3sS-name-LOC-3sO because pə?baraŋ-baraŋəŋ rirumpə? risi?i. bari ri-si?i bari pə?-baraŋ-baraŋ-əŋ ri-rumpə?

They named it the village of Barang-barang, since lots of artifacts were discovered here.

34. **Lafa** lipuna si?i, lipu ito ribifi ito Lo₉? tenamo si?i ri-bifi lafa lipu-na ito Lo₂? ito lipu tena-mo Loa' village-3sP this speak-EMP outside village therefore person person

PAS-find

lasanea kampon Baran-baran.
la-sana-ea kampon Baran-baran
3sS-name-3sO village Barang-barang

NOM-item-item-NOM

So the village of the Loa' people is called Barang-barang by people that are not from the village.

si?i tena?da Loa?, lipu 35. Məŋka Loa?, ito Lo₉? ito sao si?i tena-?da ito Loa? lipu ito Lo₉? Lo₉? məŋka sao this Loa' speak-only down Loa' village Loa' but person person ajosi?i. si?i tapana si?i ajo-si?i tapana this today until

But the people of Loa' refer to the Loa' people and the Loa' village to this day.

many

APPENDIX C: ABBREVIATIONS

1pe	1st person plural exclusive	k.o.	kind of
1pi	1st person plural inclusive	LOC	locative / transitive
_	or 2nd person singular formal	NOM	nominalizer
1s	1st person singular	O	object marker
2p	2nd person plural	P	possessive / genitive
2s	2nd person singular informal	PAS	passive
3p	3rd person plural	PL	plural
3s	3rd person singular	REA	reason / result
	or unmarked 3rd person plural	RED	reduplication
AF	actor focus	S	subject marker
BEN	benefactive	s.o.	someone
BI	Bahasa Indonesia	s.t.	something
CA	causative	ST	stative
CLASS	classifier	TR	transitive
EMP	emphatic	VR	verbalizer
FUT	future		
GP	general preposition		

NOTES

- 1. Pastor Sahabu Daing Maingak is a native speaker of Barang-barang, and has lived in *Desa* Lowa for most of his life. The authors greatly appreciate the assistance of Suayuati Maingak in the typing and translating of Barang-barang texts, and the help of Carol Laidig in the preparation of texts, wordlists, and manuscripts. The authors have benefited greatly from interaction with a number of colleagues at the Summer Institute of Linguistics, especially René van den Berg, Scott Youngman, and Rick Nivens. Special thanks and appreciation also go to J. Noorduyn, who communicated with the authors on numerous occasions before his death. The Barang-barang language data used for this analysis was collected from 1991 through 1998.
- 2. Barang-barang is referred to in Grimes and Grimes (1987), Friberg and Laskowske (1989), and Noorduyn (1991a and 1991b).
- 3. The authors have revised the data which Noorduyn had collected with one of us (Maingak) and have included that material in the corpus of data used for the present study.
- 4. Because of its lexical similarity, Barang-barang is sometimes classified as a dialect of Laiyolo, alternatively spelled Layolo or Laiolo. The spelling Laiyolo is used here in accordance with *The Ethnologue* (B. F. Grimes 1996).
- 5. The exact location of "China" is unclear. It probably does not refer to the present country of China, but more likely refers to a former kingdom located near what is now the region of Bone, South Sulawesi.
- 6. Friberg and Laskowske (1989:13) also report on Barang-barang folk history linking it with Wotu. In that account, "two princes were faced with an invasion from the king of Seram. The younger was for war, but the older for peace. The older brother won out over his younger sibling, after which the younger prince and his followers, because of their great loss of face, sailed away to settle in a place called Wotu in Luwu'." It should be noted that this account does not imply that Wotu was settled through a migration led by the younger prince from Barang-barang, but rather it could have been that existing relationships between Barang-barang and Wotu caused the younger prince to return to the area of his origin.
- 7. The 15,000-word data corpus consists of a list of all Barang-barang words obtained from the authors' texts and collected data. Each word is included only once in the list, regardless of the frequency of occurrence of that particular word in the texts.
- 8. A glottal stop must occur between like vowels. Since it is apparent from other contexts that a glottal insertion rule operates at morpheme boundaries, and since it is also apparent from other contexts that glottal is indeed a separate phoneme, the situation with morpheme-internal glottal between like vowels is truly ambiguous. Thus, the glottal between like vowels may be phonemic or it may be the result of the glottal insertion rule.
- 9. It is possible that the absence of the /əa/ sequence results from the acoustic and articulatory similarity of the two vowels, making it difficult to pronounce, and thus more difficult for children to learn. If such a sequence ever existed, it is probable that it shifted to another sequence, such as /a?a/. It is interesting to note that a /ə/-/a/ alternation is apparent in the affixation pattern of Barang-barang.
- 10. The voiced affricate [\mathfrak{g}] and the voiceless affricate [$\mathfrak{t}\mathfrak{f}$] are denoted as $/\mathfrak{j}/$ and $/\mathfrak{c}/$, respectively. The alveolar flap [\mathfrak{c}] is denoted as $/\mathfrak{r}/$.
- 11. A more accurate column heading would be "Dental/Alveolar". Similar to many Austronesian languages, Barang-barang /t/ is dental, while /d/ is alveolar.
- 12. As is common among Austronesian languages in Indonesia, the palatal nasal /n/ has a phonetic offglide $[n^y]$.
- 13. hamma? is an exclamation used to prevent someone from falling or to ward off harm when someone is falling.

- 14. An acceptable alternative representation of **kiyau** 'dog' would be /**kiau**/, however, /**kiyau**/ is preferred since three-vowel sequences are not observed within a single morpheme.
- 15. The similar words beu and beo refer to two different but closely related eagle-like bird species.
- 16. Exceptions are the two monosyllabic words **he** 'hey!' and **ya** 'yes', as well as the borrowed word **ha?** 'responsibility, BI: hak'. Other possibilities for monosyllabic words are the general preposition **ri** which most likely functions as a clitic, the morpheme **be** which is probably best analyzed as a verbal prefix marking future, and the marker **ka** which indicates benefactive or reason/result and probably only functions as an affix rather than a monosyllabic word.
- 17. Word-final, non-homorganic NC clusters are usually the consequence of a syllable-final /ŋ/ preceding a C-initial syllable, occurring as a result of suffixation or compounding.
- 18. Although ideally contrasts should be with monomorphemic words, several examples in this table include multimorphemic words. These are N-initial words in which the N functions as a verbal or stative morpheme.
- 19. The sequence /**?p**/ only occurs across morpheme boundaries. The most common occurrences are with the CəC- reduplication prefix (which becomes pə**?** with stems beginning in /**p**/ and ending in glottal), and with the suffix -**po**.
- 20. The only observed occurrences of /ff/ are across morpheme boundaries with the reduplication prefix CəC-.
- 21. The sequences /ff/ and /?f/ occur in complementary distribution, following the distribution of the reduplication prefix CəC- and its alternate Cə?-.
- 22. The sequence /?t/ only occurs across morpheme boundaries with the reduplication prefix CaC. With word-final glottal, the prefix tat- becomes ta?-.
- 23. The sequence /ʔŋ/ nearly always occurs across morpheme boundaries, most often with alternates of the affixes -mo, -na, and CəC- (-ŋo, -ŋa, and Cəʔ-, respectively).
- 24. Semivowels occur with low frequency in all positions, but this is especially evident in the word-initial position.
- 25. The few exceptions, such as jəma?at 'church congregation', jurutulis 'writer, clerk', məŋgu?gur 'to drop, fall', mil 'mile', minəral 'mineral, kuddus 'spirit', ruam 'skin rash', tabur 'scatter', tulis 'write', ukkir 'carve', and usus 'intestines', can be attributed to borrowings.
- 26. See footnote 5.

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